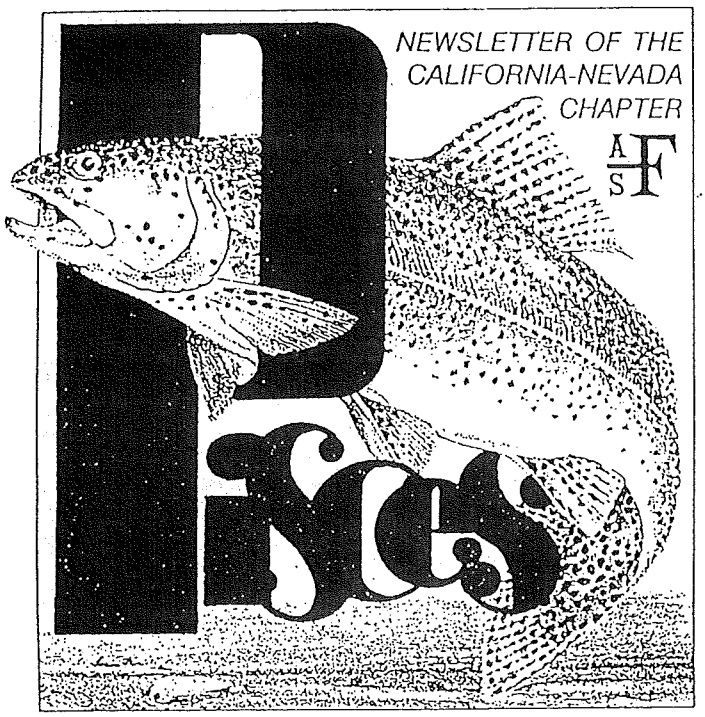


Promotes the Conservation Development and Wise Utilization of the Fisheries
A Publication of the California-Nevada Chapter, American Fisheries Society

VOLUME 24 NUMBER 1 **SPRING 1994**

PRESIDENT'S MESSAGE

On pages 2-4 of this issue of PISCES you will find information on the ESU Conference to be held in Monterey in May. I am working with the Washington office of AFS to get this out and do a general mailing, but I wanted to give CAL-NEVA members the first shot at learning about the conference, since registration will be limited on a first-come basis.

Speaker confirmations from around the world are rolling into my desk. This is going to be a major contribution from the CAL-NEVA Chapter to the development of fisheries conservation. It will also take a major contribution from chapter members to continue the organization. I will need help with the local arrangements, audio-visual support, entertainment and registration and can waive registration fees on a case-by-case basis for people committed to donating time. Let me know if and how you would like to help out. Call me at (510) 642-7525.

GET INVOLVED!

The Program for the Annual Meeting and the Klamath Symposium, March 21-24 in Eureka, is also included in this issue of PISCES -- see you there!

CONSERVATION COMMITTEE REPORT
JANUARY 1994

The Conservation Committee serves to alert the Chapter membership and Executive Committee (EXCOM) of upcoming and continuing aquatic environmental issues so that informed decisions can be made. One of the most important roles of the Conservation Committee is to provide the EXCOM with information so that the Chapter can act as another forum to provide expert opinion on a particular issue. If you feel that your agency, firm, university, etc. is not acting in the best interest of the aquatic resources on a particular issue, please feel free to contact the Conservation Committee Chair (Dennis McEwan - 916-653-9442).

Forest Issues

We provided comments on the *Draft EIS on Management of Habitat for Late-Successional and Old-growth Forest Related Species within the Range of the Northern Spotted Owl*. We were generally pleased with all of the Alternatives, except Alternatives 7 and 8. We support the inclusion of the Aquatic Conservation Strategy in whatever alternative is adopted. Specifically, we endorse provisions for establishing riparian reserves and Key Watersheds, and prohibiting new roads and reducing existing road mileage within Key Watersheds.

We provided comments on both the Klamath National Forest and the Shasta-Trinity National Forest Land and Resource Management Plans.

Endangered Species

In September, 1990, the Chapter petitioned to list the giant garter snake (GGS). A proposed rule was published in December, 1991 to list it as endangered. As of September, 1993, the final decision was 9 months overdue, so we sent a letter to the U.S. Fish and Wildlife Service (USFWS) voicing our concerns. We were also concerned that influential landowners and congressmen were attempting to intervene and circumvent the process. A final rule listing the GGS as threatened, without designating critical habitat, was published on October 20, 1993.

On January 6, 1994, the USFWS published a proposed rule to list the Sacramento splittail as a threatened species. The Chapter, as a co-petitioner with several other organizations, petitioned to list the splittail and the longfin smelt in November, 1992. Also on January 6th, the USFWS published their 1-year finding that listing the longfin smelt was not warranted because there is little or no population trend data for other populations throughout its range and the Sacramento-San Joaquin estuary population does not appear to be biologically significant to the species and may not be sufficiently reproductively isolated. We will be keeping abreast of this issue.

(continued on page 4)

A Three-Day Conference Hosted by The American Fisheries Society/Fisheries Action Network

EVOLUTION & THE AQUATIC ECOSYSTEM

DEFINING UNIQUE UNITS IN POPULATION CONSERVATION

LOCATION: Doubletree Inn, Monterey, CA

DATE: May 23-25, 1994

The American Fisheries Society (AFS) along with the Bureau of Land Management, US Forest Service, the National Biological Survey, the Columbia River Inter-Tribal Fish Commission, the National Marine Fisheries Service, and the National Park Service is sponsoring an important three-day conference which will influence the future of population conservation. The intent of this conference is to establish a forum where the best available science can be applied to a conservation issue of great public and political importance.

A range of scientific experts working to describe discrete populations will come together to discuss the ways in which the scientific and management communities can define subunits of fish and other aquatic species for conservation purposes. This issue is one that could not only effect the legislation for defining individual stocks and subunits of fish populations, but could in turn be extended to plants and terrestrial animals.

