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A Newsletter of the Western Division,
American Fisheries Society



American Fisheries Society
Western Division



Volume 12, No. 2/May 1987

President's Message from Atop a Fishbox

It is good to have the opportunity to communicate with all my fellow fishery biologists; this will be the last time for me as President of WDAFS. It has been a real uplifting experience professionally and socially to have had the chance to interact with many of you, especially on a one-on-one basis. I want to thank all of you for the hospitality you extended at your chapter meetings to the WDAFS officers (Al, Nancy, Jim, Cay, Tony, and me). I wish there was some way that I could convey to you the strength and momentum that is present within the Western Division AFS; the Chapters and the people within them are the driving force. AFS is considered the *creme d'la creme* of the fisheries profession by other fisheries professionals outside North America, and the reason, again, is the quality of folks at the Chapter level.

I have noticed a number of the chapters in the WDAFS are having an impact on society for the betterment of the fisheries resource by focusing their efforts on improving communication with the public and with politicians. These efforts have taken several different formats, such as:

1. Lecture series open to the public, focused on current fisheries and environmental issues.
2. Coalition building with sportsmen, commercial fisheries interests, and conservation groups.

3. Developing educational materials (slide-tapes, videos, etc.) for elementary and secondary schools; providing input on the development of the aquatic section of Project Wild; and purchasing Project Wild workbooks to give away to school districts.

4. Providing 20th century communications techniques courses for members.

5. Using AFS as a forum to bring together all interests on fisheries issues to develop viable solutions for which the resource receives a fair shake; this proactive approach is long overdue and the time is right for AFS to be effective in this manner.

Efforts such as these have helped different chapters develop constituencies that were previously dormant and undeveloped. As we get closer to the 21st century, the public agencies in charge of managing natural resources, such as fisheries and fisheries habitats, are going to be held accountable for their actions. It has been almost 2 decades since the first Earth Day, and a myriad of well-conceived environmental legislation has been passed at the federal, state, and provincial levels. In some cases, the legislation has been implemented with the intent for which

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it was written and in others it has not. Many of us have seen and heard many words and promises. It is time that we move out of the "Era of Promises" and into the "Era of Accountability." AFS is and should be at the forefront of this movement.

Along with this effort to scrutinize the biopolitics and management of fisheries resources, we should also be sure to look at ourselves to determine if we are truly being effective in our efforts. Are we maintaining our objectivity and credibility? Are we (AFS at the Chapter, Division, and Parent level) accurately representing the needs and concerns of the membership on a multitude of issues? AFS is designed to function in a democratic fashion; therefore, all levels of the organization should be responsive to the needs of the members. During my tenure as an officer of WDAFS, I have tried to make the system more responsive. I, along with my fellow WDAFS officers, believe the system works, but only if we hear from the members. Let your Chapter and Division officers know what and where you would like to see more action. President-Elect Al Mills has developed a small questionnaire to get a general feel for the direction members would like us to focus the Division in the near future. Please take the time and effort to fill it out and return it with your ballot for the new officers. Past President Tony Novotny has given us an excellent slate of candidates from which to choose. Please VOTE.

Thanks again for a productive and stimulating year. Keep up the good work and take care.

-- Don Martin

The Role of the Professional Society in Resolving Environmental Issues

Presented by Shelby Gerking, President, AFS Cal-Neva Chapter, American Fisheries Society February 7, 1987

The professional society, and I assume that AFS is the principal one to be addressed,

defines its role in environmental affairs by general agreement among its members, not by outside pressures. For example, the Society might agree that it would be disadvantageous to engage in environmental activism, citing negative political or economic consequences for its members as reasons. If these reasons were compelling, the Society might adopt this posture.

Instead, AFS has decided to take just the opposite stance, that of fostering environmental activism. We publish Environmental Policy Statements, we have an active Environmental Concerns Committee, and we encourage, but do not pressure, the subunits to take an active interest in environmental affairs. The Society, in other words, looks upon environmental activism as one of its responsibilities to prosecute vigorously. Most biological societies concerned with the environment accept this responsibility also, to one degree or another. AFS feels very keenly about this role, because fish are commercially valuable and are a generally accepted, vital component of the aquatic ecosystem.

Two formalized procedures are exercised to accomplish our goals. Resolutions are passed by the Society that address environmental issues and other matters. These statements pass through a rather lengthy ritual of formulation and critical examination before acceptance. It is not completely clear, to me at least, how these resolutions are used and how effective they are. Nevertheless, if a resolution passes through the Executive Committee's hands, it means that the whole Society is speaking out on the issue and this is, in itself, a powerful method of declaring our position on an issue.

The Environmental Policy Statement is, in my view, an even more powerful instrument. These statements are published and used to guide AFS on questions of environmental policy. I will not burden you with the long procedure used to arrive at a statement, but briefly it consists of selecting an issue, subjecting it to critical review, appointing a working group to write a Study Report, and formulating a final Policy Statement. Approval of the statement is given by the Executive Committee, and acceptance by the general membership is sought by publishing the statement in Fisheries and inviting comments. A course of action detailing how AFS should use the statement is a required

part of the document. The final version is supposed to have "enduring value" and the 11 statements now accepted by the Society have fully achieved that objective.

