



What do ex-fisheries program leaders do in retirement? Go Fish! Gordon Sloane, with boat and fish. Way to go Gordon! @ D. Heller

FishTales®

A Weekly Peek at Fisheries, Aquatic Ecology and Watersheds in the

USDA FOREST SERVICE

January 10 - January 14, 2005

Dave Cross -

This week I worked with a number of staffs and OGC to get their comments in on IAFWA's proposed language changes in our working agreement for fish and wildlife management in wilderness. Next week Don Fisher, Bea VanHorn and I will go over the comments and highlight major issues for the Directors.

Our staff met with the Regional Director's for WFW and Air this week to discuss a number of issue areas including monitoring, MSIM, WO/RO communications, Post Fire Recovery roles for NFVW-WC and NFWF, planning rule, environmental

management systems and the watershed program. Deputy Chief Tom Thompson provided his assessment of current and future issues and opportunities.

Forest and Regional fisheries program leaders need to have their WFRP 04 reporting entered and validated by the end of next week. The WFRP system will reopen for 05 data entry on February 28th.

We have reopened nominations in three **Rise to the Future** categories – **RecFish, Line Officer and Mentor**. We would appreciate your consideration of additional nominations in these categories. Please submit them by the end of January.

The Rise to the Future Implementation Team met this week here in D.C. Lead by Nancy Herbert, Assistant Station Director for the Southern Research Station and Richard Stem, Deputy Regional Forester for Region 2, the team will review the RTTF Task Force recommendations and provide a strategy to the National Leadership Team for implementation. Other team members include Andrew Fahlund (Director of Conservation, American Rivers), Virgil Moore, Chief of Fisheries for Idaho, Steve Moyer, Trout Unlimited, Gordon Robertson, American Sportfishing Association and Duane Shroufe, Director, Arizona Department of Game and Fish.

Bill Lorenz -

Region 9 is the only region that has reported validation of the 2004 WFRP-MS database. Not only will the data be used to report our accomplishments and opportunities to IAFWA and other partner organizations, but this year the project narratives and some summary reports will be available to the public on the internet. Forest program managers should review not only the expenditures and accomplishments, but review and edit the narratives and make sure all project partners were identified.

Anne Zimmermann has extended the deadline to nominate groups or individuals for the Karl Urban, Jack Adams, Lloyd Swift Sr. and Forest Service/BLM conservation awards. The new (and final) deadline will be January 21, 2005.

Work continued Southern Appalachian Forest Plan appeal reviews, and will occupy the majority of my time through March.

News from Around the Country

- The December 2004 issue of the American Fisheries Society monthly magazine *Fisheries* has a feature article titled "A Conceptual Framework for Assessing Impacts of Roads on Aquatic Biota". See the article at: <http://www.fisheries.org/html/fisheries/fishery.shtml>

- Swordfish heat their eyes for better vision
<http://www.nature.com/news/2005/050110/full/050110-2.html>
- **USFWS/USGS Workshop on Future Fish Passage Management and Research Needs.** Report from Mark Hudy: USFWS/USGS Workshop on future fish passage management and research needs December 7-9, 2004, Hadley, MA

I represented Dave Cross and the Forest Service at this national meeting to assess the current state of knowledge and future needs for fish passage from various federal and state agencies and NGO's. The majority of the emphasis for fish passage was still heavy toward dams, turbine designs and salmonids. Mike Furniss gave an excellent presentation on culverts. I gave a power point summarizing the Forest Service national perspective and our work in the east on coarse filters for non-game fish. The draft coarse filters and the power point presentations are available (hudymx@csm.jmu.edu) The Forest Service appears to be the leading agency interested and working on culvert passage issues. The meeting conveners' objectives were:

Objective 1: Enhance knowledge and understanding of the current capabilities and technologies for providing fish passage.

What types of fish passage technologies are commonly used in your region or prescribed by your agency?

Has your organization used innovative technologies or experienced special cases that are unique as fish passage solutions? How well did they work?

How is fish passage research currently conducted by your organization, and who is conducting it?

Objective 2: Identify information and research needs and mechanisms for addressing them

What are your primary (top 3 to 5) areas of fish passage research needs?

What issues are driving those needs?

What is unique about your region or organization with respect to research needs.

How have these needs been met (or failed) in the past?

How is the research funded, and where do you see funding coming from in the future? Dollar amounts?

Who are your primary partners in research?

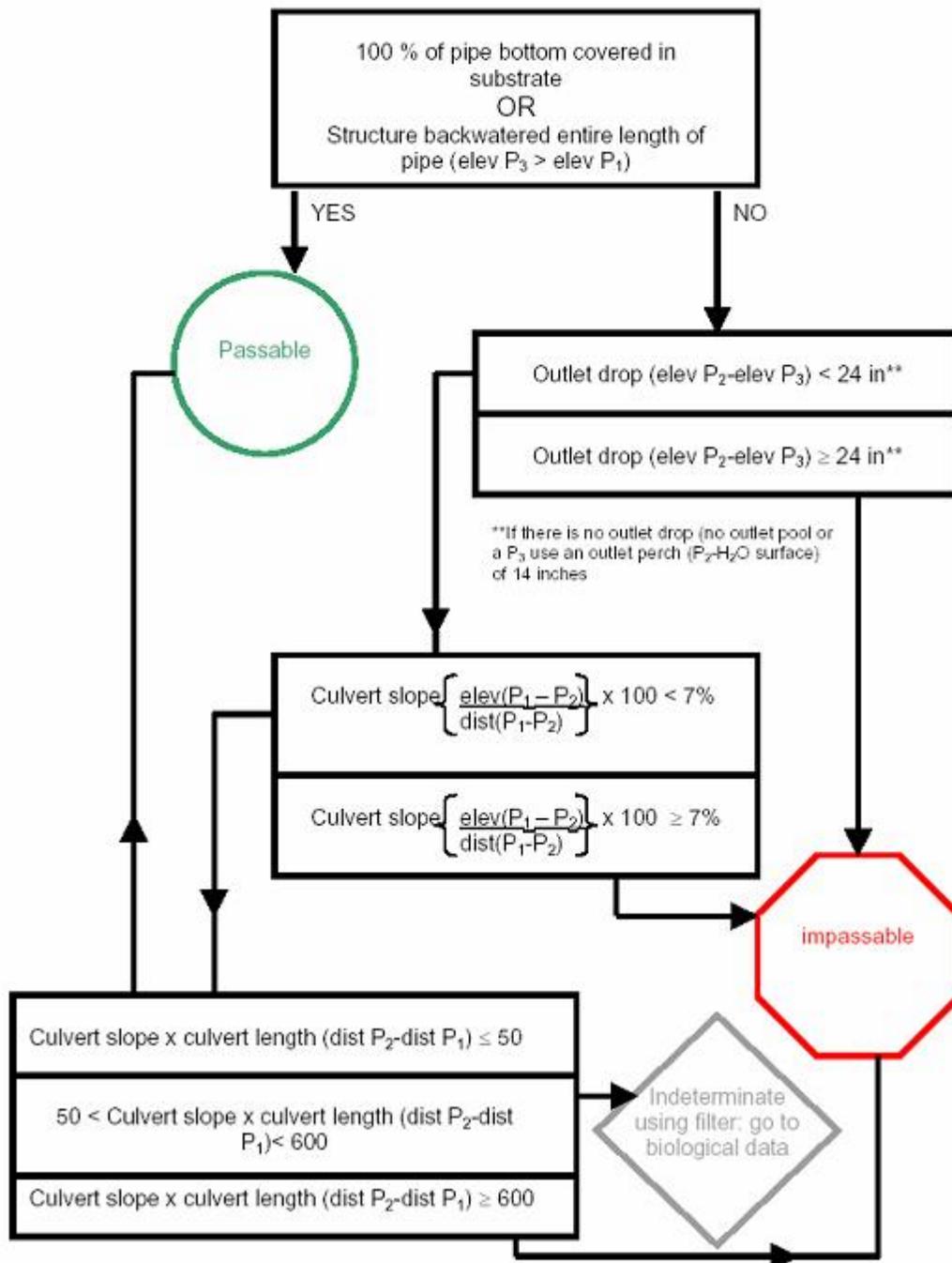
Objective 3: Identify mechanisms for national or regional collaboration to gain support and address fish passage issues

