

American Fisheries Society

WESTERN DIVISION NEWSLETTER

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'78 Western Division Meeting - San Diego

The joint meeting of the Western Association of Fish and Wildlife Agencies and the Western Division of the American Fisheries Society will be held at the Sheraton Harbor Island Hotel in San Diego on July 18-20. The theme of the meeting is "Fish and Wildlife in American Society - A Matter of Dollars and Sense". The meeting hosts have taken a different approach to the organization of the meeting this year. The Western Association and Western Division will meet together in joint technical sessions. Papers on fisheries and papers on wildlife will be presented together in 18 technical sessions. Each session will address fish and wildlife values in a different way. This meeting should be unique because of this innovation and because of the contemporary need to evaluate fish and wildlife programs from an economic point of view.

A general session, beginning at 8:30 on July 18, will kick-off the meeting. The traditional welcoming addresses, President's remarks and keynote address will be given. Following will be a panel discussion on the "Role of Fish and Wildlife in Contemporary Society" The panel will be made up of representatives from business, politics, the conservation community and the general public.

On Wednesday, July 19, a second general session will be held. A panel will present papers and discuss the topic "Environmental protection - What Cost?". Costs and benefits of environmental protection will be looked at from the point of view of industry and of the conservation community. The panel will attempt to "find a middle road".

Watch the June issue of the Newsletter for information on registration fees, room rates, early registration, social events, fisheries sights to see for those driving to the meeting and a list of fisheries pap-

ers which will be presented at the meeting.

Below is a tentative schedule of sessions.

Monday, July 17

1:00 PM Executive Committee Meeting, Western Division AFS

Tuesday, July 18

8:30-12:00 AM Opening Session

1:30-5:00 PM Concurrent Technical Sessions

Session I: Energy and the environment—a social dilemma

Session II: Fishery benefits to society and industry

Session III: Wildlife enforcement

Session IV: The tools of information and education—their strengths and weaknesses

Session V: Wildlife benefits to society

Wednesday, July 19

8:30-12:00 AM General Session

1:30-4:30 PM Concurrent Technical Sessions

Session VI: Commissioner's corner

Session VII: Economic treatment of fish and wildlife

Session VIII: Social values of fish and wildlife to society

Session IX: Resource allocation and land use

Session X: West coast commercial fisheries and their economic value

Thursday, July 20

8:30-12:00 AM Concurrent Technical Sessions

Session XI: Social implications and importance of finding a balance of values in water resource development

Session XII: Social importance of fish and wildlife to contemporary Native Americans

Sessions XIII to XVIII: Contributed Papers

1:00 PM Western Association and Western Division business meetings.



A Confession

It was during the early 1950's that I emerged from graduate school, ready to set the fisheries world on fire. Catch per Angler Hour was the God we worshipped in those days, and my job assignment with California Fish and Game took me to an area where this idol could be fully served - the eastern Sierra-Owens Valley vacationland of throngs of insatiable anglers from the metropolitan areas of southern California. Trout were not indigenous to the Owens River system, but good populations of introduced brown trout in the lower elevations and eastern brook trout in the high country, augmented by the products of a highly efficient hatchery system, made our job easy. I could sit back and bask in the glory of throngs of happy anglers as they caught countless limits of trout. Soon annual visitor use on the Inyo National Forest alone exceeded 5 million visitor days.

However, the stocking program was a disturbingly artificial thing, it was doing nothing for the basic fishery resource and the average citizen, and only so much could be accomplished by incorporating wild trout management techniques on the unplanted waters. Furthermore, the overall effect of heavy stocking on the wild populations was (and remains) very poorly understood. Predictions by planners in the mid 1960's added to the insecurity provided by the status quo: 1) hatchery production would peak sometime in the early 1980's, and 2) California's population was already approaching 20 million, and this was only the start.

It required no crystal ball to see that things could not continue as in the past. New territory had to be scouted out, but where? It seemed wise to start with a complete assessment of the entire fishery resource. We began to check out an incredible diversity of habitats ranging from sparkling lakes under the summit of Mt. Whitney to briney pools on the floor of Death Valley nearly three vertical miles below.