I have been addressing largely environmental activities on the parent Society level. Activities on the local and regional levels are equally important. I am acquainted with some of your Chapter's initiatives. Of particular note is the interest you aroused on oil and gas development and its effect on fisheries. This subject is evolving into an Environmental Policy Statement, which, with a little luck, should be ready for us to examine in the near future. Your comments on the threatened winter chinook run have been followed closely, as well as your intervention on behalf of the Forest Service in their effort to implement the Toiyabe National Forest and Resource Management Plan. These are all commendable commitments on behalf of the environment.

Another environmental activity we engage in is testifying at hearings. This is done at all levels in the Society--individuals testifying as expert witnesses, Chapter representatives testifying for the group, and Executive Director Sullivan testifying before Congressional committees. My experience in this field is not extensive, but I will predict that our involvement in these affairs will increase substantially in the years ahead.

Why is it advantageous to project our image as a professional society in this manner? First, I suppose, is the desire to pursue our findings until they become a part of public policy. This is always a satisfying result. We are a relatively young profession and the need to establish our expertise is one of our foremost desires. Secondly, activism provides an opportunity to present a united front on issues of timely concern. "Advertising" who we are and what we do will establish our society as a force to be reckoned with and will gain public recognition.

How do we differ from other environmental activists like the Audobon Society or the Sierra Club? In contrast to these groups, we are a professional society grounded in a scientific approach to environmental problems. Where they might cite arguments with an emotional appeal, we must stick to scientific arguments. Where they have a Midas chest resulting from mass ap-

peal for funds, we have meager resources largely raised from our own membership. That does not mean that we are ineffective, just that the two groups do their jobs in a different way. Both approaches are required to "fight the good fight" on environmental policy issues.

I want to remind you that our claim as a professional society is based on formal knowledge gained through higher education. We make our living by following a set of scientific principles and a body of facts that amount to specialized knowledge about fish and fisheries. Our training instills in us a sense of integrity and objectivity. These intangible attributes are no less important than the tangible facts and skills with which we work. As scientists, we are viewed, as we should be, as attacking a problem objectively; that is, we acquire our facts without bias or prejudice and apply them in the same manner. Our trustworthiness is based on independent investigation, independent thinking, and independent judgment. We report the facts as we find them and test their accuracy by repeated observations and by comparisons with the findings of others. This is how we justify our existence as fishery scientists. This is what we have to "sell" in the marketplace.

The admonition in the present context is that our Resolutions, Environmental Policy Statements, subunit responses to environmental issues, and testimony given during hearings must adhere to our scientific knowledge. Otherwise, we are in the "other fellow's back yard" where he knows the turf better than we do. If we stray far from our area of expertise, we run the risk that our credibility will suffer, and that our opinions will no longer be respected. If we hold this standard of performance before us, I see no reason why we should not enter the "environmental arena" whenever we have something to contribute.

My intention is not to criticize our environmental activism, but only to call attention once again to "who we are" and by what standards our statements are to be measured.

Society News

A unanimous Excom vote has authorized publication by AFS of an **International Directory** of fisheries science associations, foundations, societies, institutes, etc., and the names and addresses of their officers. Neil Armantrout and other members of the International Section have already begun compiling the information. AFS members with information on this subject are asked to forward it to the central office in care of Tapan Banerjee, International Section chairman.

A Section "postcard" membership renewal form will be developed by staff in response to the concern of several Section presidents. At present, the only convenient way to join or renew Section membership is at the time of annual dues payment. An additional (renew any time) system, providing membership for all Sections, will be developed soon and be made available in quantity to each Section.

Ever wonder how many practicing fisheries biologists there are in North America? AFS 1986 and 1987 membership rolls show 7,587 members, and our delinquent rolls show another 3,807 names and addresses of former members. Finally, our new fisheries scientist directory lists the names and addresses of 3,891 other known professionals. My best estimate is that there are two to three thousand people who are not on our lists, so I'd place the total number of North American fisheries biologists (active, retired, and graduate student) at about 17,500.

Newly revised professional certification brochures and application forms have been received at the central office and are available upon request. They will be mailed along with a copy of the North American Fisheries Policy and the AFS Code of Practices. In the future, all applications must be on these new forms. It will greatly speed our response and save the Society resources and energy if, with your request, you will enclose a self-addressed #10 envelope with 39 cents in postage.

A new **Fish Culturist Registry** has been produced and published by the AFS Fish Culture Section. The Registry provides background information and expertise for over 700 members involved in various areas of aquaculture. The background information includes title or position held, educational history, and work experience. 1985-86 Fish Culture Section members receive a free copy while nonmembers may order a copy for \$10.00 from the Fish Culture Section, c/o Nick Parker, 503 Bibb Street, Marion, AL 36756. It's a fine product that should be very useful to any fish culturist.

