

American Institute of Fishery Research Biologists

... BRIEFS ...

VOL. 29, NO 1

JANUARY, FEBRUARY 2000

Katherine Myers Presented Distinguished Service Award, 1999

The Washington, NW District met for its Annual "Ken Chew Multi-Course Chinese Dinner", on February 15, 2000, at the China Harbor restaurant located on Lake Union, in Seattle. The food was the best yet, and the excellent talk by Bob Lauth (NMFS-Seattle, Sand Point) on "Sea Nymphs and Groundfish" kept the large audience (96 people) in the VERY good mood that "Happy Hour" had begun!

However, this year was extra special because our own Dr. Katherine "Kate" Myers received the AIFRB "Distinguished Service Award" for 1999, the presentation being made by Dr. Jack Helle, representing the national AIFRB. Kate Myers is a Senior Fishery Biologist in the Alaska Salmon Program at the university of Washington's School of Fisheries, where she is in charge of the long running High Seas Salmon Research Program. Kate Myers received her B.S. degree from the University of Washington, her M.S. from Oregon State University, and a Ph.D. from Hokkaido University. Kate has served as AIFRB Vice Director for the NW Washington District from 1987-1989, as National Secretary from 1991-1995, and as National AIFRB Archivist from 1995 to present. CONGRATULATIONS KATE!

Submitted by—Bruce Miller



(Pictured Right)
Recipient of AIFRB Distinguished Service Award for 1999, and Past National Secretary, Katherine Myers accepts award plaque from Past President, Jack Helle, at NW Washington District Banquet February 15, 2000.

(Pictured Left)
Bob Lauth, featured speaker at Washington, NW District Chinese Banquet, contemplating life at top of food chain.

Photo by—Bruce Miller



PRESIDENT'S MESSAGE

Gary Sakagawa

SUSTAINING AIFRB

It has become politically correct to support "sustainable fisheries" and "sustainable ecosystems". Of course, it is easy to support such objectives, but another matter to achieve them. Key to successful achievement no doubt requires, *inter alia*, adequate recruitment. Likewise for the American Institute of Fishery Research Biologists, this principle holds. That is, your Institute is a living, dynamic entity with natural attrition of members and volunteers. Unless this attrition is replaced with recruits, the entity in the long run will not be sustainable. Currently, we do not have sufficient recruitment and your Board of Control is moving on several fronts to correct this flaw. Actions include improving the efficiency of running the organization, budgeting funds for recruitment initiatives by District Directors, revising and making available our recruitment brochure through e-mail, and expanding committees for increased membership participation and for building future leaders. Our actions are under consideration and will be voted on at the next Board meeting (St. Louis, MO., August 19 and 20). But these efforts are not enough. We need you to do your part. *(Continue page 2)*

(Continued from page 1...)

You can assist by soliciting qualified colleagues to join, informing colleagues and students about our excellent professional recognition and development programs (W.F. Thompson best paper award, and Research Assistance awards), nominating graduate papers for the W.F. Thompson Award, volunteering for committee assignments, promoting the objectives and philosophy of the Institute through example, and more. The Board will do its part, but it needs you to do yours. Together we can ensure that AIFRB will remain strong during the new millennium.

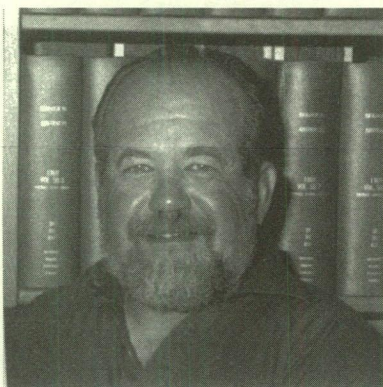
(Pictured Right)

Pensive President Sakagawa deliberates at Board of Control Meeting, August 1999.



WHO'S WHO IN THE AIFRB

ROBERT L. DIXON
DISTRICT DIRECTOR,
CAROLINAS



Bob Dixon, District Director, Carolinas, and Chief of Vessel Sampling NMFS, Southeast Fishery Science Center Headboat survey.