When all this was over I was astonished to find that, of the four fishes endemic to the Owens River system, two were virtually extinct and one was but marginally secure. Only one - the Owens sucker - had withstood the deadly combination of habitat destruction, predaceous exotics, and my own nearly disastrous inattention. Until that time, a nongame fish was simply something to be rotenoned or, at best, indifferently tolerated. Without much enthusiasm, I began to study the life histories of these fishes as a basis for planning a recovery effort. As I did so, my cynicism turned to utter fascination. What magnificent creatures they were individually, and this concept was heightened by an insight into their interspecific relationships and the evolutionary forces which had created them! And how typically American it was to find them nearly eradicated by indifference and the God of Economic Expediency! Providence was kind to give me a second chance. Possibly these four "dickie fishes" might provide a key to the fishery management needs of the future when viewed by the infinitely more perceptive populace which future generations are certain to provide. Now that the blinders were off, I could view the native fishes as part of a biological scheme and balance created with infinite precision by a power well beyond Man's absolute comprehension.

Fortunately, the early 1970's ushered in the environmental movement and the Endangered Species Act with its promise of federal financial assistance in state nongame and native fish programs. Top Brass, which had viewed earlier work with enthusiasm akin to a skunk wandering into a ladies' bridge party (after all, who wants to explain pupfish preservation to a bunch of wild-eyed fishermen?), began to mellow and even pointed with pride to early recovery efforts when cornered and called to repentance by increasing numbers of justifiably critical purists.

Happily, we now find the union of consumptive and nonconsumptive programs to be a generally compatible one, although the latter remains miniscule by comparison. But time is certain to change that. And, to quote Aldo Leopold: "There is, in short, a fundamental unity of purpose between birdlover and sportsman. Their common task of modifying economic activities for conservation purposes is of infinitely greater importance, and difficulty, than their current differences of opinion over details of legislative and administrative policy. Unless and until the common task is accomplished, the detailed manipulation of laws (and programs) is in the long run irrelevant".

In the year 2078, society will be far less interested in the 1978 catch per angler hour in Crowley Lake than in what happened to the area's native fishes, should I fail to appreciate them sufficiently to preserve them and consider their role in future programs. It would be grossly unfair and unwise of me to deprive my successors of such a potentially valuable

management tool. And, inasmuch as I will pass this way only once, I want to leave something to posterity of greater significance than a carload of yellowing creel census forms and computer printouts.

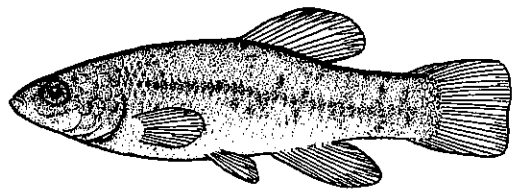
Maybe the best way to summarize this entire matter is to use again the words of Leopold: "Our ability to perceive quality in nature begins, as in art, with the pretty. It expands through successive stages of the beautiful to values as yet uncaptured by language". Let me paraphrase this to fit the subject at hand. Our ability to perceive quality in fish populations begins, as in most things, with the materialistic. It is then refined, through successive stages of appreciation, to values as yet uncaptured by language.

The dawn here is slow in coming, but its ultimate appearance is as inevitable as the rising sun.

Phil Pister

Edwin P. Pister
Associate Fishery Biologist
Cal. Dept. Fish and Game

California
Killifish
F. parvipinnis



Reservoir Census

The National Reservoir Research Program (U.S. Fish and Wildlife Service) has compiled a list of all manmade reservoirs in the U. S. with a mean annual pool of 500 acres (202 ha) or more. There are now about 1493 manmade reservoirs in the U.S. totalling 10 million acres at average water level. Between 1960 and 1970, new reservoirs increased the total reservoir surface acreage in the U.S. about 3.6% per year. Between 1970 and 1976, the surface acreage grew only 1.5% per year.

Here is how the western states stack up.

Rank in U.S.	State	Number of Reservoirs	Total acres (thousands)
7	Mont.	44	424
8	Cal.	143	370
10	Wash.	43	351
13	Idaho	42	248
15	Utah	19	222
17	Oregon	51	196
25	Wyo.	25	128
27	Ariz.	22	116
29	Nevada	10	108
30	Col.	52	101
35	N. Mex.	16	66
47	Alaska	2	4
50	Hawaii	0	0

FISHERIES

The AFS bulletin FISHERIES is emerging as a valuable publication which is a service to the membership and fisheries as a profession. The pictures of recent meetings, the national, division and chapter news, and the feature articles bring the society members closer together. Each issue seems to stimulate thinking on a variety of issues as well as provide some very contemporary information to both managers and researchers.

BUT, the bulletin needs continued support by the membership. Associate Editor Lochie Jo Allen reports that manuscript submissions have fallen dangerously low. The dearth of manuscripts was the reason the last issue was late.

