



# NEWSLETTER

C.V.C.A.  
RECEIVED

Mr. Land  
Bo  
CJ

## Fisheries Management Section American Fisheries Society

David K. Whitehurst, President

Volume 5, Number 1

March, 1985

### President's Corner

"Approval for Dingell-Johnson expansion is probably the most significant legislation ever passed by the U.S. Congress. Annual revenues from this bill should approach \$100 million, roughly three times greater than current D-J funding. This is certainly great news; I'm sure that most of us have been trying to administer fishery management programs on severely limited budgets."

This is the way I would have started my President's Corner if the newsletter came out in January. However, since then, the Office of Management and Budget has moved to impound the new Wallop-Breaux funds, which AFS (not to mention Mr. Wallop and Mr. Breaux) states is contrary to the will of Congress. An article later in the newsletter summarizes the events to date, but I'd like to urge you FMS members from the United States to write your senators and representatives. Without Congressional action to overturn this decision, a costly legal action would be necessary. We certainly want to nip this in the bud!

We must assume that Wallop-Breaux is a strong Congressional mandate that will ultimately prevail, and diligently work to achieve it by submitting new and sound fisheries initiatives to our administrators. One excellent possibility is the development of urban fisheries programs. A few states are already planning to implement such programs with Wallop-Breaux funds, but this type of program is needed in many states. I feel that the Society should establish a position on the values of urban fisheries programs. I am in the process of developing a committee to draft a position statement for the Society's consideration and to work toward development of successful fisheries programs in urban areas. Phil Jeffries from Missouri will chair this

committee. If you would like to assist the Section in this endeavor, please contact Phil.

The U.S. Fish and Wildlife Service recently requested suggestions from AFS concerning the operation of their new Gainesville Exotic Fish Lab. Carl Sullivan asked the Exotic Fish Section and our Section to provide him with recommendations for the usage of this facility. Several members of the Section provided meaningful input to Sullivan's request. Sullivan urged the Fish and Wildlife Service to dedicate this lab entirely to the comprehensive study of exotic and introduced species and outlined various research needs. A special "thank you" is given to those who assisted the Section and the Society in this matter.

One of the main objectives of the Section is to maintain and enhance communications among fisheries managers. Our main vehicle for accomplishing this objective is the newsletter, and I am very pleased with our efforts to date. However, Rich Wehnes is planning some improvements. If you have suggestions, please give him a call. I am sure he would appreciate your comments.

An Executive Committee meeting has been scheduled to coincide with the Symposium on the Role of Fish Culture in Fishery Management to be held March 31-April 3, 1985. If you have ideas that the Section should address, please convey them to your Regional Representative or me. We will discuss them at this meeting.

*Sincerely,*

*David K. Whitehurst*



## Section Business

### W-B Battle Underway

The problems involving Wallop-Breaux monies have recently been fairly well publicized, and the media has picked up on the trials and tribulations involving what was thought of as an "untouchable" budget item. I thought I'd summarize all the events to date to keep you current.

Around the first of January, the Office of Management and Budget (OMB) proposed to hold most of the new expansion dollars in the treasury, impounding the new funds. The \$38 million from items that traditionally were taxed under the old D-J legislation, plus \$6 million in taxes on "new" fishing items, would be allocated in the traditional manner. Other elements of the Wallop-Breaux funds - collections on motorboat fuel, imported yachts and other imported equipment amounting to \$66 million - would remain in the treasury.

The reason? A budget-cutting measure I assume, although these monies cannot be used for general revenue or used to reduce the national debt. I'm not sure whether the interest off of unspent monies goes to general revenue, or whether money could be "borrowed" from the W-B account (and repayment not appropriated in the future?). Some have suggested that this is a ploy so that, when W-B funds are finally allocated, the states won't be able to come up with the large amount of up-front money within the time limits specified by law, and therefore many of the funds would revert indirectly back into the Federal Treasury. It's also been mentioned that recreational boating interests are watching the W-B program, and if it will not produce for them what they expect, they may not be inclined to support keeping marine fuels tax revenues going to Wallop-Breaux when the marine fuels tax issue expires in 1988. In any event, those who asked the question, "Can they do that?" have their answer -- OMB did it, and no one to date has had an effective means of saying "No!".

What is more ominous is OMB's proposal to make W-B monies subject to annual appropriations instead of permanent and indefinite. This would make the expansion revenues subject to all the whims of the annual budget process. Traditional D-J monies would not be covered by annual appropriations, but...if OMB finds it easy to change permanent and indefinite Wallop-Breaux funds to annual, what's to stop them from doing the same to traditional D-J monies, Pittman-Robinson funds, or any other user-pay system? The precedent being set is important and could have far reaching effects, not to mention cooling anyone's desire to fight for a user-pay system to fund other worthwhile projects.