Western Division Committee Assignments

- Awards - Tony Novotny (WA) (206) 442-0856
- Nominations - Tony Novotny (WA) (206) 442-0856
- Audit - Lou Carufel (AK) (907) 356-5229
- Riparian - Bruce Smith (WY) (307) 382-5350
- Public Lands - Dave Cross (MT) (406) 675-2700
- Fishery Economics - Virgil Moore (ID)
(208) 334-3791
- Legislative - Nancy MacHuch (OR) (503) 754-4431
- Native American Fisheries - Unassigned
- Membership - Nancy MacHuch (OR)
(503) 754-4431
- Habitat Inventory Procedure Standardization -
Bill Helm (UT) (801) 750-2543
- Newsletter - Roger Ovink (OR) (503) 752-4271
- Editorial Guidelines - Bob Gresswell (MT)
(307) 344-7381
- Resolutions - Dennis Tol (NV) (705) 623-3676

** A good way to become involved in issues of interest is to participate in one or more committees. If you would like to help, or need help, contact the above committee chairs.*

This and That Around the West

Catch-and-Release Fishing--A Decade of Experience is the subject of a September 30 through October 1 national symposium at Humboldt State University in Arcata, California. Speakers from the U.S. and Canada will present new techniques, results, and problems from a variety of fresh- and salt-water experiences and the proceedings will be published. Send

abstracts to Roger Barnhart at the California Cooperative Fishery Research Unit, Humboldt State University, Arcata, California, 95521 or phone (707) 826-3268. The deadline is May 1, but late submissions may be accepted.

Montana Rivers Database. The fisheries assessment portion of the Pacific Northwest Rivers Study is now completed and a computerized database of all fisheries, wildlife, natural, recreational, and cultural resource values for hundreds of stream and river reaches in Montana is now available. A copy of this extensive database now resides in each of seven MDFW&P regional offices around the state and also at the USFS Missoula office and the BLM office in Billings. The fisheries division of MDFW&P in Helena will furnish upon request a hard-copy listing of each stream reach in alphabetical order with its classification, and/or a microfiche of river fisheries assessment details by reach with an accounting of the points used in its classification.

On March 18, U.S. Fish and Wildlife Director Frank Dunkle met with representatives of six national fisheries conservation organizations to discuss five prearranged subjects. Director Dunkle reported on the status of each and shared his views, plans, concerns, problems, and goals for each. (1) On the status of his reorganization of fisheries within his agency, he noted the shift from programmatic management to a "live" organization and stated that though the structure is in place, all assignments have not yet been made. Gary Edwards Dunkle's new assistant director for fisheries participated in the meeting. (2) On the development of a National Fisheries Policy, Dunkle noted a few complications that will slow the initial policy development process but reaffirmed his intention to involve the organizations (including AFS) represented at the meeting. (3) On merging the National Marine Fisheries Service with the U.S. Fish and Wildlife Service, Dunkle said he favored such a consolidation, but that he thought the combined agency should be under the Department of the Interior. (4) On revamping of USFWS research, Dunkle said the initial dual research advisory structure had been abandoned. He spoke positively and appreciatively

about the value of fisheries research and also made some strong commitments on the subject of professional career guidance and development, including continuing education and staff participation in opportunities for fisheries scientific information exchanges. (5) Lastly, Director Dunkle promised more attention to fisheries resource needs on the National Wildlife Refuge system. At the conclusion of the meeting he promised continuing dialogue with fisheries constituency organizations.

An Ode to Assessment

Ken Cummins

To inquire on the health
of our native stream wealth
We seek rapid assessment
to reduce our investment
Never mind if we blunder
just give it a number
Treat taxonomy chaotic
with an index biotic
If the systems redundant
just rank the midges abundant
Is it a group you despise
use a coarser mesh size
Never mind all those species
that's a whole different thesis
So with a lumper's devotions
I offer this notion
Take a moment or two
try the functional view

American League of Anglers and Boaters representatives met on March 20 to pursue our strategy for reauthorization of Wallop-Breaux in 1988 and prevention of \$25 million Wallop-Breaux "heist" by OMB in fiscal year 1988. Thus far, Congress seems strongly supportive of protecting the program, but we intend staying very close to the issue.

Operation Share a Lone Star Lunker

The Texas Parks and Wildlife Department began a new program entitled "Share a Lone Star Lunker." It is a cooperative program between Lone Star Brewery, Cajun Bass Boats, and Jungle Laboratories. The program encourages anglers to "loan" their 13-plus-pound bass to the hatchery system during spawning season. If the angler agrees to return the fish

alive, the program sponsors will provide a fiberglass replica of the fish. On the first day of the program, a 17-lb., 10-oz. bass was caught and entered into the program. We now have 6 additional 13-plus-pounders in captivity. Since November 26, over 3,000 people have visited the Tyler Hatchery to see these fish. One of the major benefits of the program, however, has been the increased focus on catch and release fishing.

The Catfish Journal

For those of you that haven't seen a copy of the Catfish Journal, you might want to get a copy. It's a newspaper format similar to what Verl is recommending for the AFS. It is the official publication of the Catfish Farmers of America and provides industry information.

Water Farming Journal

Another newspaper format publication that covers the entire gamut of the aquaculture industry. It is edited by Caroll Trosclair. Address requests to Water Farming Journal, 3400 Neyrey Drive, Metairie, LA 70002.