Support the bulletin!! There must be a multitude of philosophical perspectives burning in the minds of western fishery biologists. What better means for sharing those thoughts than to publish an article in this widely read bulletin. A contribution might be in the form of an essay that presents concepts, ideas, or philosophies that relate to what we do and why we do it as professionals. If you have questions on whether your planned article is suitable, get in touch with the Associate Editor, 5410 Grosvenor La., Bethesda, Md. 20014.



WILD TROUT MANAGEMENT PROCEDURES AVAILABLE
\$4.30 to California Trout Inc. Box 2046, San Francisco, California, will get you a copy of Proceedings of the National Symposium on Wild Trout Management.



PREDATOR-PREY SYMPOSIUM

An international symposium on predator-prey systems in fish communities and their role in fisheries management will be sponsored by the Sprot Fishing Institute, July 23-27 at the Sheraton-Atlanta Hotel, Atlanta, Georgia.



RAINBOW TROUT STRAIN STUDIES CURRENTLY TAKING PLACE - HATCHERY GETS NEW JOB

Research toward optimizing the quality of the hatchery product through strain evaluation and selective breeding is currently underway in the Fish and Wildlife Service and in several states. The overall goal of the research programs is to characterize the performance of rainbow trout strains for various management uses. Biologists at the National Fish Genetics Laboratory in Beulah, Wyoming, are identifying, cataloging, and characterizing core stocks of known salmonid strains. In Utah, a program to evaluate the cultural desirability, survival after stocking as fingerlings, and return to the creel after stocking as catchables, of rainbow trout is underway (for information on this study, contact the Utah Coop. Fish Unit, Utah State Univ., Logan, Utah 84322).

Among the goals of the Federal program are 1) to inventory wild and domestic rainbow trout genotypes and establish a registry, 2) to define characteristics of the desirable fish for various management uses, 3) determine the types of management programs which need fish, 4) establish an egg allocation program, and 5) begin a selective breeding program to meet management objectives.

To help carry out this program, the Feds have given an old hatchery a new job. The Ennis National Fish Hatchery at Ennis Montana has been designated as a center for the development and maintenance of broodstock and the production of eggs for specific strains of rainbow trout. Ennis will be working in conjunction with the Beulah lab. to produce trout eggs for special management programs of state and federal agencies.

The Ennis hatchery began operation in 1933. The hatchery produced many different species of trout and salmon for catchable programs during the 40's, 50's and 60's. Many of these fish were stocked in nearby streams like the famed Madison River. The production of catchables was reduced when it was learned that planting was actually suppressing the wild trout population of the Madison. In 1970, the facility gained importance as a major rainbow trout egg source; 14 million were ship-

ped annually. Following the discovery of kidney disease in the brood stock, the system was disinfected and the hatchery and water supply purged of fish. Now the hatchery is ready to assume its new role. It is estimated that Ennis will be producing 15 to 20 million eggs from selected strains once it resumes full operation.

Trout management programs should benefit greatly from this sophisticated use of the Ennis National Fish Hatchery.



A PIE Team

The U.S. Fish and Wildlife Service, Division of Ecological Services, has formed a Project Impact Evaluation (PIE) team. Its purpose is to provide a national focal point within the Service for the refinement and implementation of methodologies designed to assess project impacts on fish and wildlife. The team staff is located at Fort Collins, Colorado (333 W. Drake Rd., Zip 80521). Regional coordinators in Western states are located in Oregon, Denver, New Mexico and Alaska.

The goals and objectives of the team are 1) to coordinate the development of impact assessment methodologies with other agencies, 2) to provide for uniform application of FWS impact assessment techniques, 3) to serve as an information exchange, 4) to develop criteria handbooks to be used for project impact assessment, 5) update habitat evaluation procedures, 6) to refine aquatic criteria for evaluation, and 7) to develop training packages.

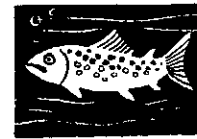
The Service has adopted standardized procedures to quantify the impacts of resource development projects on fish and wildlife. The currently used procedures called Habitat Evaluation Procedures, were developed jointly with State game and fish agencies, other Federal agencies and private conservation groups. The Procedures represent the state of the art for impact assessment.

Fisheries interests on the PIE team are served by Bob Raleigh, Aquatic Ecologist. Dr. Raleigh provides technical assistance for the development and refinement of aquatic assessment systems and the development of aquatic habitat criteria. Other expertise on the staff include a terrestrial ecologist and an economist. Other agencies detail staff to Fort Collins to increase their involvement in developing impact assessment procedures.





Pipelines & Fish



A subject of growing concern to Western fishery biologists is the impact of oil and gas pipelines on fishery resources. The Alcan pipeline, a 4782 mile-long project (7651 km) which will transport natural gas from Alaska, across Canada to the U.S., is in the planning stages. There is also talk of a pipeline from Washington to Montana or Minnesota. Fishery biologists in Alaska, Canada and ten affected contiguous states should keep an eye on this issue.