What's been done to date? I think it's an understatement to say that Senator Wallop and Representative Breaux are mad. Senator Wallop, during the confirmation hearings for Interior Secretary-Designate Don Hodel, received a promise that Mr. Hodel would take the matter back to the White House and OMB so that, when Mr. Hodel appeared before the committee again, Senator Wallop and he "will not be in disagreement" on the matter. Both Senator Wallop and Representative Breaux plus 28 other congressmen (including Senate Majority Leader Bob Dole, Senate Finance Chairman Bob Packwood and Interior Appropriations Subcommittee Chairman Jim McClure) have written a letter to President Reagan asking that this "ill-advised budget decision" be reversed and he "direct that the law be administered properly." Sully and 13 other heads of professional and conservation organizations also wrote President Reagan asking that the user fee concept embodied in the act be honored.

One opinion, as expressed in a recent Federal Parks and Recreation Newsletter, is that Congress will do nothing. By doing nothing, D-J user fees collected will automatically go into the D-J fund and be used for what was intended. Representative Breaux postulated that "...unless the law is changed, the money is statutorily appropriated and that money will be spent for the purposes for which the statute said it was to be spent..." to which FWS Director Robert Jantzen said, "That's my understanding also."

Late in March, in spite of the reasoned appeals from all sectors, the Senate Budget Committee turned the budget out with OMB's proposals essentially intact. This was definitely a serious setback, and one which Senator Wallop did not take lightly. He immediately introduced a resolution (S.Res 130) stating, in part:

WHEREAS the Administration's 1986 budget proposal threatens to: 1) eliminate the guaranteed return of user fees, and 2) withhold 2/3rds of the ear-marked user fees;

NOW, THEREFORE, BE IT

RESOLVED by the Senate that it is the sense of the Senate that:

1. The administration should honor and comply with the automatic appropriation and ear-marking provisions of the Sport Fishing Account of the Wallop-Breaux Trust Fund as required by law and support adequate appropriation for the Boating Safety Account in this Trust Fund; and



2. Funds due and owed under the terms of the Trust Fund to the states should neither be withheld nor delayed by the administration.

To date, thirty-five cosponsors have joined Senator Wallop in this resolution. We have also heard of one or two that would not agree to be a cosponsor for one reason or another, but would vote for the resolution.

Here is another battle we must fight in the long road to implementing Wallop-Breaux programs. While the outlook doesn't look totally bleak, we must not let our guard down; the war will ultimately be won or lost on Capitol Hill unless OMB changes its position. This is where you can help. Keep the pressure on your senators and representatives. Write them, phone them and wire them. Tell them about the impacts of this act and that OMB's position is contrary to Public Law 98-369 enacted by Congress last year. Urge them to vote for Senate Resolution 130 at a minimum, and preferably be a cosponsor.

W-B needs your help now.

### **National Fishing Week**

National Fishing Week has been a merchandizing promotion of the American Fishing Tackle Manufacturers Association for several years. In an attempt to broaden the concept to include education and conservation, the American Fisheries Society passed a National Fishing Week resolution at its annual meeting in Milwaukee in 1983. In 1984 and 1985, National Fishing Week Committees were appointed to implement the resolution and ensure that the Society participated meaningfully in any national effort.

National Fishing Week should serve as a focal point each year to call attention to the facts that the fishery resource (both salt and fresh) should be abundant and well managed; that the habitat that supports the resource should be free of pollution and disturbances that could threaten, diminish, or alter the fishery resource; and that all Americans should develop an awareness of and appreciation for our aquatic resources. Up to now, the committee has written to each state governor asking that a National Fishing Week be proclaimed for June 3-9, 1985. But grass roots efforts are necessary to make this event a good one. Chapters, divisions and sections should be involved. Several suggestions have been made:

- Governors sign state proclamations designating June 3-9 National Fishing Week statewide.
- Mayors sign similar city proclamations.

- Include special activities on National Fishing Week at AFS Chapter, Division and Section meetings.
- Encourage distribution of news releases and radio and TV spot announcements.
- Encourage sporting goods and fishing-related industries to feature National Fishing Week in their store displays and advertising.
- Encourage State and Federal fish hatchery and fishery facility operators to participate by providing facility tours and open houses. These could explain how each facility contributes to the conservation of fishery resources.
- Include mention of National Fishing Week in all speeches and talks, emphasizing fishing as a recreational activity of importance to our economy and quality of life.
- Special festivals and events can be staged to illustrate the role of fishing and how it is important to the travel and tourism industry.
- Ensure that your local media has adequate materials on National Fishing Week, your attractions, facilities and services and special events commemorating National Fishing Week.
- Prepare a fishing facts sheet related to your region (number of fishermen in your area, licensed anglers in the state, value of the catch to the economy, special projects underway to improve fishing) for distribution to the media.
- Sponsor a fisherman's forum whereby a panel of chapter experts would host a meeting of fishermen to answer technical questions on fish habits, habitat, and other issues of interest to the fishing public.