Aquaculture Association of Canada

Two conferences related to aquacultural water quality control were recently held in Ontario. A primary concern of the conferences was the impact of fish hatchery effluent on receiving waters. The Commercial Aquaculture Liaison Committee met March 1, 1986 at the University of Guelph. The conference was sponsored by the Ontario Ministry of Natural Resources, Ontario Ministry of Agriculture and Food, Ontario Ministry of the Environment, Department of Fisheries and Oceans, Ontario Trout Farmers' Association, and the University of Guelph.

Anyone interested in the membership in the Aquacultural Association of Canada can write to: Secretary, Aquaculture Association of Canada, Aitken Bicentennial Exhibition Centre, 20 Hazen Avenue, Saint John, NB, E2L 3G8 Canada.

The Arctic Unit of the Alaska Chapter of AFS was formed on February 18 of this year. The formation of the Unit followed approval of a petition to the Alaska Chapter and several

months of planning. The Arctic Unit is a geographic element of the Alaska Chapter. It is composed of members living north of the Alaska Range in the Fairbanks area. The Unit is expected to be particularly important to students and faculty at the University of Alaska, Fairbanks campus. First president is Mary Shiffer, vice president is Joe Klein, and secretary/treasurer responsibilities will be shared by Nicole Jones and Bob Piorkowski.

Japanese Starter Diet

Personnel at the National Fish Hatchery, Valley City, ND 58072 have been particularly impressed with a new starter diet developed by the Japanese. The feed is slightly hydrosopic and has a rather unusual feed ingredient list, which is freeze dried, crushed and graded to 250-400 microns. Survival of lake whitefish during 50-day triplicate trials exceeded 95 percent which far exceeds anything in the literature. Muskie fry survival was also excellent and growth paralleled that found in ponds. Preliminary results indicate this diet may be beneficial in starting largemouth and smallmouth bass fry. Additional information may be obtained by contacting the above facility.

-- Monty Millard

Audubon Society

The National Audubon Society is concerned with a number of environmental issues that relate to water quality. Audubon is currently involved in educational programs that provide information to the general public and to the press on acid rain issues. One of the goals of the society is to help define public policy as it relates to acid rain. Pursuit of this goal is enhanced through efforts of local chapters, individual activists, and through lobbying and staff work in Washington, D.C.

Contamination of surface water and groundwater from urban landfill operations, chemical or other hazardous waste disposal, and from agricultural practices is another key issue. A recent article questioned the perceived approach of industry and the government to put economics before biology when setting drinking water standards. Current environmental policy is allowing greater concentrations of chemicals in water than previously thought acceptable. It

was reported (Audubon, November 1986) that organizations such as EPA are replacing "risk assessment" with "risk management" and that industry speaks of "risk communication," with respect to drinking water standards.

Meetings/Seminars/Short Courses

The first full meeting of the Federal Fisheries Responsibility Committee was held in Washington, D.C., on March 18-19. Chairman Bill Gordon led the group in the preparation of a "capsulized" proposal and a specific strategy and timetable for action. The DAIRY will be publishing more specific details in the near future. AFS President Shelby Gerking and President-Elect Stan Moberly were on hand for this important session. There is a perception among committee members that national concerns with the present inadequacies of federal government fisheries programs are growing. These concerns stem in part from the overlapping and sometimes combative postures of our many federal aquatic resource agencies. Even greater anxiety is focused on the debilitated status of the nation's fisheries resources and habitats. The AFS Federal Fisheries Responsibilities Committee is recommending a comprehensive solution, which includes the creation of a single, national fisheries and economics. For details see *Fisheries*. Vol 11, No. 4, pages 2-6 (July-August 1986).

The Education Section will conduct a student caucus at the September 13-17, 1987, annual meeting in Winston-Salem, NC. If you'd like to be involved, write Section President Ira Adelman, Department of Fisheries and Wildlife, University of Minnesota, St. Paul, MN 55108, (612) 624-3600.

Red Drum Aquaculture Research Symposium

A symposium on Red Drum Aquaculture will be held on Jun 22-25, 1987, at the Marriott Hotel, Corpus Christi, Texas. The research symposium will be held in conjunction with the Red Drum Production Technology Workshop and both symposia should cover all available

knowledge on the culture of Red Drum. Contact Dr. C.R. Arnold, the University of Texas Marine Science Institute, Port Aransas, Texas 78373-1267.

Call For Papers

The Bioengineering Section Of The American Fisheries Society Presents:
Fisheries Bioengineering Symposium

October 24-28, 1988

Columbia River Red Lion Inn

Portland, Oregon

This conference will focus on solutions to major bioengineering problems that can limit fish production in developed river systems and will cover five major topics: (1) habitat improvement, (2) upstream/downstream fish movement, (3) improved hatchery operation, (4) alternative hatchery production systems, and (5) implementation of change.

For general information, contact David Owsley, U.S. Fish and Wildlife Service, Dworshak National Fish Hatchery, P.O. Box 18, Ah-sahka, ID 83520, (208) 476-4591.

Titles and abstracts for submitted papers are due by September 1987 and should be sent to John Colt, Fish Factory, P.O. Box 5000, Davis, CA 95617, (916) 756-3558. Final papers are due by September 1988 and will be published in book form.