What capabilities or mechanisms (funding, partnering) for research would you like to see developed in the future?

What collaborative fish passage research efforts are you or your organization involved with?

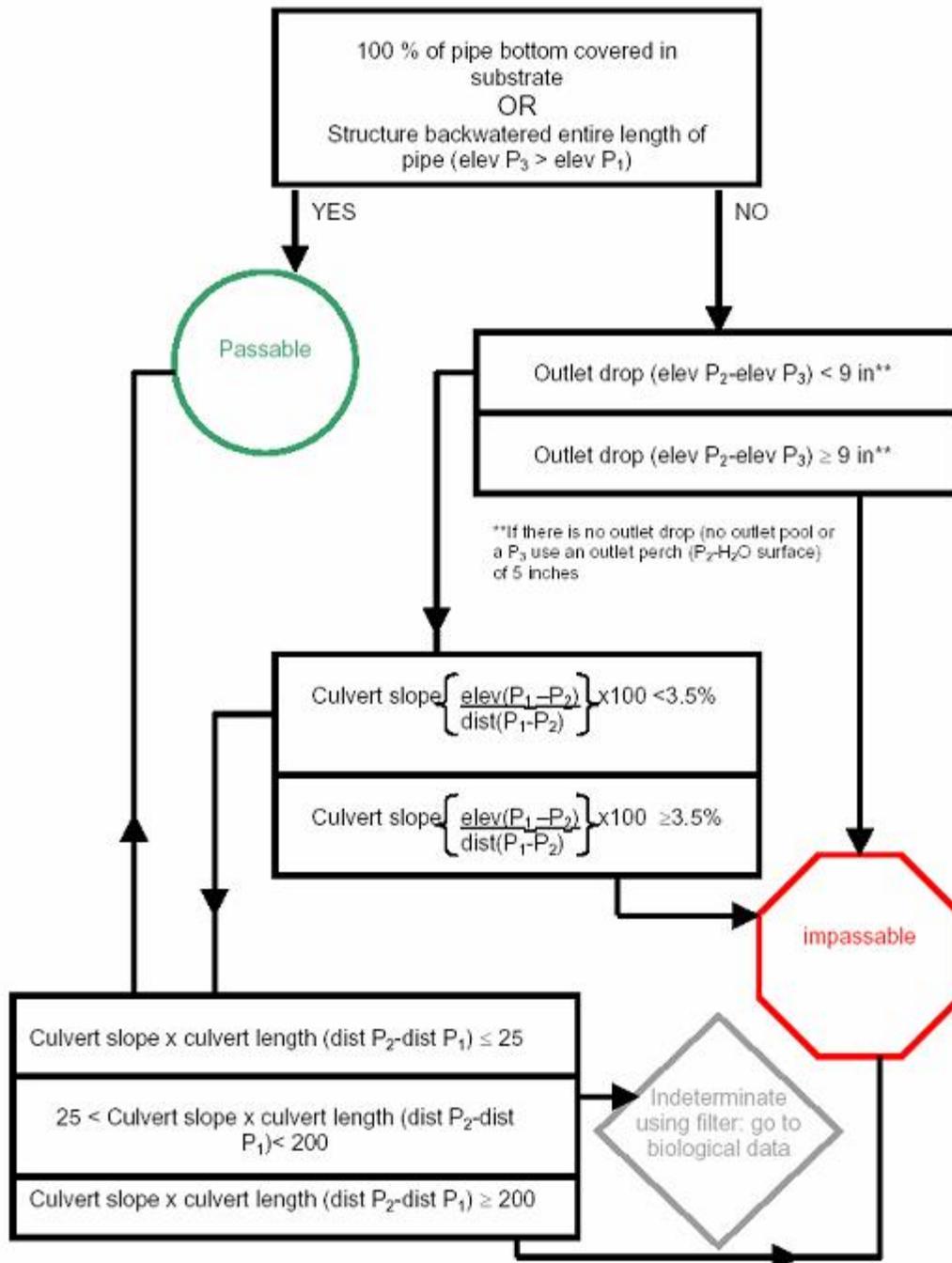
What are your needs with respect to more comprehensive fish passage collaboration/networking efforts?

How do you envision communication and collaborative efforts being improved to help you are your organization goals?