Photo by—Curtis Lewis

It might have been almost Heaven to the melodious Mr. Denver, but West Virginia clearly didn't hold a candle to the Cape Fear region of North Carolina for Bob Dixon who abandoned mountaintops and hollers for sand and subtropics, in accordance to the cliché, as soon as he was old enough to know better. Actually the historic Wilmington-Southport area, perhaps familiar to many of you from the writings of Robert Ruark – The

Old Man and the Boy, etc., was and is a principal summer destination for many Mountaineers, and the Dixon family had long maintained a summer cottage in Kure Beach, N.C., a tiny hamlet wedged between the Atlantic Ocean and the Cape Fear River estuary atop a 50:50 mixture of sand and biting midges. Ocean fever struck Bob young and after birth and schooling in the Oak Hill-Beckley area of WV, with most of his adolescent summers spent at the beach in an intensive study of bikini architectural principles, (theoretically he was a lifeguard) Bob permanently relocated to Wilmington, initially as a student in the nascent marine science technician curriculum of the Cape Fear Technical Institute. Completing that program, with ample sea duty aboard the old R/V Advance II, Dixon recognized that both his intellectual and financial advancement in marine science would require more training. Fortunately the University of North Carolina at Wilmington was just beginning expansion of its now substantial marine sciences program, and Bob's excellent academic record at Cape Fear Tech allowed him to move directly to UNC-W to finish his bachelor's degree in marine science, all without changing addresses or girlfriends.

It was while Dixon was a student, 1972, that administrators at the old federal fisheries lab at Beaufort, just incorporated into the newly formed

NOAA and with a new mandate allowing research on recreational fisheries, were desperately seeking a role for me that engendered a minimal probability of damage to the Laboratory's credibility or to the reputation of marine science in general. My proposal that I begin research on the apparently trivial and clearly obscure recreational fishery for deep water reef fishes off the Carolinas was welcomed as an opportunity to minimize my visibility and the potential for unexpected disasters. A major portion of the new program involved sampling the catches from the several headboats (they charged recreational anglers by the head for a day's fishing) of the region and convincing vessel operators to maintain a log of their catches. Field agents were needed to maintain vessel contacts and otherwise implement the program. Bob Dixon was the first field employee of the new reef fish program. To shorten a very long story the reef fish program has persisted and expanded beyond the wildest imaginations of its originators, and Dixon as a member of the central staff has for nearly two decades supervised the sampling of all the headboats (approximately 180) in the southeastern U.S. from Cape Hatteras to Mexico. Since 1972, the program has established the world's largest database on reef fish sizes, and Dixon oversees, maintains quality control on, and summarizes, analyzes, and presents reports resulting from

that database, now representing over 3 million fish of over 300 species.

Those who have worked docks anywhere know that captains of fishing vessels make hogs on ice look, by comparison, like corporate second vice presidents. Convincing these princes of their realms that maintaining records for the benefit of the government (most of this convincing took place before the availability of the strictures and leverage of the Magnuson Act) was akin to extracting voluntary sexual favors from a Vestal Virgin. Dixon had, and has, the knack (time being what it is, we'll never know how he would have fared with the ladies of the Sacred Fire) and has been central to the high level of voluntary cooperation experienced in the Reef Fish program over the years. Bob has a warm and winning personality and is clearly sincere. His devotion to collection of data of high quality was apparent to vessel personnel and they reciprocated with exceptional cooperation. Importantly Bob has had the ability to impart his dedication to most (some took more coaching than others) of the many scores of field employees he has supervised over the years.

Graduate training at The University of Washington, College of Fisheries better equipped Bob to participate in the theoretical aspects of planning and implementing a major fishery sampling program. For over 4 years Dixon has been part of two state-federal committees attempting to devise a coordinated region-wide program to sample all recreational fisheries of the southeast.

Dixon is a skilled and experienced SCUBA diver and long-time member of the Beaufort Laboratory's (NMFS) diving team. Regularly working on live-bottom reefs on the open continental shelf 20 to 40 miles into the Atlantic at depths of 70 to 120 feet, the team over the last two decades has documented substantial increases in the tropical components of the resident piscifauna apparently in response to climatic warming. Dixon has participated in

numerous special projects such as some of the initial explorations of the wreck of the Civil War ironclad USS Monitor off Cape Hatteras.

Dixon's career might have advanced even further had it not been for two unfortunate aspects of his life that had a strong personal influence on me, his supervisor until my retirement. One aspect was chronic, a manifestation of his physiology, and, to my mind, unforgivable. Dixon has never been seasick a minute of his life, not a queasy second. Bob and I have spent scores, probably a few hundred, of days at sea together. My days were inevitably seen through a green fog, the green varying from, at best, a pastoral pastel tint to a deep bilious chartreuse on most days. And through that chlorophyllous hue I could always see Dixon, jibing, dancing, laughing, being sympathetic, caring. It was awful. He earned my undying enmity.