Aquaculture Economics

An Intensive Short-Course June 8-19, 1987 Clemson University, North Carolina

Interest in aquaculture as a manageable food production system, as a promising primary and alternative agricultural enterprise, and as a source of livelihood for people in developing countries has grown considerably in recent years. Research to expand aquaculture production has received sizable effort and resources both in the United States and worldwide. An understanding of the relationship between the biological and technological elements of aquaculture and the economic elements is important so that producers and consumers benefit from the development and application of aquacultural systems.

The Department of Agricultural Economics and Rural Sociology at Clemson University will offer a new course in aquaculture economics to provide those involved in aquaculture with the

tools of economic and financial management and analysis. The course will be an intensive 2-week program with the goal of preparing those with limited economic backgrounds to apply economic and financial methods and tools to aquacultural production and marketing. The course will also be open to those with stronger economic and financial backgrounds who wish to learn how to apply their skills to this special area.

The course will cover the following topic areas:

- The role of aquaculture in food production - A review of economic concepts applied to aquaculture
- Economic factors affecting aquaculture at the farm level
- Managerial analysis for aquaculture
- Bioeconomic analysis
- Marketing aquacultural products
- Public policy and aquaculture
- International aquaculture development

The course will use examples from both aquaculture (freshwater species) and mariculture (salt and brackish water species).

The course will be available for credit to both upper level undergraduate and graduate students. Researchers, extension personnel, and business people with an interest or current involvement in aquaculture are encouraged to enroll in the course either for credit or for professional development. Registration for the course will be conducted through Clemson University. Housing will be available on campus.

The course will be offered from June 8-19, 1987, with 10 days of intensive course work. Course location will be the Clemson University campus.

For more information, write or call Robert S. Pomeroy, Department of Agricultural Economics and Rural Sociology, 209 Barre Hall, Clemson University, Clemson, South Carolina 29634-0355, (803) 656-5789.

The annual Western Division AFS meeting, which is held jointly with the Western Association of Fish and Wildlife Agencies (WAFWA), is scheduled for July 12-15, 1987, at the Salt Lake City Sheraton Hotel. Accommodations and rates are outstanding and Salt Lake is centrally located for the Western

Division and the Intermountain Region. Attendees are encouraged to bring their families and/or companions and enjoy this beautiful, hospitable, mountainous setting.

The overall conference theme is "Meeting Increasing Public Demands on Fish & Wildlife with Declining Revenues." The proposed 1987 WDAF technical sessions are oriented heavily toward management problems pertinent to the needs of the western fisheries resource and program manager.

Aquaculture 89 is already commanding much attention in the fish culture community, including the Fish Culture and Bioengineering Sections of AFS, Catfish Farmers of America, National Shellfish Institute of North America, U.S. Trout Farmers Association, and World Mariculture Society. Dates are February 12-16, 1989, at the Westin Bonaventure Hotel in Los Angeles. It's a worldwide conference that promises to be quite a show.

The Law of the Sea Institute will hold its 21st annual conference in Honolulu on August 3-6, 1987. Focus will be on international implications of extended maritime jurisdiction in the Pacific. Registration fees (\$250 professionals, \$180 academic, \$60 student) cover three meals, three receptions, and proceedings. For details, write or call Law of the Sea Institute, Richardson School of Law, University of Hawaii, 2515 Dole Street, Room 208, Honolulu, HI 96822, (808) 948-6750.

An International Symposium on Fish Tagging will be held in the spring of 1988 under sponsorship of the Fisheries Management and Fisheries Administrators Sections of AFS and the Federal Aid (Wallop-Breaux) office of the U.S. Fish and Wildlife Service. President Gerking has appointed a Program Committee which includes Nick Parker, Eric Prince, Fred Utter, Roy Heidinger, and Douglas Jester, Jr. Overall policy direction will be provided by a steering committee of USFWS representatives and Section officers. The symposium will probably be held in the Seattle area in June 1988. Tony Novotny will serve as arrangements chairman, assisted by selected members of the North Pacific International Chapter. A specific goal

of the symposium is the production of a fish tagging handbook based on the proceedings. Members with specific questions or comments on fish tagging should contact AFS headquarters.

American Society for Testing and Materials

Editor's Note: It's too late to attend this meeting, but I thought the information might be of interest.

The Eleventh Symposium on Aquatic Toxicology and Hazard Assessment will be held May 10-12, 1987, in Cincinnati, Ohio. Sponsored by ASTM Committee E-47 on Biological Effects and Environmental Fate and its Subcommittee E47.01 on Aquatic Toxicology, the Symposium is held annually in conjunction with meetings of E-47 and its Subcommittees. E-47 and its Subcommittees meet semiannually, with a spring meeting for the symposium and a fall meeting held in conjunction with the annual meeting of the Society of Environmental Toxicology and Chemistry. Current membership of E-47 is about 260.

Aquatic biologists are usually most interested in the activities of Subcommittees E47.01 on Aquatic Toxicology and E47.08 on Biological Field Testing. The scope of E47.01 is to promote knowledge, stimulate research, and develop standard nomenclatures and procedures for determining and evaluating the effects of chemicals, formulations, aqueous effluents, sludges, and other agents on aquatic organisms, their communities, and their uses. The scope of E47.08 is to develop test methods, guidelines, and practices for biological field studies in the areas of environmental baseline quantification, impact assessment, and field toxicological studies in aquatic and terrestrial ecosystems.