These are just some suggestions; your group or chapter may have others that would be locally successful.

National Fishing Week offers a good chance to show the public where their license or tax money is going and how it's being applied to benefit them and the resource they enjoy. It's also a good chance to drive home the message that good fishing is not accidental, but takes the work of dedicated professionals.

This year's Committee has recommended that these efforts continue in the future, so National Fishing Week is slated to become an annual event. Help make it a good one in your area.

### **Competitive Fishing Symposium**

Bass tournaments...Trout derbies...Crappie thons... Billfish tournaments...Carp derbies. The age of competitive fishing is upon us. But what is the impact of fishing contests on the fisheries resource? That's the subject of a half-day symposium that will be presented at the AFS Annual Meeting in Sun Valley, Idaho.



Based on the tremendous interest shown at the tournament fishing session at last year's Cornell meeting, FMS and the Fisheries Administrators Section felt there was a need to maintain a dialog on the issue and to explore public attitudes and administrative problems. The symposium will look at the evolution of competitive fishing, from catch/kill and catch/release tournaments to cash for catching a marked fish; evaluate the consequences to the fishery and to agencies; present a national assessment of marked fish tournaments; look at long term trends in tournaments; explore public attitudes and social aspects related to competitive fishing; and conclude with a panel discussion on the proper role of agencies in tournament fishing.

A number of papers will be presented, representing a wide variety of fishes and geographical areas - from midwestern bass fishing to Hawaiian billfish tournaments. It promises to be an excellent and comprehensive program on this high-interest subject.

Since the symposium was only recently selected by AFS, all the arrangements have not been finalized. I will relay further information when I receive it. But for those of you planning to go to Sun Valley...don't miss this symposium!

#### **Stream Habitat Committee**

I recently received a report on the FMS Riparian/Stream Habitat Management Committee from Don Duff. Don reports that the committee has almost reached full membership (14 members from 13 states/provinces have volunteered), although they still would like an additional member from eastern Canada and Mexico (interested? Write Don, c/o U.S.D.A.-Forest Service, 324 25th Street, Ogden, Utah 84401).

The Riparian/Stream Management Committee worked towards three goals this year. First, develop an AFS position statement on riparian habitat management. Second, work on the completion of a standardized glossary of fisheries terminology. Third, begin planning for FMS co-sponsorship of a 1986 Trout Stream Habitat Management Workshop in the eastern U.S. or Canada.

In working towards these goals, the committee has accomplished several things. It has reviewed the first draft of the AFS riparian position statement and forwarded comments to the Western Division Riparian Habitat Management Committee and the AFS Environmental Concerns Committee. A second draft incorporating these and other comments is underway.

The committee also reviewed the first draft of the Western Divisions Glossary of Fisheries Terms, but members feel that a two year commitment of effort is needed to revise the Glossary for North American use.

Finally, the committee proposed that FMS cosponsor a 1986 Eastern Trout Stream Habitat Management Workshop, which was approved in concept by President Whitehurst. The Pennsylvania Fish Commission appears to be interested in helping sponsor the workshop, and other contacts are being maintained to assure that a 1986 session is held. The committee is recommending that FMS and AFS EXCOM provide \$500 to help with the funding.

It sounds like the committee is active and well underway in accomplishing their goals. If you have ideas or would like more information on the FMS Riparian and Stream Habitat Management Committee, I'm sure Don would like to hear from you.

#### **Management Journal Bonus**

It's not necessary to remind you of the popularity and relevancy of the North American Journal of Fisheries Management. For several years, the Management Journal has contained papers of interest to a broad spectrum of fishery managers. It's only natural, then, that a roaring success experience some growing pains.

The parent society has recently observed that the Management Journal is being overwhelmed by its own success, and they're trying to produce two bonus issues this year. Apparently, the backlog of manuscripts is huge, and in order to reduce the backlog to an acceptable level, as well as reduce the already too long turnaround time, the extra issues are necessary. Two major corporations came forward to help out. Grants from both Chevron USA (San Francisco) and Sohio will cover all costs, so subscribers will receive two issues of the Management Journal gratis.

I think it's almost an understatement that FMS is very appreciative of the generosity of these two corporations. It will allow papers to be published in a timely and professional manner.