The other detrimental aspect was only a single incident, but that one was telling. Our early reef fish work involved many trips to sea to virtually unexploited reefs where we collected with rod and reel (you know, it was a dirty job etc.) and usually on those early trips one of us would hook, but never land, one of the great apex predators of the reef world, a warsaw grouper. Powerful lunging locomotives, attaining 400 pounds, these brutes would invariably and quickly dive into the rocks and leave us and the line limp. As senior member, both in rank and age, of the work party I vowed that we would one day land one of these magnificent fish and that the lander would, by all rights, be me! Well land one we eventually did but the lander was.....Dixon. He caught MY fish! That incident was over 20 years ago, but jealousy dies slowly.

Bob is an accomplished and entertaining actor, is a regular in local



Dixon ca. 1975 with hair (Nickname then: "Fluff" Now? "Glare"?) and with 169 pound warsaw grouper taken by him.

Photo by—Curtis Lewis

little theatre productions, and has held paid positions in summer dramas and other local professional productions. His specialty is pirates, and he is a good one. If Disney ever needs another Long John Silver, they should look up Dixon. Bob works hard at controlling the local deer herd and has perfected a one man-one dog technique employing one of his German shorthaired pointers that keeps plenty of venison on his table. And despite Dixon's long career with reef fishes, where he is a true sultan of snappers and prince of porgies, when it comes to piscatorial recreation, he heads back to the mountains of his youth where he floats snippets of fluff and feathers, and, truth be known, lots of worms, in ankle-deep streams to catch slimy little trout. So maybe it was almost Heaven after all.

Submitted by — Gene Huntsman

LIFE SCIENCES IN THE FY 2000 BUDGET

Arriving at the federal budget for FY 2000 proved to be an arduous process. Congress had to pass eight continuing resolutions to keep the government running past the October budget deadline, and the final appropriations bills were signed more than two months late. As the negotiations were drawn out, the spending caps that Congress and the President agreed to in 1997 were quietly surpassed. As a result, most appropriations for life sciences for FY 2000 are higher than they were last year. However, the final figures are for the most part lower than the amounts requested by the administration in February.

Department of Interior

The omnibus bill included \$14.9 billion for the Department of the Interior (DOI). The final DOI bill resolved several matters that had stalled earlier versions. The Land and Water Conservation Fund received \$445 million in the final bill, \$75 million higher than last year's budget. The following federal agencies received more money than they had last year, but still less than the amount they requested:

Bureau of Land Management

\$1.236 billion (FY '99 funding was \$1.184 billion; President's proposal was \$1.269 billion)

National Park Service

\$1.810 billion (FY '99 funding was \$1.764 billion; President's proposal was \$2.059 billion)

Fish and Wildlife Service

\$878 million (FY '99 funding was \$840 million; President's proposal was \$950 million)

U.S. Geological Survey

\$824 million (FY '99 funding was \$798 million; President's proposal was \$838 million) This includes \$137 million for biological research, \$11 million more than FY 1999 and \$12 million more than the agency's request.

Department Of Agriculture

Forest Service

USFS was allotted \$2.831 billion. This is more than the \$2.757 billion in FY '99, but less than the administration proposed \$2.913 billion. The figure includes \$214 million for forest research, \$3 million more than for FY 1999, but less than the \$242 million requested.

Agricultural Research Service

The FY 2000 budget for ARS, the Department's principal in-house physical and biological research agency, is \$903 million in FY 2000. This includes \$851 million for Research & Development. FY 1999 funding for R&D was \$811 million, and the agency's request was \$857 million. Research focus areas at ARS include biological pest control and sustainable ecosystems.

Natural Resources Conservation Service

The bill provides \$661 million for conservation operations (up from \$641 million in FY 1999), which

include soil surveys, conservation technical assistance, and plant material centers. \$35.3 million is allocated for resource conservation and development accounts (up from \$35 million in FY 1999). The bill authorized a \$6.3 million Forestry Incentives Program and a \$174 million Environmental Quality Incentives Program, which would replace the old Conservation Farm Option and Wildlife Habitat Improvement Program (\$0).

Cooperative State Research, Education, and Extension Service-National Research Initiative

Responsible for USDA's primary competitive grants program, the National Research Initiative (NRI), CSREES was allotted \$479 million for R&D in FY 2000. This is \$17 million more than the FY 1999 budget. However, NRI itself received only \$119 million—the same as for FY 1999, but far less than the \$200 million the agency had requested.

Environmental Protection Agency

EPA was allotted \$7.6 billion for FY 2000, which included \$645 million for the agency's science and technology account. The FY 1999 budget for science and technology was \$678 million, but in the newest allotment, an additional \$38 million was transferred from the Superfund Program to bring the FY 2000 total to \$683 million. The administration's request was \$645 million.