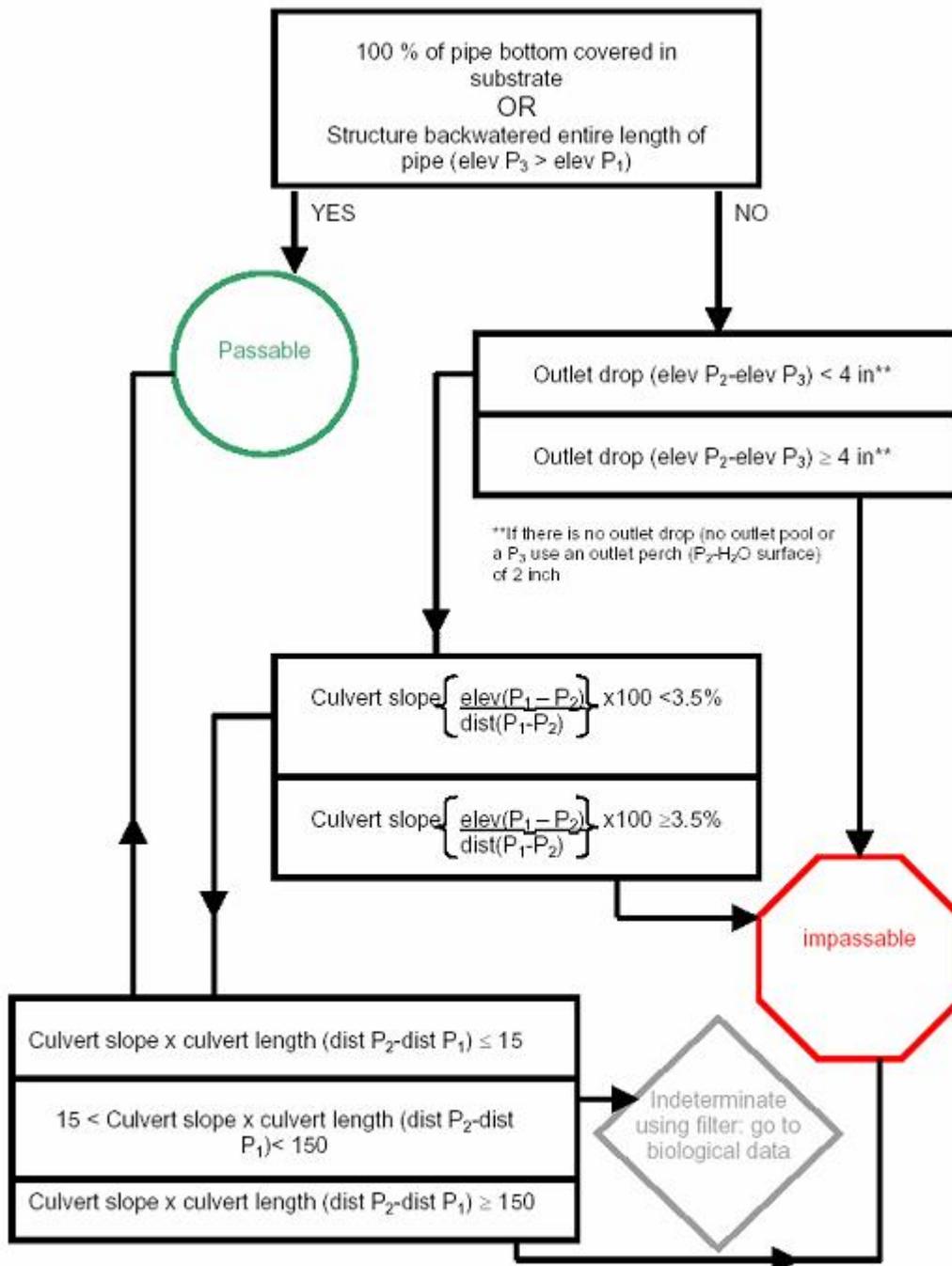
Fish passage predictive model A for Salmonidae, Osmeridae, Lepisosteidae, and Esocidae. Based on physical measurements from Clarkin, K., et al. 2003. National inventory and assessment procedure for identifying barriers to aquatic organism passage at road-stream crossings. USDA Forest Service, San Dimas Technology and Development Center, San Dimas, CA. See attached figure detailing profile of survey points used in fish passage coarse filter. Elevation and distance measurements are in feet.

Coarse Filter B Cyprinidae Version 1.2 01/10/2005



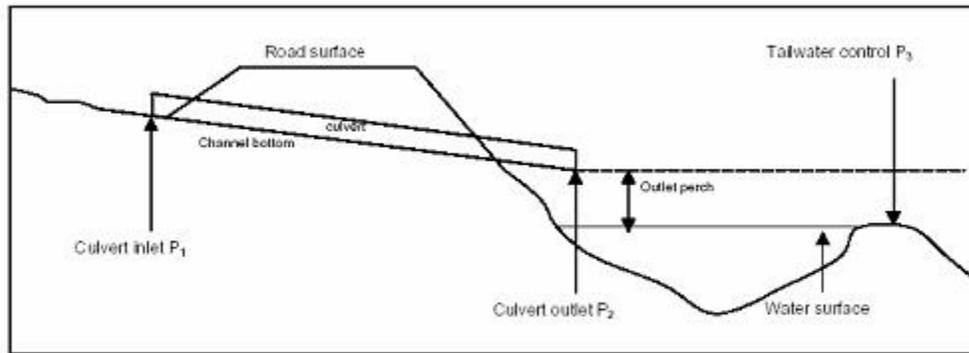
Fish passage predictive model B for Cyprinidae, Fundulidae, Aphredoderidae, Gasterosteidae, Umbridae, Atherinidae, and Poeciliidae families. Based on physical measurements from Clarkin, K., et al. 2003. National inventory and assessment procedure for identifying barriers to aquatic organism passage at road-stream crossings. USDA Forest Service, San Dimas Technology and Development Center. San Dimas, CA. See attached figure detailing profile of survey points used in fish passage coarse filter. Elevation and distance measurements are in feet.

Coarse Filter C Cottidae and Percidae Version 1.2 01/10/2005



Fish passage predictive model C for *Percina*, *Etheostoma*, Cottidae, Amblyopsidae, Elasmomatidae. Based on physical measurements from Clarkin, K., et al. 2003. National inventory and assessment procedure for identifying barriers to aquatic organism passage at road-stream crossings. USDA Forest Service, San Dimas Technology and Development Center, San Dimas, CA. See attached figure detailing profile of survey points used in fish passage coarse filter. Elevation and distance measurements are in feet.

Profile of survey points 01/10/2005



Profile of survey points used in fish passage coarse filters A, B, and C. Distance and elevation is measured (in feet) for each location point designated by P_i . Adapted from Clarkin, K., et al. 2003. National inventory and assessment procedure for identifying barriers to aquatic organism passage at road-stream crossings. USDA Forest Service, San Dimas Technology and Development Center, San Dimas, CA.

- **Groups Challenge USFWS On Cutthroat Hybridization Issue** December 3, 2004

A coalition of conservationists and a prominent angler recently filed a 60-day notice with the U.S. Fish & Wildlife Service, claiming the agency has ignored scientific evidence that the fish is heading for extinction. American Wildlands, Western Watersheds Project, Inc., the Montana Environmental Information Center, the Clearwater Biodiversity Project and legendary Montana fly fisherman Bud Lilly are asking the Service to protect westslope cutthroat trout as a threatened species under the Endangered Species Act on grounds that the service is underestimating the threat that hybridization poses to the species. The notice of intent, filed in late October, is required before the groups can sue the government to list cutthroat for protection under the Endangered Species Act.

A U.S. Fish and Wildlife Service biologist counters that the plaintiffs are interpreting hybridization to such an extreme degree that it is indefensible from biological or management perspectives. Supervisory biologist Lynn Kaeding said the service "flat-out disagrees" with the position of the plaintiffs. The Service cited research from several leading scientists in its August 2003 decision not to list the trout as threatened. Now, the same scientists are saying the Service misused their analysis of the effects of hybridization on native cutthroat populations.

"The U.S. Fish & Wildlife Service's interpretation of the science about trout hybridization is untenable, mystifying, and just plain wrong," says research biologist Dr. Chris Frissell.

Along with fellow scientists Dr. Fred Allendorf of the University of Montana and Nathaniel Hitt of Virginia Tech, Frissell recently wrote the agency to protest its use of their peer-reviewed research to justify its westslope cutthroat trout decision.

"The Fish & Wildlife Service cited our study," said Frissell, "then bizarrely contradicted or ignored it's most obvious and conclusive finding: that hybridization is a progressive threat that will continue to undermine native populations until a sincere and serious effort is made to address the problem."