I have also heard that the authorized number of pages in the Management Journal will increase from 400 to 600. This, coupled with funding efforts such as the above, should help keep the manuscript backlog low...for awhile, anyway.



## Items of Interest

### Lake Erie Artificial Reefs

What do you do with a lake that lacks habitat? Add it! And what do you do if your lake happens to be 6,361,600 acres in size? Consider it a challenge! That's what a cooperative effort between the Ohio Department of Natural Resources, Sea Grant Extension and several private organizations did in approaching a habitat deficiency in Central Lake Erie.

Western Lake Erie is dotted with islands and submerged reefs, but the Central Basin is deeper, larger and lacks productive bottom structures. Fish abound in the Central Basin, but anglers find them difficult to locate since the fish aren't congregated around "structure". But Lake Erie's Artificial Reef Program is now underway. The first reef structure was begun by placing 3,000 tons of concrete and rock rubble near Lakewood last year. Ultimately, five submerged reefs comprised of 120,000 tons of rubble could be constructed. In a spirit of cooperation, the rubble was donated by O'Brien Stone Company, transported by the Cuyahoga County Engineers to a dock made available by Ford Motor Company. Funding from local sportsmen's associations, the Cuyahoga County Commissioners and the Ohio DNR helped transport and place the material on site.

Five major reefs will eventually be constructed, but for now, research will be needed to determine if placement and height is successful in providing acceptable habitat and to establish likely improvements for subsequent reefs. Each site will consist of a number of reefs in a configuration that maximizes habitat area. Fish could be attracted to the area around each reef, between reefs, between different reef areas and around the site perimeter. It will then be up to the angler to put these habitat enhancements to good use.

Sponsors hope to benefit fish by providing food, shelter, protection and spawning area; local anglers through savings of time and money spent in traveling elsewhere; and the local economy through non-local anglers' expenditures for food, gas, tackle, lodging and the like. The Lake Erie Artificial Reef Program may yet yield a number of scientific and economic benefits -- what you'd like to expect from a challenge.

### Western Riparian Legislation

In the August, 1984, issue of the FMS Newsletter, I mentioned that model legislation for improving and protecting wildlife habitat patterned after the Oregon statute, was being recommended by the Council

of State Governments. This past fall, similar legislation was being pursued by the Colorado/Wyoming Chapter of AFS, initially aimed at the state of Colorado. Similar initiatives were also underway in Idaho and Montana. If these are successful, the West will be leading the nation in riparian habitat protection. Those of you who would like to begin such a movement in your state, please contact the parent society office for a copy of draft legislation.

How about someone from each of these states dropping me a note and letting me relay your riparian successes, failures and/or recommendations to the rest of North America? I'd especially like to hear from someone in Oregon!

### PASER

Did you ever wonder what sort of help you'd be able to expect if you wanted (or were forced) to look for another position in the aquatic sciences? Obviously, your corner employment agency and the want ads in your local newspaper are of little help. While the past efforts of AFS and the Sport Fishing Institute were helpful in publicizing open positions, a centralized "clearinghouse" of employment information and assistance was lacking. Until now.

The parent society has developed Professional Aquatic Scientist Employment Registry (PASER). The Registry is an exclusive employment assistance program available only to AFS members. All members in good standing have received information and a questionnaire relating to the registry. Interested people should complete the questionnaire and return it to the central office.

Hopefully, the cost of the program can be covered by employers, so that it can be offered as a free service to AFS members.

### Reef Fish Regulations

According to Gulf Fishery News, regulations to conserve and manage reef fish resources of the Gulf of Mexico became effective recently. The regulations implement a fishery management plan prepared by the Gulf of Mexico Fishery Management Council and apply to the Gulf of Mexico portion of the fishery conservation zone, which generally includes all waters extending from three nautical miles off Alabama, Mississippi and Louisiana, and nine nautical miles off Texas and the west coast of Florida, to a distance of 200 nautical miles offshore. Snappers, groupers and sea basses are regulated under the management plan.



The regulations, designed to reduce fishing effort and the potential for user conflicts, establish a "stressed area" in the nearshore waters of the fishery conservation zone off Florida and Alabama and portions of Mississippi and Texas where reef fish resources are subjected to intensive fishing effort, and some species, especially red snapper, are overfished. In this area, the use of fish traps and roller-rigged trawls is prohibited altogether, while powerheads (a projectile-firing device used by divers), may not be used to harvest any regulated species. Fish traps used outside the "stressed area" are subject to certain construction specifications, number and size limitations, and permitting and tagging requirements.