BACKGROUND

Research biologists, managers, decision makers, and politicians are frequently faced with questions of what populations of fish to save. Increasingly there is a new set of questions generated from these queries: what is a unique population, what is a founding population, and what is the relationship between populations? These questions have been pursued in a number of disciplines, but so far definitive answers have been elusive. The problems become especially complicated in aquatic ecosystems, where temporal and spatial corridors connect subunits of metapopulations, making those subunits difficult to separate and analyze. There is a need for experts from these disciplines to combine their information, to establish consensus where possible, to refine the questions, and to identify new research to answer them.

CONFERENCE PRODUCTS

An executive summary (a synthesis of perspectives) will be available within three months after the conference, in time to contribute to the informed debate about reauthorization of the Endangered Species Act. A conference proceedings, containing peer reviewed papers given at the meeting, will be available within eight months.

WHO SHOULD ATTEND?

Anyone who is working in conservation programs concerned with aquatic ecosystems, including all fisheries professionals, geneticists, systematists, natural resource managers, and tribal and agency personnel.

SPEAKERS AND TOPICS

AFS members take pride in always providing fisheries information that is on the cutting edge of science, and this conference will be no exception.

Plenary Speakers:

Eldridge Bermingham - Smithsonian Tropical Research Institute. Dr. Bermingham received his Ph.D. in genetics from the University of Georgia in 1986. Some of the awards and fellowships he has received include the National Institute of Health Training Grant in Genetics; Ernst Mayr Award, Best Student Paper; Society of Systematic Zoology; National Academy of Sciences; National Research Council Research Associateship; and the Alfred P. Sloan Foundation Postdoctoral Fellowship for studies in Molecular Evolution.

Dr. Bermingham has written a number of publications related to molecular studies of evolution. Some of his article topics in this field include: characterization of mitochondrial DNA variability in a hybrid swarm between subspecies of bluegill sunfish; molecular zoogeography of freshwater fishes in the southeastern United States; and size polymorphism and heteroplasmy in the mitochondrial DNA of lower vertebrates.

J. B. Callicott - Dr. Callicott is Professor of Philosophy and Natural Resources at the University of Wisconsin-Stevens Point. Since his contribution to the first issue of the journal Environmental Ethics in 1979, his work has been at the forefront of the new field of environmental philosophy and ethics. Also, Leopold's A Sand County Almanac is its seminal text, and Callicott has been called "the leading contemporary exponent of Leopold's land ethic." Calicott's 1989 In Defense of the Land Ethic explores the intellectual foundations of Leopold's nascent insights and provides them with a full theoretical expression and development.

Callicott has served as guest editor of the venerable philosophy journal, the Monist, and his articles and essays have appeared in such professional philosophicals as the *American Philosophical Quarterly*, *Inquiry*, and *Philosophica*, and in a variety of scientific journals such as *Fisheries* and *Conservation Biology*.

Phillip Mundy -- Dr. Mundy is a population biologist specializing in the conservation of Pacific Salmon, and in the management of human uses of Pacific Salmon.

Mundy has served as manager and senior research scientist for the Fisheries Science Department of the Columbia River Inter-Tribal Fish Commission and currently serves as technical advisor for the Scientific Review Group, Implementation Planning Process, Division of Fish and Wildlife, Bonneville Power Administration, Portland, Oregon.

Oliver Ryder - San Diego Zoo. Dr. Ryder received his doctorate from the University of California, San Diego in 1975. He manages a highly productive genetics laboratory and has applied his background in molecular genetics to the emerging science of conservation biology.

He is an associate editor of the Journal of Heredity, serves on the editorial board of *Conservation Biology*, and is a member of the Council of the American Genetics Association.

Robin S. Waples - Dr. Waples, a geneticist with the National Marine Fisheries Service, brought the term "Evolutionarily Significant Units" into the regulatory arena. He is the author of several publications including a multispecies approach to the analysis of gene flow in marine shore fishes and conservation of Pacific salmon.

Some of Waples' current research interests include application of the Endangered Species Act to Pacific salmon, genetic conservation of Pacific salmon populations, and patterns of gene in marine fishes.

Session Chairs:

Fred W. Allendorf -- **Genetics**

Dr. Allendorf is on the faculty at the University of Montana. His main interests are in the areas of evolution, population genetics, and conservation biology. Much of his research is centered on salmonid fishes: trout, salmon, grayling, char, and whitefish.

Another focus for Allendorf has been on the significance of genetic variation within natural populations. He, along with two colleagues, has found that "many phenotypes related to fitness are correlated with individual heterozygosity within populations."

Allendorf has been active in applying the principles of population and evolutionary genetics to the conservation of salmonids and a variety of other species (e.g., grizzly bears and bighorn sheep). He is currently using biochemical and molecular genetics to describe intraspecific patterns of genetic variation and phylogenetic relationships in many of these species.

George W. Barlow -- **Behavior and Life History**

Dr. Barlow teaches and conducts research in two areas, ichthyology and animal behavior at the University of California, Berkeley. Most of his research has been on the behavior of cichlid fishes, but he has also studied the behavior of coral reef fishes, such as surgeonfishes, hamlets, and the longnose filefish. He has remained active in the Animal Behavior Society, becoming president in 1979, and was chairman of the Ecology and Animal Behavior Sections.

Barlow has been an editor of Ethology, and serves on the boards of a number of other scientific publications. He has published a total of 145 articles to date.

Robert J. Behnke -- **Morphology and Systematics**

Dr. Behnke is a professor in the Department of Fishery and Wildlife Biology at Colorado State University and serves as a Cooperator with the Larval Fish Laboratory. He is a world-renowned ichthyologist and an expert on the systematics and biology of trout, salmon, and related fishes. His interests and expertise include surveys, inventories, and identification of fishes; rare, endangered, and threatened fishes; distribution and speciation of fishes; environmental factors influencing fish distribution particularly in relation to human-induced environmental changes; and application of intraspecific genetic diversity to fisheries management.

Behnke has taught courses on ichthyology, zoogeography, and fisheries management at the University of California and Colorado State University, and has participated in numerous conferences and symposia on fishes, fisheries, and environmental concerns.