In a series of letters to the Fish & Wildlife Service, Frissell and the other scientists repeatedly questioned the Service's decision to count hybridized fish as pure westslope cutthroat trout based solely on visual similarities.

Recent studies, including an article in a recent issue of Conservation Biology, stress that while hybrids may look similar to pure fish, they behave differently than westslope cutthroat trout and do not share the genetic make-up that has allowed native fish to survive thousands of years of floods, fires, droughts, and disease in the Northern Rockies.

The Fish & Wildlife Service ranks hybridization as the number one threat facing the species, then turns around and claims that the species is not threatened because there are plenty of streams with hybridized trout in them, says Rob Ament, executive director of American Wildlands. But Kaeding said the plaintiffs have taken a position that fish that look entirely like cutthroat would be considered a "threat" from the plaintiff's perspective.

"We disagree with them and feel they are flat-out wrong, and we are using their data to show this. Kaeding noted that a previous lawsuit made the same arguments, and a court ordered a judge to define what level of hybridization would be acceptable.

"There is a degree of hybridization that is allowable, and we will still have a fish that is a cutthroat trout. The court agreed that 100% purity is not a requirement," Kaeding said.

"The plaintiffs seem to want to go back to their 100 percent or nothing, which is really difficult from the standpoint of managing these fish, because, if you're not 100 percent, then you are a threat and should be eliminated. We don't think that is scientifically defensible."

From the public's standpoint, efforts to curb populations of fish that have every single cutthroat characteristic would not be acceptable, said Kaeding, who also disputes the position that less-than-pure fish are behaviorally disadvantaged.

"It's not like they behave like cabbages," he said. Politics, rather than biological science, served as the basis of the Service's decision, according to Abigail Dillen, the attorney representing the coalition.

"You know that the Fish & Wildlife Service is making decisions based on politics instead of science when it ignores the leading scientists and actually misuses their work," says Dillen, an attorney with Earthjustice.

Bud Lilly says he hopes the Service will see past the politics and work to preserve an integral part of the U.S. Northern Rockies.

"Streams and rivers all over the Northern Rockies used to be thick with westslope cutthroat trout when I was a boy. You could catch one every minute," Lilly said. "But pretty soon, there won't be any left unless the Service wakes up, smells the coffee, takes a good gulp and gets busy giving this fish the protection it needs as a threatened species."

- **SYMPOSIUM and CALL FOR POSTERS (DEADLINE EXTENDED)
NEW CURRENTS IN CONSERVING FRESHWATER SYSTEMS**

A Biodiversity Science Symposium

<http://cbc.amnh.org/symposia/freshwater/>

In the increasingly vital quest to build a sustainable economy, the conservation of freshwater systems and the biodiversity that depends upon their ecological integrity is a paramount, but elusive goal. Dedicated scientists and managers have worked for decades to improve the health of rivers, lakes, and wetlands, yet in most places the battle is being lost. There is an urgent need for the development and application of innovative new approaches to freshwater conservation, and for the sharing of success stories.

In April 2005, the American Museum of Natural History will host a forum for scientists and conservation practitioners to highlight recent successful initiatives in freshwater conservation, to discuss cutting-edge ideas and tools, and to investigate how and where these innovations might be implemented on the ground. The symposium will showcase projects that are rooted in the best available science, integrate scientific fields, and link science with other disciplines. This cross-disciplinary integration will generate a fertile landscape for discussing the way forward in freshwater conservation.

CALL FOR POSTERS: A limited number of posters will be accepted for presentation. Poster subjects must relate to the symposium's general theme of freshwater biodiversity conservation, but are not limited geographically. Case studies are encouraged. For abstract submission guidelines, go to <http://cbc.amnh.org/symposia/freshwater/>.

POSTER SUBMISSION DEADLINE EXTENDED to Friday, 18 February 2005.

EARLY-REGISTRATION and STUDENT PRICING available until March 18. All registrants are invited to attend a special reception on Thursday evening, April 7. "New Currents in Conserving Freshwater Systems" is sponsored by the American Museum's Center for Biodiversity and Conservation (CBC), in collaboration with the World Wildlife Fund, U.S. Fish & Wildlife Service, and National Park Service. Major funding is provided by the National Oceanic and Atmospheric Administration. Additional support is provided by The Conservation Trust of the National Geographic Society, the American Society of Ichthyologists and Herpetologists, The Nature Conservancy, and the American Fisheries Society.

- **From "Science at the Smithsonian" DNA Barcoding Reveals Cryptic Species –
Are there implications for aquatic biodiversity?**

A recent paper in the Proceedings of the National Academy of Sciences combines the taxonomic expertise of Smithsonian entomologist John Burns (who has spent a lifetime discerning the subtle morphological differences between closely related butterfly species), the ecological expertise of Dan Jansen (who spent 25 years

rearing 33,500 wild-caught caterpillars of skipper butterflies to adulthood), and the molecular expertise of Paul Hebert (the "father" of DNA barcoding). "DNA barcoding" is the DNA sequencing of a standard section (amounting to 645 nucleotide base pairs) of the mitochondrial gene cytochrome c oxidase I.

By applying this procedure, the team has found that the skipper butterfly -*Astrartes fulgurator*, considered a single species since it was named in 1775, actually comprises 10 species in Costa Rica's Area de Conservación Guanacaste. Because this area is such a small fraction of the total range of *Astrartes fulgurator*, which extends from the far southern United States to northern Argentina, the team's research suggests that this "one" skipper may mask many more cryptic species.

This discovery has enormous implications for the general study of biodiversity. For example, besides the probability of far more neotropical species still waiting to be described, if many "single species" are actually "species complexes" like *Astrartes fulgurator*, then efforts at conserving them may be much more complicated than previously thought. Similarly, if a pest species turns out to be species complex, efforts at controlling it may be complex, too; what works for controlling one species in the complex may well be ineffective against another.

Just as interesting, the cryptic species revealed by the DNA barcoding exactly correspond to differences in the food plants utilized by the caterpillars, to color-pattern differences in the caterpillars, and to very subtle color-pattern differences in the adults. The latter adult morphological differences could only have been detected and described by an expert such as John Burns.