In addition, regulations prohibit the use of explosives or poisons for taking any regulated species, and establish a minimum size limit of 12 inches fork length (13 inches total length) on red snapper with three exceptions: an incidental catch of five undersized red snapper per person per trip is allowed; domestic vessels lawfully fishing trawls in the fishery conservation zone are exempt from size limits and catch allowances for red snapper; and persons fishing from leadboats (vessels carrying seven or more persons who fish for a fee) are exempt until May 8, 1986.

If you'd like more information, contact Fishery Operations Branch, National Marine Fisheries Service, 9450 Koger Boulevard, St. Petersburg, Florida 33702.

### **Freshwater Fish Attractors**

Fisheries managers have improvised many techniques to capitalize on the affinity of fish to cover. In order to expedite information exchange and provide nationwide coordination for the use of artificial reef/fish attractor technology as a management strategy, the Sport Fishing Institute created the Artificial Reef Development Center. Recently, the center circulated a questionnaire to 50 state fishery agencies.

A total of 32 state agencies (64%) currently have fish attractor programs. An estimated 44,643 structures were placed in 1,582 bodies of water. Lakes were the major recipient of such habitat management; 70% of habitat enhancement projects took place in lakes, 27% in coldwater streams, and 3% in warmwater streams. Logs, used primarily in stream structures (48%), brush (27%) and tires (21%) proved to be the most frequently used materials for constructing fish attractors. Wooden pallets (stake beds), construction rubble, quarry stone and gabions also were utilized to a lesser degree. Artificial spawning chan-

nels were utilized in six states. Wisconsin currently is evaluating artificial spawning reefs for walleye in five lakes. Eighteen states are evaluating commercially produced polypropylene filament units as fish attractors.

The survey shows that artificial habitat technology is one of a number of management strategies that many states pursue. Hopefully, the Artificial Reef Development Center will continue to coordinate information on artificial freshwater fish habitat structures and provide information in a usable and readily available form. If you want more information, contact the Sport Fishing Institute, 100 Massachusetts Ave., N.W., Suite 100, Washington, D.C. 20001.

### **Ontario Trout Management Brochure**

Chris Brousseau recently sent me a brochure on Ontario's management approach to aurora trout.

Aurora trout are genetically similar to brook trout, but are colored differently. Aurora trout lack the worm-like dorsal markings as well as the red spots with blue halos of the brook trout. These colors are replaced by a gleaming silver or purplish sheen more or less uniformly distributed over the body, reminding some of the splendor of the northern lights for which it was named. The fish occurred naturally in four lakes in Ontario, but disappeared more than twenty years ago, perhaps due to acid precipitation. The preservation of the species is now dependent on artificial propagation.

Aurora trout have scientific values for their unique genetic makeup, and have demonstrated longevity and good survival following stocking. They have desirable recreational characteristics such as good fighting ability, rapid growth and are a truly beautiful fish for the angler.

The management objective is to maintain the trout and to rehabilitate the stock to provide for fishing opportunities and associated benefits. The objective differs from traditional management approaches to this fish in that the aim is to rehabilitate the stock to allow angling on a restricted basis. Four targets to be achieved in the next ten years are listed: maintain by stocking, establish natural reproduction in three sanctuary lakes, provide limited angling and create public awareness and obtain scientific knowledge of the trout's life history.

This brochure is a really fine example of getting fish information to the public in a visually-appealing yet concise and factual manner. Those contemplating similar brochures that explain management efforts ought to request a copy from Chris (Box 2529, Cochrane, Ontario P0L 1C0, CANADA).



## Florida License Changes

According to the Sport Fishing Institute, Florida sportsmen will soon carry less paper around if a revised license schedule is enacted by the Florida State Legislature. The proposed license revisions would require a sportsman to purchase one card on which stamps for various activities would be placed. Rather than carry half a ream of paper around, only one would be required. In addition, several of the 36 licenses now issued would be consolidated, resulting in only 23 licenses.

Anglers and hunters are understandably pleased, and so are administrators. Why? The changes will result in a revenue increase as well as a savings in the cost of printing. A similar system was adopted by the state of Oklahoma last year, with savings of \$72,000 in the first year of operation. SFI also suggests that the fiscal savings by revising licensing systems may be helpful in at least partially offsetting the expanded matching fund requirements mandated by the 1984 Boating Safety and Sport Fish Restoration Act.

## Symposium Clearinghouse

Last fall, AFS announced that a symposium clearinghouse was being instituted at the AFS Central Office to maintain an ongoing record of all major fisheries-related symposia and workshops. All AFS subunits considering or planning a symposium or workshop were asked to check with the "clearinghouse" in order to avoid scheduling conflicts and duplication of subject matter. Subsequently, the Parent Society again asked for members to help by providing any information they may have on AFS and non-AFS workshops and symposia planned for the future so that these can be entered into a permanent reference system. They have been recording dates, sponsors, location and the name of contact people for workshops and symposia from 1980 to the present, and are especially interested in those planned for the future. If you are involved in planning any symposium or workshop, it is recommended that you contact the clearinghouse to ensure that another gathering doesn't siphon off part of your intended audience.