Peter A. Bisson -- **Ecosystems, Watersheds, and Habitat**

Dr. Bisson is an aquatic biologist at Weyerhaeuser Company, Tacoma, Washington. He received a B.A. in environmental biology from the University of California at Santa Barbara, and an M.S. and Ph.D. in fisheries from Oregon State University. He is an affiliate of the Center for Streamside Studies and the Fisheries Research Institute at the University of Washington, and is a guest faculty member in the Department of Fisheries and Wildlife at Oregon State University.

His research interests include stream habitat analysis, factors limiting the production of salmon and trout, and the biodiversity of fishes in forested streams. He serves on the National Research Council Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, and chairs the American Fisheries Society (AFS) Western Division Stream Habitat Procedures Committee. He is currently an associate editor of the *Transactions* of AFS.

Dale Burkett -- **Regulatory Guidelines**

Mr. Burkett received his B.S. in Ecology and Ethology from the University of Illinois and his M.S. in environmental biology from Eastern Illinois University. He spent four years as project coordinator with the Illinois Natural History Survey, where he conducted research on hook-and-line vulnerability of largemouth bass. Upon completion of his research, Burkett became a district fisheries manager for the Illinois Department of Conservation in northeastern Illinois responsible for all aspects of fisheries management in State, public and private waters.

In May 1993, Burkett accepted a position with the U.S. Fish and Wildlife Service as Deputy Director of the Great Lakes Coordination Office with responsibility for building a Great Lakes Ecosystem Partnership composed of federal, state, provincial, industrial, organizational, and private partners.

RESERVATIONS AND FEES

Registration fee prior to May 1, 1994:
- AFS regular members $160
- AFS student members $140
- Non-member students $170
- Regular non-members $220

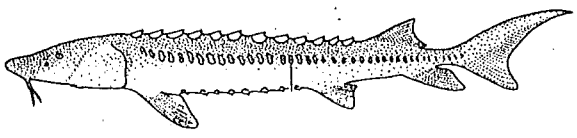
After May 1, registration will be $250, if available.

All reservations at the Doubletree Inn must be made by the cut-off date of **April 2, 1994**. Any reservations received after this cut-off date will be honored on a space and rate availability basis only, so early reservations are recommended. For single or double occupancy, the rate is $99. To contact the Doubletree Inn reservation department directly, telephone (408) 649-4511. **(Each attendee is responsible for his/her own hotel reservations.)**

TRAVEL INFORMATION

For your convenience, the Monterey Peninsula Airport is only ten minutes from the hotel. Rental cars and taxi cab services are available. For further airlines information call (408) 373-3731.

A REGISTRATION FORM FOR YOUR USE IS ON PAGE 5



CONSERVATION COMMITTEE REPORT
(continued from page 1)

We are reviewing the status of several California native fish species for possible listing.

Aquatic Habitat Mitigation and Restoration Fund

We joined with the Natural Heritage Institute and several other organizations to petition the State Water Resources Control Board (SWRQB) to establish a fee assessment on all water users that divert from the Sacramento-San Joaquin system. This assessment, which is essentially a resurrection of the mitigation fund that would have been established by SWRCB Decision 1630, would be used to fund the state's share of the habitat restoration costs of the Central Valley Project Improvement Act and other mitigation and restoration measures. The SWRCB has deferred consideration of the petition until they take up the Bay-Delta proceedings again.

A Special Symposium

of the

American Fisheries Society

Uses & Effects

of

Cultured Fishes

in

Aquatic Ecosystems

Doubletree Hotel

and

Convention Center

Albuquerque, New Mexico

March 12-17, 1994

Symposium Chairman ..... Delano Graff
Registration ..... Marty Marcinko
..... Fred Binkowski

Commonwealth of Pennsylvania
Fish & Boat Commission
Bureau of Fisheries,
450 Robinson Lane, Bellefonte, PA 16823
814-359-5154 (FAX-5153)

ESU CONFERENCE REGISTRATION FORM

_____	AFS Regular Member	$160 Registration
_____	AFS Student Member	$140 Registration
_____	Non-member Student	$170 Registration
_____	Regular non-member	$220 Registration
_____	After May 1	$250 Registration

.....

To help us plan for the special activities we need you to answer a few a questions:

Arrival date and time:_____

Departure date and time:_____

Included in your registration fee is dinner at the Monterey Bay Aquarium on Monday, May 23.

NAME:_____ TITLE:_____

NAME (as you wish to see it on your name tag):

_____

AFS MEMBERSHIP NUMBER:_____

AFFILIATION:_____

ADDRESS:_____

_____

CITY:_____ STATE:_____ ZIP:_____

TELEPHONE NUMBER: FAX NUMBER:

PAYMENT:

Send payment (in U.S. currency only) and registration form to: Christine Gan or Cindy Carpanzano, Department of Molecular and Cell Biology, 401 Barker Hall, AC Wilson Laboratory, University of California, Berkeley, California 94720-3202.

TELEPHONE: (510) 642-7525 FAX: (510) 643-5035

_____ Check

(Make payable to: American Fisheries Society-ESU)

_____ Mastercard

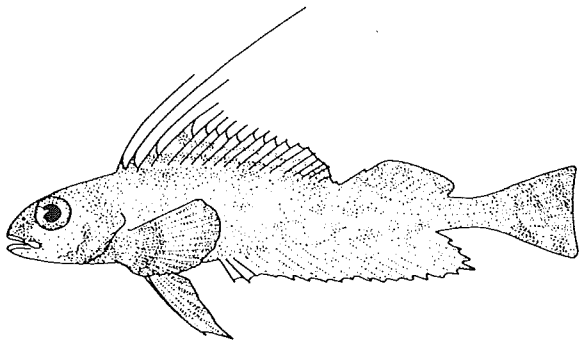
_____ Visa

Card #_____

Expires_____

Signature _____

Total amount enclosed $_____



Klamath Basin Fisheries Symposium
March 23-24, 1994
Red Lion Inn, Eureka, CA

Information

The Klamath River anadromous fisheries resources have dwindled over the decades, and in recent years, much attention has focused on various efforts and programs to restore salmon and steelhead. Physical, biological, management, political, and economic obstacles have affected the restoration of the Klamath River fishery resources. Klamath Basin salmonids are subject to mixed stock ocean fisheries, and tribal, and sport fisheries in the river environment. The spring run chinook, coho salmon, and other species are potential species for listing under the federal Endangered Species Act. Within the Pacific Northwest, the Klamath Basin is a focal point of resource controversy, as well as the leading edge of contemporary salmonid restoration efforts.