- **Accessing Fire and Aquatic Systems Publications on the Internet**

Given the large number of Forest Service projects related to fire, the ***Fish and Aquatic Ecology Group*** thought it would be timely to provide access to a number of the recent and seminal papers published on the effects of fire, the effects of salvage harvest due to fire, and the relationship between these activities and aquatic systems. Much of research on this subject has been conducted by or in coordination with the Aquatic Research Group located at the Rocky Mountain Research Station in Boise. But while their website provides access what this group has published, additional important articles are not found at this site. The listed website seeks to provide a single access point to a variety of fire related publications. Our hope is this effort saves Field Offices redundant searches to find the same publications. Given the Forest Services increased capacity to access many documents through the intranet (DigiTop), most of the documents listed below can now be downloaded (by FS personal) by following the provided link;

http://www.fs.fed.us/biology/fishecology/recommended_readings/fire_aquatic_readings.html

This link provides access to the following publications;

- Minshall, G.W., J.T. Brock, and J.D. Varley. 1989. Wildfires and Yellowstones stream ecosystems. *Bioscience* 39:707-715
- Reiman, B. and J. Clayton. 1997. Wildfire and native species: issues of forest health and conservation of sensitive species. *Fisheries* 11(2):6-13.
- Gresswell, R.E. 1999. Fire and aquatic ecosystems in forested biomes of North America. *Transactions of the American Fisheries Society* 128:193-221.
- Brown, T.W., J.K. Agee, and J. F. Franklin. 2004. Forest restoration and fire: principles in the context of place. *Conservation Biology* 18:903-912.
- Dwire, K.A. and J. Boone Kauffman. 2003. Fire ecosystems in landscapes of the western USA. *Forest Ecology and Management* 178:61-74 .
- Benda, L., D. Miller, P. Bigelow, and K. Andras. 2003. Effects of post-wildfire erosion on channel environments, Boise River, Idaho. *Forest ecology and management* 178:105-119.
- D. Miller, C. Luce, and L. Benda. 2003. Time, space, and episodicity of physical disturbance in streams. *Forest ecology and management* 178:121-140.
- Minshall, G.W. 2003. Responses of stream benthic macroinvertebrates to fire. *Forest ecology and management* 178:155-161.
- Philliod, D.S., R.B. Bury, E.J. Hyde, C.A Pearl, and P.S. Corn. 2003. Fire and amphibians in North America. *Forest ecology and management* 178:163-181.
- R.B. Bury. 2004. Wildfire, fuel reduction, and herptofaunas across diverse landscape mosaics in Northwestern Forests. *Conservation Biology* 18:968-975.
- Reiman, B., D. Lee, G. Chandler, and D. Myers. 1995. Does wildfire threaten extinction for salmonids? Responses of redband trout and bull trout following recent large fires on the Boise National Forest. Pages 47-57 in the Proceeding of Fire Effect on Rare and Endangered Species and Habitat Conferences, Couer d'Alene ID.
- Rieman, B. D. Lee, D. Burns, R. Gresswell, M. Young, R. Stowell, J. Rinne, and P. Howell. 2003. Status of native fishes in the western United States and issues for fire and fuels management. *Forest ecology and management* 178:197-211.
- Dunham, J.B., M.K. Young, R.E. Gresswell, and B.E. Rieman. 2003. Effect of fire on fish populations: landscape perspectives on persistence of native fishes and nonnative invasions. *Forest ecology and management* 178:186-196.
- Bisson, P.A., B.E. Rieman, C. Luce, P.F. Hessburg, D. C. Lee, J.L. Kershner, G.H. Reeves, and R.E. Gresswell. 2003. Fire and aquatic ecosystems of the western USA: current knowledge and key questions. *Forest ecology and management* 178:213-229.
- Dellasala, D.A., J.E. Williams, C Deacon Williams, and J. F. Franklin. 2004. Beyond smoke and mirrors: a synthesis of fire policy and science. *Conservation Biology* 18:976-986.
- Beschta, R.L., J.J. Rhodes, J.B. Kauffman, R.E. Gresswell, G.W. Minshall, J.R. Karr, D. Perry, F. R. Hauer, and C.A. Frissell. 2004. Postfire management on forested public lands in the Western United States. *Conservation Biology* 8:957-967.
- Beschta, R.L., C.A. Frissell, R.E. Gresswell, F. R. Hauer, J.R. Karr ,G.W. Minshall, D. A. Perry, and J.J. Rhodes. 1995. Wildfire and salvage logging: recommendations for ecologically sound post-fire salvage logging and other post-fire treatments on federal lands in the west. Pacific Rivers Council, Portland Oregon.

- **ANNOUNCEMENT: Launching of the New Whirling Disease Initiative Web Site**

The Whirling Disease Initiative located in Bozeman, Montana and housed at the Montana Water Center is releasing a new informational web site; please take a look at: <http://whirlingdisease.montana.edu>. The goal of the web site is to act as a central, online repository for whirling disease and information showcased includes: research reports and other publications, a contacts list, maps, graphics, application tools, outreach tools and information, pertinent meeting and conference information, and background information on the Initiative and the National Partnership for the Management of Wild and Native Coldwater Fisheries that oversees it.

The Initiative web site is just one educational component of a much larger whirling disease outreach program currently in development. In addition to the web site, proposed outreach activities and products include: formal presentations to interested parties; field visits to fishery managers; annual whirling disease updates; risk assessment methodology and other useful fishery management tools; status-and-trend information; compilation of state-by-state information on policies and regulations; a quarterly newsletter; communication link with researchers, project partners, technical advisors, fishery managers, universities, the media, and the general public.

Note: Our first *Whirling Disease Initiative Newsletter* is scheduled for release later this month, on January 31, 2005. Please feel free to contact Amy Rose, the whirling disease outreach coordinator, for more information or if you have questions or comments.

Amy Rose: (phone) 406.994.7644; (e-mail) rose@montana.edu.

- **Fisheries biologist Julie Bednarski** has joined the staff of the Hoonah Ranger District, Tongass National Forest, Alaska. Julie is nearing completion of an M.S. degree from the University of Idaho, Moscow. Julie's Master's Thesis, was completed in 2004, and titled *The Ecology of the fishes in the lower Milk River, Montana in relation to spring discharge*. Julie has previously worked as a fisheries technician on the Superior, Beaverhead, and Lassen National Forests; and for the State of Idaho Department of Fish and Game. Julie also completed a two year Peace Corps mission in Madagascar. Welcome
- **The Tongass National Forest** has been at the forefront of fish passage inventory, analysis, prioritization and restoration techniques. The Tongass maintains fish passage websites where their latest efforts in fish passage prioritization may be viewed.

USFS folks may access via

<http://fsweb.stikine.r10.fs.fed.us/tongass/engineering/structural/fishpassage.shtml>

Anyone may access via

http://www.fs.fed.us/r10/tongass/what_we_do/fishpassage/fish_passage_index.shtml

Regional Roundup: Pacific Southwest Region

Reports are provided for the following issues:

- Karen Vandersall, New Fisheries Biologist on the Lassen National Forest
- Challenge to Threatened Status of Klamath River coho salmon

- Deer and Mill Creek Anadromous Fish and Watershed Restoration
- Collaborative Anadromous Fish and Watershed Management in the Klamath Basin

><> ><> ><> ><> ><> <>< <>< <>< <>< <><

Lassen National Forest Lands a New Fisheries Biologist

Karen Vandersall (kvandersall@fs.fed.us) is the new fisheries biologist on the Eagle Lake Ranger District. Karen received her BA in Biology (with an Ecology emphasis) from the Univ. of Delaware. She comes to the Lassen from West Virginia where she worked for the National Park Service (New River Gorge National River). Her experience includes long-term monitoring of aquatic systems (in both marine and FW systems, including the Great Lakes); bull trout restoration in Crater Lake, Oregon; database management; and search and rescue. She also has an interest and experience with aquatic invertebrates. We welcome her to the PSW Region.