Anyone interested in the activities of ASTM Committee E-47 can obtain further information by calling Gary Chapman at (503) 867-3011, ext. 247, or Rick D. Cardwell at (206) 451-4613.

Wetland Resources Symposium

An International Symposium on Increasing our Wetland Resources is scheduled by the National Wildlife Federation's Corporate Conservation Council October 4-7, 1987, at the Mayflower Hotel in Washington, D.C. The status and effectiveness of wetlands restoration and creation projects and ways to initiate and fund future projects will be examined by scien-

tists, engineers, elected officials, corporate leaders, agency officials, and conservationists.

For a brochure and registration form or information regarding presentations, papers, posters, or displays, please contact Barbara Haas, Administrator, Corporate Conservation Council, National Wildlife Federation, 1412 16th Street, NW, Washington, D.C. 20036-2266, (202) 637-3746.

Economics of Aquaculture Training Program

Economics of Aquaculture is the title of an intensive 1-week training program from August 17-21, 1987, at Oregon State University offered by Oregon State, the Consortium for International Fisheries and Aquaculture Development (CIFAD), and the International Institute of Fisheries Economics and Trade (IIFET). It is part of a 5-week course in Fisheries Economics.

The program is suitable for middle- and upper-level administrators with responsibilities for fisheries or aquaculture management and development. The short session may be particularly attractive to persons in the private sector.

Dr. Trond Bjordal will be the instructor for the Economics of Aquaculture program. Dr. Bjordal is an Assistant Professor with the Institute of Fisheries Economics at the Norway School of Economics and Business Administration. He received his Ph.D. in economics at the University of British Columbia and has taught at the University of Tromso in Norway. He is a researcher on numerous aquaculture topics and is completing a book on salmon aquaculture.

Staff from the Department of Agricultural and Resources Economics at Oregon State University will also participate in the program.

The fee for instruction, materials, and supplies is \$800. This fee does not include meals and lodging. Direct inquiries and requests for application forms to: CIFAD Training Programs, Office of International Agriculture, Oregon State University, Corvallis, Oregon 97331 U.S.A.

Shortcourse of Larval Fish Ecology and Sampling

A shortcourse on Ecology and Sampling of Fish Larvae in Freshwaters was offered by the

Larval Fish Laboratory (LFL) at Colorado State University (CSU) in November 1986. The purpose of this 3-day shortcourse was to facilitate improvements in larval fish sampling programs. Twenty-one persons from 12 U.S. states and representing 14 different governmental and private agencies attended the shortcourse. The shortcourse featured 2 days of classroom lectures and a one-day field trip to demonstrate use of selected larval fish sampling gear. Barton C. Marcy (NUS Corporation, Aiken, South Carolina), an expert on ichthyoplankton sampling and entrainment, was a guest lecturer. Topics covered included fish reproduction; larval fish anatomy and development; habitat utilization by fish larvae in lentic and lotic waters; when, where, and how to sample for fish larvae; sampling design considerations; use of larval fish collections in fishery research and monitoring programs; and field and laboratory handling of larval fish samples. Practical application of the information presented in fishery research, management, and environmental assessment was emphasized. A videotape entitled "Sampling Fish Larvae: Selected Gear" was produced as a byproduct of this shortcourse. VHS copies can be purchased for about \$40.00 per copy from Office of Instructional Services, A-71 Clark Building, CSU, Fort Collins, Co 80523, (303) 491-1325. When ordering, use catalog number S1397.

The LFL will be offering another shortcourse on Ecology and Sampling at Fish Larvae in Freshwaters at CSU October 27-29, 1987. Enrollment fee is \$300.00/person. Participants can earn 1 hour of academic credit from Colorado State University for an additional fee of \$33.00. Registration deadline is October 1, 1987. A detailed brochure will be sent upon request. The LFL is also planning to offer a shortcourse on Larval Fish Taxonomy in Spring 1988. Look in future issues of this newsletter for a formal announcement of this shortcourse. For further information, contact Robert T. Muth (303) 491-5295 or Clarence A. Carlson (303) 491-5089, Department of Fishery and Wildlife Biology, CSU, Fort Collins, CO 80523.

JOB OPENINGS/ VOLUNTEER OPPORTUNITIES

Head of University Fish and Wildlife Department

Application Deadline July 1

Demonstrated expertise in leading research, teaching, and extension program.

Contact: Dale Arner Department of Fish and Wildlife

P.O. Drawer LW

Mississippi State, MS 39762

The Resource Protection Division of the Texas Parks and Wildlife Department is now advertising a Biologist position. The purpose of this position is to plan and implement an Oil and Chemical Spill Assessment Program in Texas. If you are interested, contact Dennis Palafox, Acting Chief, Pollution Surveillance Branch, Texas Parks and Wildlife Department, Austin, Texas, (512) 389-4634.

Experienced members to serve on a World Fisheries Congress Steering Committee are being sought by Tapan Banerjee, president of the AFS International Section. The Society and the Section have begun to plan for sponsorship of such a worldwide fisheries science gathering, and we need experienced, capable, and enthusiastic volunteers to help do the planning. If you are interested and consider yourself qualified, please send a very short (no more than a page) resume to Tapan Banerjee, President, AFS International Section, 1308 Titania Lane, McLean, VA 22102, or call him at (202) 377-3922. The International Section will recommend members for appointment by President Gerking.