This Klamath Basin Fisheries Symposium was developed in response to the enormous professional challenge confronting Klamath River Basin resource managers. The symposium will address four distinct areas challenging Basin managers: physical, biological, management, and ecosystem management. Recognized professionals from outside the Basin have also been recruited to provide new perspectives, contributions, and critiques of present restoration efforts. Symposium participants shall consist primarily of investigators and managers from within the Basin. Presentations and recommendations shall be summarized in symposium proceedings.

This symposium is intended for fellow investigators and managers within the Klamath River Basin. All other parties interested in the Basin's anadromous resources are welcome. The audience will have the opportunity to post written questions for the speakers during scheduled breaks. The moderators will select the questions for speakers to respond to during the panel session. In this way, we expect that this symposium will provide contemporary insights into possible ways to improve current management and restoration efforts, and also present new perspectives and solutions.

Symposium Topics

Physical Challenges

The increase in human population puts pressure on the physical environment. There are physical settings and processes in which fish must exist, and which limits their distribution and abundance. Our challenges are to manage fisheries under these conditions and where possible to restore the habitats and physical processes necessary to allow the restoration of our fisheries. What are the roles of climate, geology and hydrology in influencing the fisheries populations and habitats? How do dams/diversions, and water quality affect the ecology of salmonids. How would this knowledge potentially help us achieve restoration of Klamath-Trinity Basin fish stocks? The presenters will address these various topics.

Biological Challenges

Identify the information and scientific data required to support a biological-based management approach to the restoration of anadromous fish populations in the Klamath River Basin. We need to find out more about critical life history stages, interactions between natural and hatchery fish, and identification of "unique" stocks within the basin. What is the technology available for discrimination of fish stocks, and how can this information be used to maintain genetic diversity? Is there a need to standardize genetic investigations? Is disease a problem in the Basin, and what type of assessment is needed? The speakers will present state of the art findings, and offer insights to these complex issues.

Fisheries Management

Fisheries management is a complex and difficult subject, involving diverse groups of disciplines, and special interests. Effective management needs to be adaptive, and requires accurate information provided through life history investigations, population monitoring, and mathematical modeling. These aspects are crucial to adapting the management of our anadromous fisheries to the changing environmental conditions and human pressures within the Klamath River Basin. This portion of the symposium will explore mixed stock management, ocean and river allocation issues, and hatchery related issues such as mass-marking, release strategies, and interactions with wild stocks.

Ecosystem Management

Explore the concept of ecosystem management. The public appears to be demanding greater and more diverse benefits from public lands accompanied by a more environmentally sensitive application of commodity extraction activities. There is urgent need for short and long-term flexible management planning that will allow for some local economic activity combined with a scientifically based move towards ecosystem management. Focus will be on fishery restoration management. Speakers will make short presentations, interact as a group, and with the audience. The intent is to articulate and discuss representative views on ecosystem management and its implications for fishery restoration.

For additional information, contact George Kautsky at (916) 625-4267, or David Fuller at (707) 442-1721 and be sure to look at the Program on pages 6 & 7.

KLAMATH RIVER SYMPOSIUM

MARCH 23, 1994

0700 **LATE REGISTRATION**
0800 **INTRODUCTION/INVOCATION**
Dale Risling, Chairman, Hoopa Valley Tribal Council

0830 **KEYNOTE SPEAKER**
David Cottingham, Counselor to Assistant Secretary for Water and Science
Department of the Interior, Washington, D.C.

PHYSICAL CHALLENGES Moderator: Hiram Li

0900 INTRODUCTION
Hiram Li, PhD, Assistant Project Leader, Oregon Cooperative Fisheries Research Unit, National Biological Survey
Corvallis, OR

Climate, Geology and Hydrology
Gabriella Meyer, PhD, University of California, Davis, CA

Bill Weaver, PhD, Watershed Consultant, Pacific Watershed Associates, McKinleyville, CA

Dams and Diversions
William Trush, PhD, Professor of Fisheries, River Institute, Humboldt State University, Arcata, CA

Ocean Conditions
Peter Lawson, PhD, Fishery Biologist, Oregon Dept. of Fisheries and Wildlife, Newport, OR

Panel Discussion (includes presenters and moderator)

1200 LUNCH BREAK

BIOLOGICAL CHALLENGES Moderator: Don Erman

1330 INTRODUCTION
Don Erman, PhD, Director, Centers for Water and Wildland Resources, University of California, Davis, CA

Life Histories
Michael Mohr, PhD, Department of Fisheries, Humboldt State University, Arcata, CA

Stocks
Michael Wallace, Fishery Biologist, California Department of Fish and Game, Arcata, CA

Roger Barnhart, PhD, Project Leader, California Cooperative Fishery Research Unit
National Biological Survey, Arcata, CA

1415 BREAK

Genetics
James Vilkitas, PhD, Professor of Natural Resources Planning, California Polytechnic University, San Luis Obispo, CA

Kenneth Jones, PhD, Professor of Biological Sciences, California State University, Northridge, CA

Disease
Scott Foott, PhD, Fish Pathologist
U.S. Fish and Wildlife Service, California/Nevada Fish Health Center, Anderson, California

1530 Panel Discussion (includes presenters and moderator)

MARCH 24, 1994

FISHERIES MANAGEMENT Moderator: Billy Frank
0800 INTRODUCTION
Billy Frank, Chairman, Northwest Indian Fisheries Commission, Olympia, WA

Stock Management
Alan Baracco, Senior Marine Biologist, Marine Resources Division,
California Dept. of Fish and Game, Rancho Cordova, CA