><> ><> ><> ><> ><> <>< <>< <>< <>< <><

Challenge to Threatened Status of Klamath River coho salmon

From California Water News, Department of Water Resources - In a repeat of his 2001 finding that struck down protection for Oregon coastal coho because of the lack of genetic distinction between hatchery and wild salmon, U.S. District Judge Michael Hogan ruled from the bench in Eugene in favor of a lawsuit brought by property-rights advocates challenging threatened-species status for coho salmon in a region of Northern California and Southern Oregon that includes the Klamath and Rogue rivers. However, he granted a motion from National Oceanic and Atmospheric Administration Fisheries to let stand the threatened-species listing until the agency completes a comprehensive review of 26 West Coast salmon listings prompted by the Oregon coastal coho ruling. That review is expected to be finished in June, said NOAA Fisheries spokesman Brian Gorman. The ruling affects coho in the Klamath River, where agricultural and fishing groups and American Indian tribes have been fighting about scarce water since the Bush administration was forced by the Endangered Species Act in 2001 to shut off water to farmers on the Klamath Reclamation Project to assure water for threatened fish. NOAA Fisheries said it expects Klamath coho to retain their threatened-species listing. Hogan allowed the plaintiffs, the California State Grange and Oregon State Grange, to return to court if they are harmed by any actions based on the listing.

><> ><> ><> ><> ><> <>< <>< <>< <>< <><

Deer and Mill Creek Anadromous Fish and Watershed Restoration
 Ken Roby, Fisheries Biologist and Hydrologist,
 Almanor Ranger District, Lassen National Forest

Overview: Deer and Mill Creeks are tributaries to the Sacramento River, draining mixed ownership lands that range from the Sacramento Valley to Lassen Peak. These watersheds support a range of environmental, economic and cultural uses that give them regional, if not national significance. The most pressing current issue in the watershed is maintaining and improving habitat for anadromous fishes. Deer and Mill Creek both support naturally reproducing populations of Chinook salmon and steelhead and are considered anchors for the successful recovery of both species in the Sacramento River drainage.

The upper watersheds also support timber management on private lands, substantial recreation on both public and private lands, and water for domestic, agricultural and domestic use downstream. The watersheds contain the Ishi Wilderness and are the site of remarkable heritage resources. Populations of both foothill yellow-legged and Cascade frogs are also present in the watersheds. The lower watersheds are in private ownership, and support agriculture, ranching and homes.

Partnerships and Funding: There are active watershed partnerships in both watersheds. Both the Deer Creek Conservancy and the Mill Creek Watershed Conservancy have developed watershed management strategies that focus on maintaining social and ecological values in the watersheds. Both have plans to conserve and improve habitat for the listed anadromous fishes. Downstream, key actions include maintaining in-channel flows for movement of fish during critical times. In the upper watershed, actions have been supported by a Forest Service Watershed analysis. Both the WA and Conservancy action plans identify treatment of existing sites of accelerated erosion as an important objective.

Partners in these watersheds are numerous. They include the Conservancies, the primary private timberland managers Collins Pine Company and Sierra Pacific Industries, numerous private landowners, and several federal and state agencies, including the California Departments of Fish and Game and Water Resources and the US Forest Service and NOAA Fisheries. Funding for projects on public lands managed by the Forest Service has come from both appropriated sources (watershed, fisheries, roads and trails) and external funds (RAC, and CalFed).

Restoration Goals and Objectives: The overall goal of restoration actions in the watershed is to improve watershed resiliency to provide increased protection for anadromous fishes and their habitat. Primary objectives of the work on Forest Service land have been to treat existing sources of accelerated erosion, and restore natural patterns of stream flow. Roads inventory and analysis determined that roads may have increased overall sediment production in the watersheds by as much as 20%. The roads inventory also found that 70% of the increased erosion was produced by only 5% of the road segments.

Accomplishments: A strategy based on treating the high sediment producers at a sub-watershed scale was developed, and has been active since 1999. Program activities and costs are estimated below. Note that these are Forest Service accomplishments. Numerous other projects have been funded and implemented by the Conservancies, Collins Pine and Sierra Pacific. Additionally, multi-scale monitoring of project implementation and effectiveness, and habitat condition are a key component of the management strategy. Monitoring of anadromous fish populations is led by the California Department of Fish and Game.

Activities are focused on roads, and include reduction in sediment production on existing roads through out-sloping, other drainage improvement and surfacing. Emphasis however, is on corrective actions at crossings. Road closure and decommissioning is another common treatment. Costs associated with road decommissioning work in Deer Creek and Mill Creek watersheds are shown in Table 1, and photos from typical road decommissioning projects in Mill Creek watershed are shown in figures 1 and 2.

Table 1- Cost Summary (estimate) for restoration actions in Deer and Mill Creeks (FS lands only).

Watershed	Year	Number of Sites	Estimated Costs
Deer	1999	7	\$80,000
	2000	4	\$9,000
	2001	46	\$183,500
	2002	58	\$254,500
	2003	56	\$80,000
	2004	12	\$50,000
Mill	2000	14	\$118,000
	2001	16	\$56,900
	2002	22	\$114,000
	2003	28	\$100,000
	2004	7	\$10,000



Figure 1. Example of a road decommissioning project performed in subwatershed M12 of the Mill Creek drainage, Lassen National Forest.
Top, left - Typical diversion gully running down a road.
Bottom, left - Recontouring the slope and filling of the gully.
Bottom, right - Mulching along drainage on the obliterated road.



Figure 2. Example of a road decommissioning project performed in subwatershed M11 of the Mill Creek drainage, Lassen National Forest.
Top, left – A plugged culvert at a road crossing. An estimated 250 cubic yards of sediment backed up behind the plugged culvert.
Bottom left- Excavator digging out culvert.
Bottom, right – The crossing reshaped and armored.



><> ><> ><> ><> ><> <>< <>< <>< <>< <><

Collaborative Anadromous Fish and Watershed Management in the Klamath Basin

Background: The Klamath River was once the 3rd largest salmon-producing basin on the West Coast. It is home to a variety of commercially, recreationally and culturally important native fish species, including chinook salmon, coho salmon, steelhead, sturgeon and Pacific lamprey, shortnose sucker, Lost River sucker and bull trout. Four of these fish species have protection under the Endangered Species Act. Many of these fish species are trust resources of the Native American tribes in the Klamath River Basin.

There are 8 National Forests in the Klamath River Basin of California and Oregon that comprise 54% of the Klamath Basin and contribute more than 70% of the total basin runoff. The Forest Service is the steward of more than 14,000 miles of perennial streams and 64% of the Basin's fish bearing streams occur on National Forests. More than 15,000 miles of road are managed by national forests in the basin, 53% of which are located near streams.

Restoration Objectives: Projects being implemented are designed to achieve a wide-ranging integrated set of objectives such as reducing sediment from road systems, curbing the risk of wildfire to communities, restoring fire to fire-dependant ecosystems, rehabilitation of abandoned mine lands, enhancement of wetlands, and restoring fish passage at road crossings.