A fisheries specialist job with the Bad River Band of the Lake Superior Tribe of the Chipewewa Indians will be open until June 12. Salary begins at \$18,000 and applicants must have B.S./B.A. in biology with emphasis on fisheries limnology, etc. Job location is the Bad River Reservation at Odanah, WI. Submit resumes to: Sandra L. Deragon, Personnel

Manager, Bad River Tribal Admin. Bldg., P.O. Box 39, Odanah, WI 54806. Include three references, detailed educational background, and names, addresses, and phone numbers of previous employers.

The director of field operations position at the Illinois Department of Conservation is open, with applications to be accepted through May 15. Salary range is \$38,000 to \$58,000, with selection to be made no later than July 1. Applicants must have a college degree with very strong experience in conservation and natural resource management. Job also requires exceptional oral and written communication skills and high level managerial experience. For details, contact Mr. Bruce Clark, Assistant to the Director, Illinois Department of Conservation, Suite 425, 524 S. Second Street, Springfield, Illinois 62706, (217) 785-0067.

USFWS Seeks Volunteers

The USFWS is seeking volunteers for Alaska wildlife conservation programs. There are about 150 openings each year for about every natural resource occupational specialty, particularly waterfowl, marine birds, mammals, fisheries, hydrology, botany, public involvement, environmental education, computer programming, fire management, etc. Opportunities exist throughout the state and most extend from mid-May to September. The Service provides food, lodging, and transportation *within* Alaska. Contact Bill Knauer, USFWS, 1011 East Tudor Road, Anchorage, AK 99503, (907) 786-3399.

Strong support for continuing the original thrust of the Skinner Memorial Fund was voiced by the Excom in preference to converting it to a scholarship. The fund, which now totals more than \$39,000, is to be used to assist deserving students to attend the AFS annual meeting. Though the number of applications for assistance last year was unacceptably low, Excom members believe this can be reversed with a concerted Society-wide promotional effort. If you know of deserving students who could benefit from a Skinner grant, please con-

tact Education Section president Ira Adelman at the address listed in the following action item.

A new AFS job service called JOBLINK won unanimous approval, provided it is primarily a service to AFS members and provided the financing can be arranged. JOBLINK is a computerized, telecommunications, daily-updated program that allows users to run their own computer job searches, or they may call or write for the same information to be mailed in hard copy. The JOBLINK service will be operated for professionals in the natural resources fields and probably will service the Society of American Foresters and The Wildlife Society, in addition to AFS. All three of these scientific professional societies will contract with Colorado State University for the telecommunications system. JOBLINK is not an inexpensive service and will require each Society to invest a one-time \$8,000 in hardware, etc., plus an estimated \$27,000 per year, which will be recovered from contracts, grants, and small service fees. Though it is an extremely ambitious plan, it was enthusiastically endorsed by the Excom and everyone is dedicated to making it work. Dr. Bob Aukerman, who represented Colorado State University, reported on the considerable work done to date by the staff at Fort Collins. AFS members will be hearing much more about JOBLINK in the coming months.

J. Frances Allen Scholarship

The American Fisheries Society is pleased to announce that applications are being accepted until June 15, 1987, for the J. Frances Allen Scholarship, a one-time award of \$2,500 (US) for a female doctoral student whose research emphasis is in the area of fisheries science. This scholarship was established in 1986 in honor of Dr. Allen, a pioneer of women's involvement in AFS and in the field of fisheries, with the intent of encouraging women to become fisheries professionals. The qualified applicant must be a female, advanced Ph.D. student (i.e., at least second year), and a current AFS member. For complete application information and instructions, write J. Frances Allen Scholarship, Attn: Dr. Brenda L. Norcross,

American Fisheries Society, 5410 Grosvenor Lane, Bethesda, MD 20814.

HELP!

The Chehalis River Hatchery, run by the Canadian federal Salmonid Enhancement Program, is struggling with what appears to be a new disease for chinook. Although the causative organism remains unidentified, we would like to isolate the eggs from each female through to ponding (symptoms are obvious only after hatch). Moreover, we would like the isolation system to fit into the space presently occupied by eight-tray Heath stacks, with minimal modifications. Each incubator should be capable of handling up to 10,000 chinook eggs, and eight incubators should fit into a space roughly 630 mm long by 620 mm wide by 510 mm high. There is 15 LPM currently available to each eight-tray stack (flows could be doubled). If anyone knows of a system which might come close to meeting these criteria, please contact: Bruce Shepherd, Department of Fisheries and Oceans, 1090 West Pender Street, Vancouver, British Columbia, V6E 1P1, Canada, (604) 666-0115 (collect, if you wish).

CANDIDATES FOR WESTERN DIVISION OFFICES--1987

VICE-PRESIDENT

William Patrick ("Pat") Dwyer (Montana Chapter)

"Pat" is a fishery biologist at the Fish Technology Center near Bozeman, Montana. He received his BSc from Utah State University in 1968, and his MSc in 1969. He served 2 years in the Armed Forces and began working for the U.S. Fish & Wildlife Service in 1972 in Missouri. In 1974, he transferred to the USFWS Center at Bozeman, where his primary research efforts center on cutthroat trout and their environmental limitations. Pat is also an adjunct instructor at Montana State University, a mem-

ber of the Montana Wildlife Federation, and the Lions International.