## Cancer in Fish

A recent article in the newsletter of the Upper Mississippi River Conservation Committee described a condition that should bother us all -- the increasing incidence of cancer in fish. Citing an article that appeared in the August 1984 issue of *International Wildlife*, UMROC reported that a number of researchers from across North America have shown that some species have an exceedingly high incidence of cancer. Normally, cancer appears

in less than 1% of fish, but in the Great Lakes, some varieties of carp were shown to carry gonadal tumors in 100% of the male fish. Museum fish collected prior to the 1940's show a low incidence of cancer, leading investigators to suspect that the cancer was related to environmental pollution. Or is it?

In an effort to provide a link, one researcher painted a laboratory colony of brown bullheads with contaminated river sediments. "Within one year, all surviving fish had pronounced neoplasms - small nodules that are the first indication of cancer," reports researcher John Black. In another test, bullheads fed a diet containing contaminated bottom sediments contracted cancerous liver lesions.

Are fish giving us a warning? The cancer maps issued by the National Cancer Institute in 1973 show that in five of the counties where fish tumor occurrence is high, the human mortality rate from all cancers is higher than average. This may or may not be circumstantial evidence. More attention is being given to fish cancer. "Fish are like the caged canaries used by early coal miners to warn of the unseen hazards of methane gas," says Black. Fish are warning us of problems nearby.

## Crayfish Threat

According to a recent release from the National Fishery Research Laboratory at LaCrosse, Wisconsin, excessive numbers of crayfish may become a nuisance in several midwestern states. The Wisconsin Department of Natural Resources reports problems with crayfish (*Procambarus* sp.) in ponds used to rear muskellunge. The crayfish become so numerous that they damage or destroy many of the young muskies during harvesting operations. More recently, however, the rusty crayfish (*Orconectes rusticus*), has become established in lakes of Wisconsin and adjacent states. This crayfish has displaced endemic species, is a voracious feeder and, in some lakes, has caused the decline of aquatic plants. The sport fishery has seriously declined in heavily-infested lakes.

The rusty crayfish is native to streams in Illinois, Indiana, and Ohio, but fishery biologists suspect that the animal may be increasing its range through releases of surplus bait or through deliberate stocking by crayfish trappers wishing to expand their supply. Resource managers are concerned about adverse impacts on angling and are considering a variety of approaches for its control, including stricter laws for bait sales, more efficient trapping methods, introduction of diseases, natural predators, and toxicants.



Currently a two-phased project is underway to address potential control measures. Phase I involves preliminary screening of potential crayfish toxicants and field testing promising agents. Phase II evaluates the efficiency of trapping as an effective crayfish control.

Trapping may be an efficient method for removing crayfish from high density populations. Experimental trapping in a one acre pond showed that an estimated 75% of a rusty crayfish population was harvested. Daytime catches were significantly less than nighttime catches, but daytime catches increased as trapping progressed into deeper water. During the night, depth had no significant effect on catch. Males made up a significantly higher percentage of the catch initially but females were predominant during the later weeks.

After 6 weeks of trapping, the pond was treated with an experimental toxicant to kill the remaining crayfish. The compound killed all observed crayfish, but remained toxic to caged fish for up to 6 weeks after treatment. Although much more study will be required, the results suggest that the control of nuisance crayfishes may be possible through an integrated program of harvesting and chemical toxicants.

If you'd like more information on this study, contact National Fishery Research Laboratory, P.O. Box 818, LaCrosse, Wisconsin.

## Publications of Interest

### Olympic Wild Fish

*Olympic Wild Fish Conference Proceedings*, edited by J.M. Walton and D.B. Houston is the culmination of an excellent symposium on wild salmonids, co-sponsored by the Olympic National Park and Peninsula College, and held in the State of Washington in 1983. The Olympic Wild Fish Conference was the first professional gathering of its kind at Washington's Olympic Peninsula to discuss the concerns about wild salmon, steelhead, cutthroat and rainbow stocks in the Pacific Northwest. Prominent fisheries scientists and managers from Alaska to California and Washington to Wyoming contributed their most significant research and management strategies in 32 pages. Now the proceedings have been published. Major topic headings include Genetic Differentiation of Wild Fish Stocks, Lake Studies and Management Strategies, Agency Management of Wild Fish Stocks, Cutthroat Trout, Salmon and Steelhead. This book contains much of the latest information on wild fish management and research directions.