Joseph Polos, Fishery Biologist, U.S. Fish and Wildlife Service, Arcata, CA and Yurok Tribal Fisheries Dept. Klamath, CA

Hatchery/Artificial Propagation
Robert Corn, Fishery Management Supervisor, California Department of Fish and Game, Redding, CA

Harvest Management
L.B. Boydstun, Fishery Program Manager, California Department of Fish and Game, Sacramento

Susan Masten, Yurok Interim Tribal Council Member, Yurok Tribe, Klamath, CA

Pliny McCovey, Vice Chairman, Hoopa Valley Tribal Council, Eureka, CA

David Bitts, Vice President, Humboldt Fisherman's Marketing Association, Eureka, CA

Danny Jordan, Self-Governance Coordinator, Hoopa Valley Tribe, Hoopa, CA

Rodney McInnis, National Marine Fisheries Service, Long Beach, CA

Panel Members (in addition to the moderator and presenters)
William Shake, Assistant Regional Director, U.S. Fish and Wildlife Service, Portland, OR

Peter Lawson, PhD, Oregon Department of Fisheries and Wildlife, Newport, OR

ECOSYSTEM MANAGEMENT Moderator: Russell Sadler

1330 INTRODUCTION
Russell Sadler, Political Columnist & Professor of Journalism, Southern Oregon State College, Ashland, OR

Speakers
Malka Pattison, Policy Analyst, U.S. Dept. of Interior, Washington D.C.

Jim Lecky, Chief of Endangered Species Unit, National Marine Fisheries Service, Long Beach, CA

Elwood Miller, Natural Resources Specialist, Klamath Tribe, Klamath Falls, OR

Sari Sommarstrom, PhD, Natural Resource Planner and Scott River CRMP Coordinator, Etna, CA

Felice Pace, Program Coordinator, Klamath Forest Alliance, Etna, CA

Joan Smith, Klamath Alliance for Resources and Environment, Yreka, CA

Member of Board of Supervisors, Trinity County, Weaverville, CA

Randal O'Toole, Forest Economist and Editor, Forest Watch, Portland, OR

Jim Sedell, Research Ecologist, Pacific Northwest Research Station, USDA, Corvallis, OR

INSTREAM FLOW INCREMENTAL METHODOLOGY (IFIM) EXECUTIVE BRIEFING

A WORKSHOP SPONSORED BY THE CALIFORNIA-NEVADA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

THE COURSE: This one day overview course is designed to provide supervisors and managers with the basic principals and concepts of Instream Flow Incremental Methodology (IFIM) applications. The course is intended to provide a broad overview to those responsible for overseeing staff who conduct or review instream flow studies, or are involved with negotiations and agreements based on IFIM studies.

THE INSTRUCTOR: Thomas Payne, a Certified Fisheries Scientist, has been a professional Fisheries Biologist for over 20 years. He has been a principal with Thomas R. Payne and Associates Fisheries Consultants for the past twelve years, specializing in instream flow analysis and stream ecology. His company has been involved with nearly 200 IFIM applications during that time. Mr. Payne teaches a similar class as an Associate Professor of Fisheries at Humboldt State University.

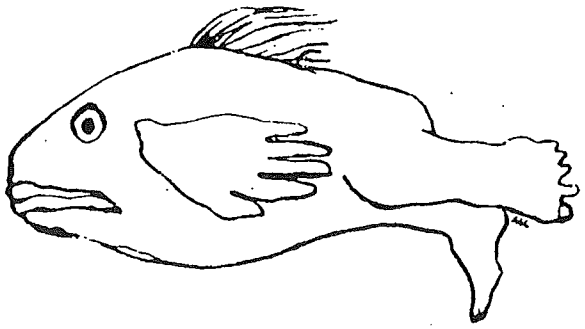
COURSE DATE: April 26, 1994.

LOCATION: National University, 9320 Tech Center Dr., Sacramento.

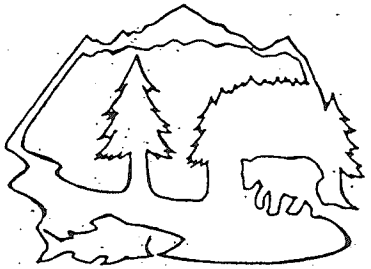
COST: $110 per person for AFS members, $130 for non-members (does not include travel or lodging expenses).

BRING TO THE COURSE: Paper and pencil only.

TO ENROLL OR GET MORE INFORMATION: Call or write Paul Forsberg, Department of Fish and Game, Environmental Services Division, 1416 9th St., Room 1341, Sacramento, CA 95814, telephone (916) 654-2578. Enrollment deadline is March 29, 1994. An agency or personal check should accompany your enrollment request. For State and Federal employees a copy of your approved training request will be sufficient to hold a space. Enrollment is limited to the first 30 paid registrants and is on a first come, first served basis. This course has a minimum of 20 registrants.



be part of your profession



Watershed Restoration: Assessment, Prevention, and Rehabilitation

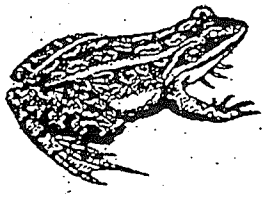
Sunday
March 20
9am - 5pm

Danny Hagans and Dr. Bill Weaver

Cost effective watershed restoration is urgently needed in drainages throughout the Western States in order to restore healthy populations of fishes. Although much technology is currently available for specific restoration projects, proper assessment and priority-setting can greatly improve the effectiveness of a watershed restoration program.

The workshop will consist of a morning session covering field inventory and assessment techniques, data collection forms, computerized analysis procedures, determining treatment priorities, developing prescriptions, estimating costs, cost-effectiveness analysis, and monitoring. In the afternoon, participants will visit a roaded and partially logged watershed to analyze completed assessment work and pilot erosion prevention projects that have been undertaken. Transportation and lunch will be provided. Wear your boots!