Partnerships and Funding: Aquatic restoration measures are being addressed through integration with forest plans, the Healthy Forest Initiative, and the National Fire Plan. Aquatic habitat restoration projects on national forests are developed through extensive collaboration with local communities, States, Tribal Governments, other Federal agencies, and interested members of the public. More than \$8 million in external partnership contributions to aquatic habitat restoration over the past 4 years has leveraged the Forest Service's ability to meet restoration objectives.

Restoration Activities & Opportunities: The Forest Service emphasizes ecosystem-based restoration throughout the basin for the benefit of all fish species as a means of preventing future listings and addressing recovery of Threatened and Endangered species. Specific activities include:

- **Improving Fish Passage** The Forest Service is an active member of the interagency California Fish Passage Forum and coordinates with State and county governments during inventories and project planning. A complete assessment of fish passage barriers associated with Forest Service roads has been completed for anadromous fish producing watersheds in California. In FY 2003 and 2004, the Forest Service allocated \$2 million to restore 38 miles of habitat by remediating barriers at 17 sites. Another 60 sites have been identified as barriers to 1 or more miles of fish habitat for future restoration. The Forest Service also works through the local Resource Conservation District to assist private landowners in installation of fish screens downstream of important coho salmon and steelhead habitat.

- *Improving Watershed Condition* A variety of upland, streamside, and wetland treatments are being applied by the Forest Service to rehabilitate watersheds. On steeper forested landscapes, roads present the single largest impact to aquatic species. Based upon field inventories more than half of the controllable sediment and hydrologic impairment associated with roads can be treated by targeting a small proportion of the road system. National Forests have begun landscape treatments of roads in recent years, much of which has occurred in partnerships with states and tribes. There are numerous opportunities to continue focused road treatments that yield resilient aquatic habitat and reduce the long-term financial cost of roads. In FY 2003, a total of 755 acres of riparian, watershed and wetland were restored for water quality improvement. Restoration treatments included 455 acres of riparian conservation through grazing exclusions and 300 acres of wetland rehabilitation. Environmental upgrades to 89 miles of roads were implemented which reduced sediment input to adjacent streams and improved water quality. In addition, 46 miles of identified roads were decommissioned, reducing water quality risks in the Klamath River and tributaries.
- *Reducing Hazardous Fuels* The Region 5 National Forests in the Klamath basin contain approximately 1 million acres of wildland urban interface (WUI). About 47% of these acres are identified at risk from high and moderate severity fires. Under the NFP the forests need to annually treat 25,500 acres within the WUIs over the next 30 years. In FY2003, hazardous fuels were treated on 27,306 acres of National Forest lands, reducing the future threat of wildfire impacts on wildlife habitat and water quality.
- *Abandoned Mine Lands Reclamation* In 2003, threats to *Sensitive* spring-run Chinook salmon were substantially eliminated by removal of approximately 8,000 cubic yards of unstable earthen dams associated with an abandon mine in the Salmon River Subbasin. In addition, the first phase of road improvements, capping and restoration of contaminated mine tailings in the Dillon Creek watershed was initiated at the Siskon Mine CERCLA (Superfund) site.

Interagency Conservation Efforts: The Forest Service participates in the following interagency conservation efforts.

- *Klamath River Basin Fisheries Task Force and Klamath River Fishery Management Council*, which were formed to restore anadromous fish populations in the Basin.
- *Trinity River Restoration Program* as part of the eight member interagency Trinity River Management Council. The mission of this program is to restore, enhance, and conserve naturally-spawning anadromous salmonids, native plant communities, and associated wildlife resources of the Trinity River Basin.
- *Coastal Salmon Restoration Program* through which the National Forests work closely with California Department of Fish and Game staff, local watershed councils and tribal governments on development of fish habitat restoration projects, upslope resource inventories, watershed assessments and fisheries investigations.

Ecosystem Restoration Planning Efforts: The Forest Service participates in the following ecosystem restoration planning efforts.

- *Recovery Strategy for California Coho Salmon* The State of California has developed a draft plan for coho salmon recovery. The National Forests are active collaborators with the State in development of plan activities which are currently before the State Fish and Game Commission for consideration.
- *Recovery Plan for Southern Oregon/Northern California Coho Salmon* The Forest Service continues to provide technical support to NOAA Fisheries Technical Recovery Team. A National Forest fisheries biologist is participating as an official member of the formal recovery team in identifying population and habitat objectives for the Southern Oregon/Northern California coho salmon ESU.
- *Water Quantity* The Forest Service has provided technical support to hydropower relicensing proposals on the Klamath Project and continues coordination with state and federal agencies, utilities, and non-governmental organizations during the licensing process.
- *Water Quality* The Forest Service has been actively involved in processes to improve water quality on National Forest System lands within the basin. These efforts include:
 - Coordination with states and tribes in development of Total Maximum Daily Loads and implementation plans for impaired waters.
 - Coordination with states during project development to minimize non-point source and cumulative watershed effects. This includes active implementation and monitoring of Best Management Practices designed to protect water quality.
 - Watershed restoration programs, as previously described.
- *Subbasin Plans and Assessment* The National Forests continue to provide technical support to Subbasin Planning process being coordinated through the Klamath River Fisheries Restoration Task Force.. At present, National Forests have developed or provided technical support to the Salmon River, Scott River, and mid-Klamath River Subbasin planning assessments
- *Watershed Analysis and Plans* Watershed analyses have been completed for approximately 70% of National Forest lands in the California portion of the Basin. These analyses identify opportunities that indirectly or directly relate to protection and restoration of aquatic habitats on National Forest System lands to promote recovery of ESA-listed salmonids.

Monitoring/Adaptive Management:

- *Forest Plan Monitoring* The Forest Service and the Bureau of Land Management are jointly implementing the Northwest Forest Plan Aquatic and Riparian Effectiveness Monitoring Plan (AREMP). This program is intended to characterize the ecological condition of watersheds, streams, and riparian areas on federal lands covered under the Northwest Forest Plan (NWFP). This includes the Mendocino, Shasta-Trinity, Six Rivers, Modoc, and Klamath national

forests in California. AREMP will assess present watershed conditions, track trends in watershed condition over time, and report on the NWFP's effectiveness across the region.

Over a five-year period, a total of 250 watersheds will be sampled in Washington, Oregon and northern California within the NWFP area. Watershed conditions are being assessed by analyzing indicator values using a decision support model that incorporates physical, chemical, and biotic relationships developed by provincial and regional experts. Significant progress has been made with State agencies to coordinate monitoring approaches and collection of data.

- *Cumulative Watershed Effects and BMP effectiveness in Northern California* The Forest Service Pacific Southwest Regional Office and the University of California (Berkeley) signed an agreement in 2003 for the first of a planned five-year study to evaluate cumulative watershed effects (CWE) and BMP effectiveness on national forests in Northern California. Scientists from USFS Pacific Southwest Research Station (PSW) are also participating in this investigation. The objectives of the study are to:
 - develop quantitative information regarding natural and human-caused erosion and stream conditions in selected Northern California watersheds.
 - determine how biologically significant properties of different types of channels respond to different sediment loads.
 - validate the degree to which road and timber management BMPs are effective in protecting water quality.