Pat has been a member of AFS since 1967, is a Certified Fishery Scientist, and has held the offices of Secretary-Treasurer, President-Elect, President, and now, Immediate Past-President of the Montana Chapter.

Cay Goude (California/Nevada Chapter)

Cay Goude is a Fish and Wildlife Biologist with the USFWS Ecological Services Branch in Sacramento, California. She received her BSc in 1976 from the UC (Davis), and her MSc in Fisheries from California State University in 1981. When she isn't working on environmental problems on the job, Cay works on environmental issues through her AFS Chapter, where she has spearheaded efforts on outer continental shelf oil exploration issues and the preservation of the Sacramento River winter-run chinook salmon.

Cay began serving AFS as President of the Sacramento Chapter in 1982. In 1985, she was elected President-Elect of the California/Nevada Chapter, and in 1986, as President of the CAL/NEVA Chapter, she organized the most successful Continuing Education Program in AFS chapter history.

In 1986, she was elected to the office of National Nominations Representative for the Western Division of AFS.

SECRETARY-TREASURER

Dudley Reiser (California/Nevada Chapter)

Dudley has received a B.A. in Zoology from Miami University (Ohio), an M.S. in Water Resources from the University of Wyoming, and a Ph.D. in Fishery Resources from the University of Idaho. He is currently a senior fisheries scientist at Bechtel in San Francisco. Dudley's professional expertise includes habitat enhancement work, instream flow and habitat quantification, flushing flow and sediment deposition studies, out-migrant passage, and mine reclamation.

Dudley is an active AFS member. He is the Past President of the Palouse Unit of the Idaho Chapter and served on the AFS Western Division Riparian Habitat Committee (1981-1982). He is the co-chairman of the AFS

Western Division Water Development and Streamflow Committee, and is a member of the Western Division Stream Habitat Inventory Committee.

**NATIONAL NOMINATIONS
REPRESENTATIVE TO THE PARENT
SOCIETY**

Don Chase (North-Pacific International Chapter)

Don is the Regional Fish Pathologist for the Southwest Region of the Washington State Department of Game. He received two BSc's from Washington State University in 1979, and is currently finishing an MSc from the University of Idaho. Don has been an active member of AFS since 1982, and almost single-handedly organized the AFS Computer User Section, which is now the fastest growing section in AFS with over 500 members. Don has served as President of AFSCUS for over 2 years, has organized the AFSCUS Computer Workshops for chapters, divisions, and the parent society, has been active in a number of AFS committees, and has served the AFSCUS Section on the AFS EXCOM meetings.

William S. ("Bill") Platts (Idaho Chapter)

Bill is a Fishery Research Biologist for the U.S. Forest Service in Boise, Idaho. He received a BSc from Idaho State University and an MSc and Ph.D. from Utah State University. In 1967, he began his career with the Forest Service on riparian habitats and aquatic environments, and has been one of the biggest spokesmen for fish in the region.

Bill has been an active participant and life member in AFS for over 20 years. He has held the offices of Secretary-Treasurer, Vice-President, President, and Immediate Past-President of the Idaho Chapter; President-Elect, President, and Immediate Past-President of the Western Division; National Nominations Representative of the Western Division to the Parent Society in 1979 and 1980; and 2nd Vice-President, 1st Vice-President, President-Elect, President, and Immediate Past-President of the American Fisheries Society.

Let Us Hear from You!

Those of us who are privileged to be your friends and colleagues and at the same time be your representatives in the Excom of the Western Division need your help. Your Presidency and Excom need to hear about your professional fisheries concerns and priorities to better represent you. At the Salt Lake City meeting in July, we have dedicated an entire day and evening to your chapter representatives to hear "your agenda." Send them with solid issues and priorities! President Martin has asked them to bring your views to this WDAFS Excom Retreat, which will open with their prioritization and development of their agenda. To assist in this overall effort, a brief expression of your priorities is attached on a pre-addressed mailer.

Your presidency works very closely with, and carries your votes and concerns to, the parent society. Through these contacts and working relationships, we are always impressed at the hard-working and highly efficient organization at your immediate disposal. At the same time, we are sorely frustrated at our limited ability to share with each of you the exposure to all this effective work, and the even greater need and potential, at the division and national levels. A first experience at the national Excom meeting with such dedicated people working on challenging and rewarding issues must be almost comparable to an athlete's first trip to the Summer Olympics in an LA coliseum. Our predecessors in division presidencies, particularly our own Western Division, have been keenly perceptive and equally effective at championing a very responsive and democratic organization. To keep AFS from becoming just another "good-old-boy" organization, we all need to participate at some level, to use and stretch the organization's potential.

TAKE 5 MINUTES, mentally process the question, "Why are you an AFS member?", and check your priorities on the attached questionnaire. It is a part of the ballot, addressed ready to mail. Simply state your priorities, affix a stamp, fold, fasten, and mail. Please do it NOW while you are thinking about it!

--Al Mills, President Elect



THE TRIBUTARY

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