EPA's environmental programs and management account was provided \$1.9 billion, \$147 million below the request and \$52 million more than FY '99.

National Oceanic and Atmospheric Administration

Congress appropriated \$2.34 billion for FY 2000, an 8% increase over the FY '99 budget, but less than the \$2.5 billion the agency requested. NOAA programs for the natural resources and environment R&D increase by \$17 million to \$617 million. The budget that the administration proposed was \$600 million, the same amount as the FY 1999 budget. Of the R&D budget, just over \$100 million in new funding will be derived from the Land and Water Conservation Fund (LWCF) to fulfill the environmental mandates outlined in the Lands Legacy Initiative. NOAA's Endangered Species Act program—primarily targeting whales and salmon—was given \$43 million in the final bill. This was more than the \$28 million it received in FY '99, but not the \$55 million the agency had requested.

Office of Oceanic and Atmospheric Research

OAS received \$300 million, \$287 million was allotted in FY '99, while the president sought \$283 million. OAS runs The National Undersea Research Program (NURP), which conducts undersea research in fisheries habitats, coral reef ecosystems, and fisheries management issues. NURP was allotted \$13.8 million for FY 2000. NURP had only requested \$9 million, and the FY 1999 budget was \$14.5 million.

National Marine Fisheries Service

NMFS received a total of \$404 million. This is significantly more than the \$377 million allotted in FY '99 figure but below the \$413 million request. The NMFS budget includes funds for:

-Habitat conservation — \$10.9 million (\$9.3 million requested; \$9.0 million in FY 1999)

Fisheries Mgmt. Programs — \$75.7 million (\$87.7 million requested; \$61.8 million FY 1999)

National Ocean Service (NOS)

NOS received \$279 million. The FY '99 level was \$258 million, while Clinton had sought \$329 million. The NOS budget includes funds for:

-Ocean Resources Conservation and Assessment — \$85.9 million (\$99.7 million requested; \$82.9 million in FY 1999)

-Coastal Zone Mgmt. Grants — \$54.8 million (\$55.8 million requested; \$53.8 million in FY 1999)

Estuarine Research Reserve System — \$6 million (\$7 million requested; \$4.4 million in FY 1999)

Marine Sanctuary Program — \$23 million (\$26 million requested; \$14.3 million in FY 1999)

National Science Foundation

The National Science Foundation remains the principal source of federal support of academic non-medical research in biology-related disciplines. NSF received \$3.9 billion for FY 2000, almost exactly what the administration proposed. The FY 1999 budget was \$3.74 billion. Of the \$3.9 billion, \$3 billion goes to Research and Related Activities, which include \$250 million for polar exploration and \$415 million for the Biological Sciences Directorate (\$24 million more than FY 1999 and \$6 million more than the President's request).

From — New Source, December 1999

Ed Iverson and Early Alaskan Days Remembered

Clint Stockley

2902 E. 2nd St. Unit 109 • Newberg, OR 97132-9615

It was with great sadness that I read of Ed's passing away. I first got acquainted with Ed at Larsens Bay in June of '48 as part of Don Bevan's salty crew. Ed's sense of humor soon destroyed all of us. His droll wit compared to Don's — just the facts, was a constant source of a twist to the gray skies and strong winds.

As I recall, Ed stayed on tagging in Uyak Bay, while Bevan and I went to Uganik Bay to tag off the traps along with Allan Hartt. Al and I ended up down at Allitack tagging off PAF traps and then pursuing tag recoveries in Olga Bay country, where Al and I were lucky to meet pioneers Bill Pinnell and his mate Morris Tollefson — gold seekers since '32, trappers and later famous bear guides.

In late August Bevan sent me to Karluk Lake to be with Ray Willis fellow tent mate on Camp Island chasing tagged red salmon up and down the tribs to the big lake.