Regional Roundup Calendar

Region	Issue
Pacific Southwest Region	1/14/05
Pacific Northwest Region	1/21/05
Southern Region	1/28/05
Eastern Region	2/04/05
Alaska Region	2/11/05
Northern Region	2/18/05
Rocky Mountain Region	2/25/05
Southwest Region	3/04/05
Intermountain Region	3/11/05

Migration Opportunities (Federal job announcements: http://jobsearch.usajobs.opm.gov/agency_search.asp)

- Job announcement: The International Association of Fish and Wildlife Agencies (IAFWA) seeking applications for a National Fish Habitat (NFHI) Research Liaison, under cooperative agreement with the USGS Biological Resources Discipline. The Liaison will develop a comprehensive database using existing information on past and current fisheries habitat projects in the United States. The database will be used

to develop a NFHI central clearinghouse for methods, protocols, and project designs for the National Fish Habitat Initiative Conservation Plan.

The successful candidate will follow a work plan developed jointly by the IAFWA and the USGS-BRD Fisheries: Aquatic and Endangered Resources Program. The Liaison will work primarily out of the IAFWA offices in Washington, D.C., in cooperation with the USGS-funded Science and Research Liaison. The position is available immediately, and is funded for a term not to exceed 12 months from entry onto duty. Salary will be based on qualifications and experience.

For further information, contact:

Dr. Russ Mason
Science and Research Liaison
International Association of Fish and Wildlife Agencies
444 North Capitol Street, NW
Washington, D.C. 20001
(202) 624-5853
rmason@iafwa.org

- **Director Public Lands Initiative**

Trout Unlimited (TU) is seeking to hire a national director for TU's Public Lands Initiative (PLI). The PLI was formed in 2002 primarily to organize TU members and other hunters and anglers in support of balanced, responsible public lands policies and protection. The PLI work is mostly in western states and has three divisions: Oil & Gas work; Roadless Lands Protection and Mining Restoration. Presently the PLI has four full time employees with current plans to double that number. Please refer to: <http://publiclands.tu.org/> for complete information on the PLI.

The PLI Director position will involve oversight of the PLI program and its employees. The ideal candidate will have strong organizational, leadership and people skills, be able to delegate responsibility and handle strong personalities. The position will be housed in the western United States (likely co-located with another TU office, if possible). The person should be an articulate and passionate advocate for public land conservation, fishing and hunting, and able to work in collaboration with state and federal agencies, other conservation and environmental groups and industry representatives. The Director must have experience in managing budgets and staff and other attendant administrative requirements, well as experience in fundraising and grant writing.

Candidates must have strong written and public communications skills as well as good computer skills. The ideal candidate should have a college or advanced degree in a relevant field, live in a western state, have a strong background of fishing and hunting and a love for wild places. Travel will be required. Fundraising experience will also be beneficial. Pay and benefits will be competitive.

If you think you would enjoy the team atmosphere that comes from working for an organization with a strong and broad conservation mission, if you want to ensure that America's last wildlands and watersheds remain intact for future generations, and desire to take advantage of a lifelong love affair with wild places, then email, fax, or mail your resume, cover letter and salary history to sportsmen@tu.org, Trout Unlimited, Attn: Chris Wood, 1300 North 17th Street, Suite 500, Arlington, VA 22209, 703-284-9400 (fax).

- **Out reach notice** - The Gifford Pinchot National Forest is conducting outreach to identify candidates for an exciting and rewarding challenge as the Fishery Biologist at Mount St. Helens National Volcanic Monument (MSHNVN). The Forest is seeking to fill a permanent, full-time Fishery Biologist GS-0482-11 with a duty station of Amboy, Washington. The position will be advertised soon on the USA Jobs website: <http://www.usajobs.opm.gov/>

For more information regarding this position, please contact Karen Thompson, Watershed Resources Manager, at (360) 449-7826, karenmthompson@fs.fed.us; or Cliff Ligons, Monument Manager at (360) 449-7800 cligons@fs.fed.us

- **Outreach Notice:** The Southern Region of the USDA Forest Service will soon advertise the position for Director of the Biological and Physical Resources (BPR) Unit. We plan to advertise it as a GS-15 or a GS-14/15. The results of this outreach will determine what grade(s) we advertise it.

The Southern Region of the USDA Forest Service encompasses thirteen Southern states, plus Puerto Rico and the Virgin Islands. Fourteen National Forests and Grasslands, four National Recreation Areas and the Savannah River Natural Resources Management and Research Institute make up the Southern Region. The Region accounts for approximately ten percent of the total Forest Service workforce. Most of the 3100 Forest Service employees within the Southern Region work in field offices overseeing National Forest operations, about 300 work in the Regional Office in Atlanta. The Regional Office has five primary staff areas: Natural Resources, State and Private Forestry, Operations, Civil Rights, and Public Affairs.

If interested, please contact Roberta Moltzen, Deputy Regional Forester, Natural Resources, telephone at 404-347-4177, or e-mail robertamoltzen@fs.fed.us.

Hotlinks:

- Forest Service Fisheries and Aquatic Ecology: <http://www.fs.fed.us/biology/fish/index.html>
- Fish Your National Forests: <http://www.fs.fed.us/fishing/>
- National Fish Habitat Initiative (NFHI): <http://www.fishhabitat.org>
- Large-Scale Watershed Restoration Projects: <http://www.fs.fed.us/largewatershedprojects/>
- Fish Ecology Unit: <http://www.fs.fed.us/biology/fishecology/index.html>
- Watershed and Air Management: <http://www.fs.fed.us/clean/>
- National Fishing and Boating Week: <http://www.nationalfishingandboatingweek.org/>
- NatureWatch: <http://www.fs.fed.us/outdoors/naturewatch/>
- Forest Service Research Stations – One stop shopping: <http://www.srs.fs.usda.gov/pubs/index.htm>

- Forest Service Research Station - Boise Aquatic Sciences Lab: <http://www.fs.fed.us/rm/boise/>

Sensory Stimulation:

"Truth has no special time of its own. Its hour is now - always."

Albert Schweitzer - On the Edge of the Primeval Forest

New Files for FishTales – FishTales can now be viewed in one of three ways. You can receive it via e-mail or go to our web site where it is available in a pdf or html version.

<http://www.fs.fed.us/biology/resources/pubs/fish/fishtales/>

FishTales® is a weekly update of activities of the Fisheries and Aquatic Ecology Program of the USDA Forest Service. All information presented is subject to change as projects evolve, opportunities arise and issues unfold. Contributions are welcome and should be submitted to Dave Cross at dcross01@fs.fed.us or Bill Lorenz at blorenz@fs.fed.us no later than close of business on Thursday afternoons. We reserve the right to edit contributions for clarity, brevity, and wherever possible, a dash of silliness and irreverence.

Positions listed are for outreach purposes only and are not full announcements. Interested individuals should contact the forests referenced or consult the USAJOBS website.

"The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation or marital or family status. (Not all bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audio tape, etc.) should contact the USDA's TARGET Center at (202)-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 326-W, Whitten Building, 1400 Independence Ave. S.W., Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer."