$100 per person. Attendance limited to 30.
Location: Red Lion Inn, Eureka



Sunday
March 20
9am - 4pm

Monitoring Cumulative Watershed Effects: A survey of effective, low-cost tools.

Dr. Tom Lisle, Chris Knopp, Jerry Boberg, and Rich Nawa

This workshop is designed to introduce participants to several low-cost, relatively uncomplicated methods and devices that can be used to monitor stream health. Techniques and devices that require minimal investment in equipment will be emphasized. The methods that will be covered by this workshop include: RASI, V*, continuous temperature recorders, and scour chains.

The workshop will include a half-day session of indoor instruction focusing on stream processes and necessary background knowledge needed to use these techniques. The afternoon will be spent at a nearby stream where workshop participants will get "hands-on" experience with the monitoring techniques.

$75 per person. Attendance limited to 25 participants
Location: Adorni Center, Eureka

Monitoring Amphibians and Reptiles in Old Growth Forests and Other Habitats

Wednesday
March 23
1pm - 5pm

Hartwell H. Welsh, Jr., Amy Lind, Devin Reese, and Lisa Ollivier

Biologists are becoming increasingly aware of the importance of amphibians and reptiles to ecosystems and their value as indicators of environmental health. Building dependable data sets on distribution and abundance of these animals is essential for long term monitoring.

Participants in this workshop will learn sound sampling techniques used to sample populations of amphibians and reptiles in both aquatic and terrestrial habitats. Sample size and sampling bias will also be discussed. The uses of amphibians and reptiles as indicator species will be emphasized.

$45 per person. Attendance limited to 25
Location: Red Lion Inn, Eureka

Registration Form

Humboldt Chapter AFS Workshops:
Red Lion Inn, Eureka, CA
March 20 and 23, 1994

Name _____

Affiliation _____

Address _____

City _____

State _____

Zip Code _____

Workshops

Watershed Restoration ($100) _____

Monitoring Cumulative Watershed Effects ($75) _____

Monitoring Amphibians and Reptiles ($45) _____

Total Enclosed: _____

Preregistration must be postmarked by March 1st, 1994

Mail this form to:

Humboldt Chapter AFS
Attn: Workshop Registration
PO Box 210
Arcata, CA 95521

For more information about workshops, contact David Fuller (707) 839-5253

Check or Money Order payable to Humboldt Chapter AFS.
We're sorry, we cannot accept Purchase Orders or SF 182's.

TENTATIVE PROGRAM
JOINT CAL-NEVA AND HUMBOLDT CHAPTER
AMERICAN FISHERIES SOCIETY MEETING
MARCH 21-22, 1994
RED LION INN EUREKA CALIFORNIA

Monday, March 21, 1994

8:00 - 8:15 Introductory Remarks

8:15 - 10:00 Plenary Session

Speaker: Milton Love, Humor in Fisheries Research

10:00 - 10:15 Break

10:15 - 12:00 Salmon Stocks and the Endangered Species Act, Panel Facilitator, Patrick Higgins, Humboldt AFS

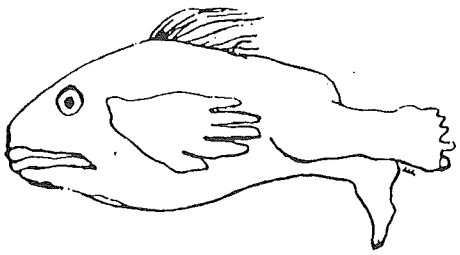
12:00 - 1:15 Lunch

1:15 - 3:15 Session #1 Marine Session
Chair, Pete Kalvass, CDFG
Mike Trianni, HSU Nat. Res Graduate Student
Tony Chess, National Marine Fisheries Service,Tiburon, CA
Ann Grey, HSU Fisheries Graduate Student
Wade Van Buskirk, CDFG

Session #2 New Approaches for Evaluating Cumulative Watershed Effects
Chair, Leslie Reid, USFS Pac. S.W. Research Sta.

Leslie Reid, An overview of CWE Analysis
Christopher Knopp, USFS Six Rivers Nat. Forest, Measuring Selected Indices of Fish Habitat Condition
Glenn Chen, USFS Intermountain Research Sta.A Quantitative Analysis of Cumulative Watershed Effects in the Elk River Basin, Oregon
Michael Furniss, USFS Six Rivers Nat. Forest Watershed Analysis: from PacFish to FEMAT to you

3:15 - 3:30 Break



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3:30 - 5:30 Session#3 Water Quality Fisheries/Management Interactions Chair, Jim Harrington, CDFG, Rancho Cordova, CA
Jewel Bennett and S. Schwarzbach, USFWS, Sacramento, CA, Bioassessment of the Effects of Irrigation Drainwater in the Klamath Basin
Robert Fujimura, B.J. Finlayson, C. Huang and C.Alpers, Keswick Reservoir: Toxicity of Metal Contaminated Sediments
Bruce Gwynne, RWQCB, N. Coast Reg., The Measurement of Fish Related Water Quality Parameters in the Shasta River, Siskiyou County
Tom King, J.M. Harrington, M. Lunday and K. Wagter, CDFG, Toxicity of Three Size Fractions of Asphalt Pavement Milled to Ceriodaphnia dubia
Roland Knapp, Univ. of Calif. Sierra Nevada Aquatic Research Lab., Mammoth Lakes, CA, The Effect of Livestock Grazing on Golden Trout in Their Native Streams
Steven Rae, CDFG, Board of Forestry Pilot Monitoring Program-Instream Study Component
Session #4 Restoring Watersheds to Prevent Extinction of Pacific Salmon Stocks: How Will We Do It?
Chair, Jack West, USFS Klamath Nat. Forest
Danny Lee, USFS Intermountain Forest and Range Experiment Sta., Making the most of Watershed Restoration: A Look at Some Basics
Bob Doppelt, Pacific Rivers Council, A National Initiative to Protect Pacific Salmon Refugia through Watershed Restoration
Tom Nickelson, ODFW, When Watershed Restoration Isn't Enough: Habitat Restoration for Coho Salmon
Bill Weaver, Pacific Watershed Associates, Assessing Erosion Potential and Implementing Preventative Measures to Reduce Watershed and Stream Damage During Flood Events