AFS Executive Director, Carl Sullivan, recently submitted written testimony on the Alaska Natural Gas Transportation System issue to a House of Representatives Hearing. He stated that AFS biologists foresee the need to form an international team to minimize duplication of effort. Studies are needed to protect resources to the degree possible. Sullivan urged an early coordinated review and planning effort and the formation of a State/Federal interagency planning team. The Team would coordinate work on the following issues: 1) pipeline alignment, plans and design, 2) develop and implement studies needed for the review of permits, 3) determine necessary changes in existing Trans Alaska Pipeline System stipulations which will be applied to the gas line project, 4) carry out surveillance and enforcement of stipulations and permits during construction, and 5) carry out surveillance and enforcement during operation and maintenance phases.

404 ?

The Federal Water Pollution Control Act authorizes the Corps of Engineers to control activities that involve disposal of dredged spoil or fill material into water courses and wetlands. They do this by means of a permit program known as the "404 Permit Program". It went into effect on July 1, 1977. The program excludes activities of normal farming, ranching and forestry. 404 procedures ensure that fills are not laden with hazardous chemicals, protect wetlands from unwise development, and ensure that new fills for highways and roads are properly culverted to protect upstream and down stream habitat.



Sullivan suggested that we could learn from mistakes on the Trans Alaska pipeline project. Alaska Chapter AFS members worked in close association with that project and have suggestions to make. First, input by resource interests on the Trans Alaska pipeline was not fully instigated until the company's final design stage. Changes to avoid critical habitat areas at that time were costly. This problem may not arise with the Alcan project. Alcan has indicated their desire to cooperate closely with resource agencies at the earliest stage of the project.

The Alaska fisheries biologists also noted that lack of compliance by the construction agency to stipulations designed to protect fish and wildlife resources was another problem. Moreover, biologists in only an advisory capacity could not enforce the stipulations. And government appointed inspectors were reluctant to enforce them. (This has recently been corrected on the Trans Alaska project. Biologists now have the authority to enforce stipulations and correct some long standing fish passage problems and erosion control problems). Both engineers and biologists should be at an equal level throughout the entire organizational structure.

Early input into the planning effort, interdisciplinary and interagency planning teams, and ability to enforce regulations, sum up the recommendations of the AFS to Congress.

This is the kind of issue that the Western Division should keep abreast of.



AFS NAME CHANGE

A proposal to change the name of AFS to "The Fisheries Society" and a petition for support of the change was printed in the January issue of the Newsletter. To date, the Washington AFS office has received 9 approvals and several letters expressing considerable opposition.



When something goes wrong, there is always someone who knew it would!!!

GENETIC IMPLICATIONS OF STEELHEAD MANAGEMENT PROCEEDINGS AVAILABLE

The California Coop. Fish. Research Unit in conjunction with the Humboldt AFS Chapter and the Northcoast Flyfishers Assoc., sponsored a symposium in May, 1977 on the genetic implications of steelhead management. Proceedings are \$4.00 per copy from the Fishery Research Unit, Humboldt State University, Arcata, Calif., 95521



BIOLOGISTS SUPPORTED BY DINGELL JOHNSON

According to a quick survey of 10 state fish directors chosen at random, it was learned that 237 fisheries biologists are being supported by Dingell Johnson funds. Nationwide, this would be about 1185 fisheries positions supported by these funds. Presently, the AFS has resolved to support a doubling of the D-J program through the imposition of a 1% excise tax on recreational boats, motors and trailers.



WESTERN DIVISION NEWSLETTER
c/o Utah Cooperative Fishery Research Unit
Utah State University
Logan, Utah 84322

FROM THE EDITOR

The Newsletter goes to about 1800 members of the Division 3 times a year. I would like to see a little more science discussed on its pages. The Newsletter is the perfect place to learn who else is currently working on the things you're working on. Summaries of planned, ongoing or completed projects and requests for information are welcome.

I'll start. The Utah Coop. Fish. Unit has done a little work with livestock exclosures as an information and education tool, a research tool, and a fishery management tool. In one exclosure we looked at, we found that bank stability increased 100%, riparian vegetation cover increased 10% and fish population number increased 22% (biomass increased 105%) in the exclosure compared to a grazed open area immediately upstream.

Does anyone have published or unpublished data on exclosures used in the riparian and aquatic zones? If so, please contact C. Berry, UCFRU, USU, UMC 52, Logan Utah 84322.



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