Copies of the proceedings are available from James M. Walton, Peninsula College Fisheries Technology Program, Peninsula College, Port Angeles, Washington 98362, for \$15.00.

### Pelagic Fish Age Determination

*Proceedings of the International Workshop on Age Determination of Ocean Pelagic Fishes: Tunas, Billfishes and Sharks*, edited by Eric D. Prince and Lynn M. Pulos considers the difficult problem of aging oceanic pelagic fishes. The book is partitioned into sections by species and provides an overview of the state of the art, including innovative approaches. *Proceedings* includes 16 papers, nine summaries, two round table discussions, a glossary, and a list of workshop participants. The 211-page report is free, as long as supply lasts, and is available from Eric D. Prince, Southeast Fisheries Center, Miami Laboratory, 75 Virginia Beach Drive, Miami, Florida 33149-1099.

### Urban Fishing Symposium

*Proceedings of the Urban Fishing Symposium*, edited by Lochie Jo Allen is the long-awaited publication of the Urban Fishing Symposium sponsored by Fisheries Management and Fisheries Administrators Sections on October 5-8, 1983. The information presented is first rate and state-of-the-art. The Urban Fishing Symposium and its *Proceedings* were structured to reach people over a broad spectrum of interests. *Proceedings* presents overview papers dealing with the needs and opportunities for urban fishing development. Major sections of *Proceedings* address the topics of urban fishing program planning, implementation, information and education. Eight case studies, which are diverse both in program method and geographic locations, depict how these factors work together to create urban fishing opportunities. *Proceedings* is a must for anyone managing urban fisheries or having administrative responsibility for urban fishing programs. *Proceedings of the Urban Fishing Symposium* can be purchased by sending \$25.00 to Sport Fishing Institute, 1010 Massachusetts Avenue, N.W., Suite 100, Washington, D.C. 20001.

### Artificial Reef Literature Review

*Artificial Reef Literature Review* by James A. Bohnsack and David L. Sutherland reviews over 400 references on artificial reefs. The references were annotated and compiled by a computer program for rapid retrieval. The authors' report presents the results of their analysis and recommendations for future studies and for improving the usefulness and effectiveness of artificial reefs. For a copy of the report, contact Dr. Bohnsack, Miami Laboratory, Southeast Fisheries Center, National Marine Fisheries Service, 75 Virginia Beach Drive, Miami, Florida 33149; 305/361-4252.



## National Fisheries Survey

*The 1982 National Fisheries Survey, Volume I Technical Report: Initial Findings* by Robert D. Judy, Jr., Paul N. Seeley, Thomas M. Murray, Susan C. Svirsky, Molly R. Whitworth and Lee S. Ischinger is the first statistically designed survey of the status of the Nation's waters, their fish communities and the limiting factors affecting these fish communities. Questionnaires covering 1,303 river segments were distributed to state fish management experts and the results tabulated from a national perspective. The 1982 National Survey presents information on a number of issues: fish communities, fish community sampling, water as usable fish habitat, factors and sources adversely affecting fish communities, present status of the Nation's waters, past and present water quality trends, future conditions if present trends continue, and future conditions with controls on man-caused limiting factors. This report is the first of a three-volume series and is intended for use by professional fishery biologists and water quality management personnel, and the general public.

The 1982 National survey is an excellent reference and can be obtained from The Western Energy and Land Use Team, Division of Biological Services, U.S. Fish and Wildlife Service, 2627 Redwing Road, Fort Collins, Colorado 80526. Ask for publication FWS/OBS-84/06.

## Upcoming Events

May 1-3, 1985. *Symposium on Small Hydropower and Fisheries*. Ramada Renaissance Hotel, Denver, Colorado. Sponsored by the Western Division and the Bio-engineering Section of AFS. For more information, contact Robert White, Steering Committee Chairman, Montana Cooperative Fishery Research Unit, Biology Department, Montana State University, Bozeman, Montana 59717; 406/994-3491.

May 5-8, 1985. *Annual Meeting of the Northeastern Division of AFS*. Hartford Sheraton Hotel, Hartford, Connecticut. For more information, contact Robert Jones, Department of Environmental Protection, Bureau of Fisheries, 165 Capitol Avenue, Hartford, Connecticut 06115; 203/566-2287.

June 3-5, 1985. *The 28th Conference on Great Lakes Research and the Annual Meeting of the International Association for Great Lakes Research*. University of Wisconsin-Milwaukee, Milwaukee, Wisconsin. Details concerning the program, registration, etc., can be obtained by contacting the Conference Coordinator, IAGLR-85, Center for Great Lakes Studies, 600 E. Greenfield Avenue, Milwaukee, Wisconsin 53204; 414/649-3000.