EVENING BUSINESS MEETINGS (5:30-6:30)
HUMBOLDT CHAPTER SPONSORED BANQUET

Tuesday, March 22, 1994

8:00 - 10:00 PLENARY SESSION-Timber Harvest/Fisheries Interactions. Chair, Jim Steele, CDFG

10:00 - 10:15 Break

10:15 - 12:00 Session #5 Winning Cooperation to Build a Comprehensive Fish and Water Quality Data Base
Chair, Ron Garrett, USFWS Klamath Ecosystem Management Office

Stan Allen, Overcoming Barriers of Multiple Jurisdictions to Build the Columbia River Information System
Bill kier, Wm. M. Kier Assoc., Using the Klamath Coordinated Information System (KCIS) to Monitor Success of the Klamath River Basin Fishery Restoration Program
Linda Stonier, National Park Service, Gathering Information to Assist in the California Rivers Assessment Program

Session #6 Contributed Papers
Chair, Lesa Meng, USFWS

1:15 - 3:15 Session #7 Wild Trout Management and Research
Chair, Chuck Knutson, CDFG, Sacramento, CA

Dave Lentz and Eric Gerstung, CDFG, Wild and Threatened Trout Management from a Statewide Perspective
Steve Parmenter, CDFG, Wild Trout Management in the Eastern Sierra Nevada and Southern California
Stan Stevens, CDFG, Wild Trout Management in the Southern Sierra Nevada
Kyle Murphy, CDFG, Wild Trout Management Along the Central California Coast
Bill Somer, CDFG, Wild Trout Management in North Central California
Mike Berry, CDFG, Wild Trout Management in Northern California

Session #8 Aquatic Resource Information Acquisition and Management for a Geographic Information System

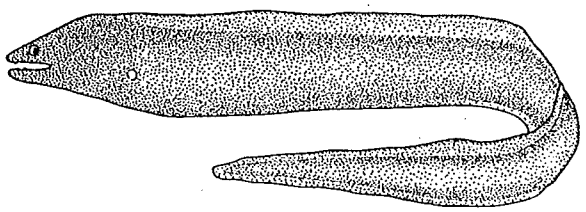
Mike Martischang, USFWS, The Utility of Integrating Habitat Typing Data into a Watershed GIS
Stacey Cepello, CDWR, Use of a GIS to Track Important Habitat Parameters for Recovery of Winter Run Chinook Salmon
Paul Veisze, CDFG, California Dept. of Fish and Game Efforts to Track Restoration on the Eel River using a GIS

3:15 - 3:30 Break

3:30 - 5:30 Session #9 Klamath Basin Non-Game Fish Issues
Chair, Mark Buettner, USBR

Session #10 Stream Channel and Habitat: Acquisition and Utilization Chair, Mike McCain, USFS

Hart Walsh, USFS, Amphibian Use of Habitat Types in Prairie Creek and Responses to Sediment Problems
Tom Lisle, USFS, Use of "V-star" Measurements in Tracking
Gary Reedy, USFS, Use of Habitat Subunit Stratification in Determining Habitat Use in Large Channels
Jim Wilcox, Plumas Corp., Application of Rosgen Stream Channel Typing: the Feather River Example
Bret Harvey, USFS, Analysis of Fish Distribution by Habitat Type in Small Streams



REGISTRATION FORM
CAL/NEVA AND HUMBOLDT CHAPTERS AFS ANNUAL MEETING
KLAMATH BASIN FISHERIES SYMPOSIUM
RED LION INN, 1929 4TH ST., EUREKA, CA 95501
(707) 445-0844

NAME_____

AFFILIATION_____

ADDRESS_____CITY_____STATE_____

CAL/NEVA-HUMBOLDT ANNUAL CONFERENCE, MARCH 21-22,1994

	BEFORE MARCH 1	LATE REGISTRATION	# ATTENDING	TOTAL AMOUNT
AFS MEMBERS	$30	$45	X_____	$_____
NONMEMBERS	$40	$50	X_____	$_____
STUDENT REGISTRATION	$15	$25	X_____	$_____
BANQUET		$15	X_____	$_____
RAFFLE TICKETS		$1	X_____	$_____
1994 ANNUAL DUES (if not paid to Nat.)		$5	x_____	$_____

KLAMATH BASIN FISHERIES SYMPOSIUM, MARCH 23-24, 1994

	BEFORE MARCH 1	LATE REGISTRATION	# ATTENDING	TOTAL AMOUNT
SYMPOSIUM WITH PROCEEDINGS	$45	$60	X_____	$_____
ATTENDANCE ONLY	$25	$40	X_____	$_____
PROCEEDINGS ONLY	$25	$25	X_____	$_____
STUDENT, ATTENDANCE ONLY	$15	$30	X_____	$_____

MEETING SUBTOTAL $_____

Donation for the sole use of the Conservation Committee $_____
Donation for the sole use of Educational Outreach $_____
Donation to the Jim Schuler Memorial Scholarship Fund $_____

TOTAL TO REMIT $_____

MAKE CHECKS OR MONEY ORDERS PAYABLE TO: CAL-NEVA AFS. NO PURCHASE ORDERS WILL BE ACCEPTED FOR THE EARLY REGISTRATION RATES. Send this form and payment to:Ed Cheslak, EA Engineering Science and Technology, 3468 Diablo Blvd, Suite B-100, Lafayette, CA 94549. We will accept checks, cash, travelers checks, money orders or purchase orders at the meeting--No Credit Cards.

RESERVATION REQUEST
CAL NEVA/HUMBOLDT CHAPTERS AMERICAN FISHERIES SOCIETY CONFERENCE
March 20,21,22,23 & 24,1994
Rates: $55.00 One Queen Bed - $65.00 Two Queen Beds - $85.00 One King Bed

Name (print)_____ Phone ( )_____

Address_____City_____ State___ Zip_____

How Many Rooms? ____ **How Many People?** ____

Date of Arrival _____ **Date of Departure**_____

Room Type: One Bed___ Two Beds___ King Bed ___ Smoking___ Non Smoking___

[ ] Visa [ ] Master Card [ ] Diners Club
[ ] American Express [ ] Carte Blanche [ ] Check or Money Order Enclosed

Credit Card Number:_____Exp Date_____Amount $_____
I authorize the Red Lion Inn Eureka to charge my account for one night's room and tax.