June 9-11, 1985. *International Symposium on Age and Growth of Fish*. Hotel Fort Des Moines, Iowa. For more information, contact Robert C. Summerfelt, Department of Animal Ecology, Iowa State University, Ames, Iowa 50011; 515/294-6107.

July 15-19, 1985. *Annual Meeting of the Western Division of AFS*. Mountain Chalet Hotel and Conference Center, Snow Mass at Aspen, Colorado. For more information, contact Tony Novotny, 2725 Montlake Blvd., E., Seattle, Washington 98112; 206/442-0856.

July 23-26, 1985. *National Wilderness Research Conference*. Colorado State University, Fort Collins, Colorado. For more information, contact Glenn E. Haas, Department of Recreation Resources, College of Forestry and Natural Resources, Colorado State University, Fort Collins, Colorado 80523; 303/491-7283.

September 7-11, 1985. *The 115th Annual Meeting of AFS*. Sun Valley, Idaho. For more information, contact Carl Sullivan, Executive Director, American Fisheries Society, 5410 Grosvenor Lane, Bethesda, Maryland 20814; 301/897-8616.

October 23-24, 1985. *Wetlands and Water Management on Mined Lands*. Pennsylvania State University, University Park, Pennsylvania. Representatives from the scientific community, industry and regulatory agencies are collaborating to present a conference exploring the positive aspects of maintaining aquatic environments on mined lands. Emphasis will be on coal-mined lands, but papers on other types of mining will be included. Session topics include wetland restoration, water management, mining regulations, wetland wildlife, fish and aquatic invertebrates, and renovation of mine drainage. A poster session for innovative techniques and preliminary studies will also be held. Registration fee is \$60 (includes proceedings to be distributed at the conference) before October 1, \$70 thereafter. Contact Agricultural Conference Coordinator, Wetlands Conference, The Pennsylvania State University, 409 J.O. Keller Building, University Park, Pennsylvania 16802; 814/865-9547.

October 27-30, 1985. *Thirty-ninth Annual Conference of the Southeastern Association of Fish and Wildlife Agencies*. Radisson Plaza Lexington, Lexington, Kentucky. Authors should submit five copies of their paper in final form by May 1, 1985. For more information, contact Jeffrey Foltz, Department of Entomology, Fisheries and Wildlife, Clemson University, Clemson, South Carolina 29631; 803/656-3118



November 13-16, 1985. *International Symposium on Applied Lake and Watershed Management*. Americana Great Gorge Resort, Lake Geneva, Wisconsin. For more information, contact the North American Lake Management Society, P.O. Box 217, Merrifield, Virginia 22116; 202/833-3382.

November 14-19, 1985. *Sixteenth Annual Desert Fishes Symposium*. San Luis Potosi, Mexico. For more information, contact Phil Pster, California Fish and Game, 407 W. Line, Bushop, California 93514; 619/872-1171.

March 9-13, 1986. *Common Strategies of Anadromous and Catadromous Fishes*. Park Plaza Hotel, Boston, Massachusetts. Sponsored by the Northeastern Division AFS. For more information, contact Mike Dadswell, Fisheries and Oceans, Biological Station, St. Andrews, NB E0G 2X0; 506/529-8854.

May 25-31, 1986. *First Asian Fisheries Forum*. Manila, Philippines. For more information, contact the Chairman, Asian Fisheries Forum, MCC P.O. Box 1501, Makati, Metro Manila, Philippines.

## A Note From the Editor

This is the third issue of the newsletter under my editorship, and I've received some good and bad comments about it. Several of you have sent news items, announcements for meetings, examples of your management approaches, etc., and I've tried to use most of them. Keep it up; I need the information.

One of the things that we need to do from time to time is thank the people who help make this newsletter possible. The Information Section of the Missouri Department of Conservation helps typeset and print this newsletter at no charge to FMS. This is substantial support for which I for one am very grateful. We also need to thank Loretta Matheis for transcribing my scribbles into something that's readable and grammatically correct. Without these two, this newsletter wouldn't be anywhere near the quality that it is now.

The Fisheries Management Section Newsletter is a publication of the Fisheries Management Section, American Fisheries Society. Address all correspondence to Richard E. Wehnes, Editor; P.O. Box 180; Jefferson City, MO 65102; 314/751-4115.







**Richard E. Wehnes, Editor**  
**AFS-FMS Newsletter**  
**P.O. Box 180**  
**Jefferson City, MO 65102**

**Nonprofit Organization**  
**Bulk Rate**  
**U.S. Postage**  
**PAID**  
**Permit No. 263**  
**Jefferson City, MO 65102**