Signature_____Date_____
FINAL DATE TO MAKE RESERVATION: March 7,1994. **Cancel by 6pm day of arrival without penalty. (If calling reservation in, you must say you are with this Conference to obtain this rate)**
RED LION INN 1929 FOURTH STREET EUREKA, CA 95501
(707) 445-0844

AWARDS COMMITTEE REPORT
PROPOSAL TO REVISE THE CRITERIA FOR THE CHAPTER AWARD OF EXCELLENCE

BYLAWS CHANGE TO BE CONSIDERED AT THE ANNUAL BUSINESS MEETING ON MARCH 21,1994

It appears that we are not going to be able to award the Chapter's Award of Excellence as often as we used to, and that our members are not aware of its stringent selection criteria. The current criteria for the award in our Bylaws is:

"The Chapter Award of Excellence recognizes a Chapter member (who must by definition be a member of the National AFS) for professional excellence in research, management, education, publication, or for outstanding contributions to the profession, the Society, or fisheries conservation."

However, the actual criteria applied to all past nominees is more along the lines of the following statement:

"The Chapter Award of Excellence recognizes a Chapter and Parent Society member for exemplary depth and breadth of professional achievement in academia, government service, or private practice; combined with significant publications and/or conservation activities, and participation in Chapter activities. They must have achieved significant distinction on multiple fronts (professionally, scientifically, environmentally, and as a supporting Chapter volunteer). Those given this award should have achieved statewide recognition as a major authority or guiding force in California and/or Nevada fisheries management and science."

Many recent, and meritorious, award nominees do not even come close to these standards. Needless to say, neither will most of us in the course of our careers, but that is the point of having such a distinguished and prestigious award. In response to this, we created a new award at our 1992 Annual Meeting in Redding to recognize the efforts and accomplishments of the less superhuman among us, who have nevertheless distinguished themselves professionally. It is called the "Chapter Award for Distinguished Professional Achievement". At the 1992 meeting we were supposed to adopt the revised text in the preceding paragraph for our Award of Excellence, to better separate it from the Award for Distinguished Professional Achievement. However, things got lost in the shuffle, people were still confused about the issue at the 1993 Annual Meeting, and we still need to vote on this Bylaws change at the upcoming meeting in Eureka. I propose that we substitute the second description of the Chapter Award of Excellence for the one that exists in our Bylaws to codify the actual criteria by which we have always been giving this award.

Kevan Urquhart
Awards Committee Chair

PHOTO CONTEST AT ANNUAL MEETING

There will be $250.00 worth of prizes for winners of the photo contest to be held at the joint Cal/Neva - Humboldt Chapter meeting in Eureka. To encourage participation, we are "bribing" you with prizes beyond compare, and we are going to loosen up the rules. In the past we have not accepted pictures in frames. If you have a photo that you are really proud of, but have not entered it because it was in a frame, you may enter it this year. Keep in mind large, heavy frames will be difficult to display. There will be a size limit of 16X20 inches. As in the past, slides will be accepted.

Categories will be as follows: 1) mammals, 2) birds, 3) fishes, amphibians, and reptiles, 4) nature, 5)environmental problems, and 6) fisheries management techniques. There must be at least three entries in a category for there to be a ribbon or prize awarded. There will also be a PHOTO OF THE YEAR award.

You have plenty of time to go through old photos and possibly find a negative that a professional photo lab could make into a winner. If you don't yet have a photo that you could enter, you still have time to get that shutter working. There may be a beautiful scene you frequently pass, but you haven't gotten around to taking that masterpiece.

If you have any questions, call Master Photographer Bob Reavis at (916) 654-6851.

INTRODUCTION TO THE INSTREAM FLOW INCREMENTAL METHODOLOGY (IFIM)

A WORKSHOP SPONSORED BY THE CALIFORNIA-NEVADA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

THE COURSE: This course will be somewhat similar to the Fish and Wildlife Service (National Ecology Resource Center) IF200 course, *Designing and Negotiating Studies Using IFIM*, as it will provide training in the design and conceptual principals of IFIM applications. However, the course will emphasize California streams and focus on how to effectively review IFIM study plans and how to evaluate and interpret the information generated by an IFIM evaluation. The course will cover basic concepts such as:

- Definition of IFIM: what it is and is not
- Application and utility of methodology
- Methodology limitations and assumptions
- Study design and scoping process
- Field procedures and data collection
- Interpretation and negotiation

THE INSTRUCTOR: Thomas Payne, a Certified Fisheries Scientist, has been a professional Fisheries Biologist for over 20 years. He has been a principal with Thomas R. Payne and Associates Fisheries Consultants for the past twelve years, specializing in instream flow analysis and stream ecology. His company has been involved with nearly 200 IFIM applications during that time. Mr. Payne teaches a similar class as an Associate Professor of Fisheries at Humboldt State University.

COURSE DATES: April 12-15, 1994.

LOCATION: National University, 9320 Tech Center Dr., Sacramento.

COST: $325 per person for AFS members, $375 for non-members (does not include travel or lodging expenses).

BRING TO THE COURSE: Paper and pencil, calculator is optional.

TO ENROLL OR GET MORE INFORMATION: Call or write Paul Forsberg, Department of Fish and Game, Environmental Services Division, 1416 9th St., Room 1341, Sacramento, CA 95814, telephone (916) 654-2578. Deadline for enrollment is March 15, 1994. An agency or personal check should accompany your enrollment request. For State and Federal employees a copy of your approved training request will be sufficient to hold a space. Enrollment is limited to the first 30 paid registrants and is on a first come, first served basis. This course has a minimum of 20 registrants.