We camped in this cold wall tent for some three weeks, drying out at the BCF cabin and lab, at the kindness of Dick Shuman and Phil Nelson. In mid Sept. we flew into town to return to U of W. for the fall term and Ray's wedding-to-be. Before departure, I got on the phone with W.F. Thompson and he said to get back there to the lake and stay till the snow flies. Bye bye Ray for wedding bliss in Seattle. Somehow I located Bevan and he said to look for Ed in a chartered seiner somewhere in Uyak Bay. So away I go with Rapid Robert in his not so trusty CB pusher from Kodiak town to Uyak B. where we eventually found Ed in a tiny stinky Indian seiner. After loading up, we were off to Camp Island and gloomy Karluk Lake. Fortunately Shuman was shutting down for the season, so we moved into palatial BCF Manor to chase the red salmon die-off between autumn storms. Ed and I had only been at Camp Island a short time, when Bob Bergner dropped by with a mail delivery, to make sure we were "Gung Ho" in our pursuit of tagged sockeye. With a full larder — we waved Bud and Bob off to Kodiak Town and civilization. Ed tolerated my cooking and kept us in stitches as we crawled the bear trails along the tribs of Karluk Lk. Somewhere I've got a photo of Ed sitting on the banks of O'Malley River posing with about 50 feet of bear tape-worm twisted onto his fish spear like spaghetti on a fork. After the snow came, Bob Hall came to fetch us in his newly acquired Grumman Widgeon. He was low on petrol, so we filled him up with a couple cans of Chevron white gas. After capping the chimney and turning over the boats, we were off for civilization a month late for fall term. Ed and I socialized with the ladies while in school and worked part time at FRI so we could eat while on the GI Bill. As long as I live, Ed's humor will shine through. Looking back now, the numbers shrink. First Wally Neurenberg, then Don Bevan and now Ed. Some of the 'great ones' from "The Greatest Generation" are gone.

Editor's Note: Many, many thanks to Clint Stockley for these remembrances of classic times in Alaska. Our profession has an exciting and rich history. I would like to capture more of it in the pages of BRIEFS. All contributions welcomed.

~ MEETINGS OF NOTE ~

Joint Meeting of the:

American Society of Ichthyologists
and Herpetologists
80th Annual Meeting

American Elasmobranch Society
16th Annual Meeting

Neotropical Ichthyological
Association Herpetologists' League
48th Annual Meeting

Canadian Association of Herpetologists
Society for the Study of Amphibians
and Reptiles-43rd Annual Meeting.

Hosted by Universidad Autonoma de Baja
California Sur, La Paz, B.C.S., Mexico

June 14-20, 2000

For more information on all aspects of the
2000 Joint Meeting or to submit abstracts,
please see the 2000 Web site:

www.uabcs.mx/asih
or contact:

- Carlos Villavicencio Garayzar
- Laboratorio de Elasmobranchios
- Departamento de Biología Marina
- Universidad Autonoma de
Baja California Sur
- A.P. 19-B. La Paz B.C.S., Mexico.
CP. 23000

Phone & Fax: 011-52-1-128-07-75

email: cvilla@calafia.uabcs.mx
asih@calafia.uabcs.mx

The Third William R. and Lenore Mote International Symposium in Fisheries Ecology

TARGETS, THRESHOLDS, AND
THE BURDEN OF PROOF

October 31-November 2, 2000

Sarasota, Florida

Symposium Format and Topics

*Invited and contributed papers in the
symposium will address the following
questions:*

- How accurately can be determined
biological reference points such as
maximum sustainable yield?
- How long does it take us to recognize
that a stock has fallen below the target
stock size and thus into
nonsustainable status?

- How fast can fishing effort be reduced
and at what cost?
- How well can fishing effort be
controlled and by what means while
the stock rebuilds?
- What risks do we want to minimize
(e.g., stock extinction, economic
collapse)?

Invited Speakers

Jon Brodziak, Anthony Charles, Colin
Clark, Paul Dayton, Mikko Heino, Ray
Hilborn, Paul G. Kinas, Don Ludwig,
Murdock McAllister, Alec MacCall, Marc
Mangel, Ransom Myers, Ana Maria
Parma, Charles Perrings, Randall
Peterman, Andrew Rosenberg, Keith
Sainsbury, Carl Walters, and James
Wilen.

Contributed Papers or Posters

A limited number of contributed-paper
and poster sessions will be scheduled.
If requests exceed the number of
available paper and poster slots,
acceptance of the contributed paper or
poster presentation will be based on
relevance to the symposium topic. Late
submissions will not be accepted. Each
contributed paper presentation will last
15 minutes (timed) with an additional 5
minutes for questions and answers.
*Attendees not giving papers are
welcome.*

A limited number of contributed papers
will be included in the symposium
proceedings, to be published in the
Bulletin of Marine Science. If you wish
your contributed paper to be
considered for inclusion, you must
submit the completed manuscript one
month prior to the symposium. The
few to be published will be chosen on
the basis of peer review from among
those submitted.

Abstracts and Abstract Deadline

Abstracts should reflect work in one of
the topic areas and should be no longer
than 250 words. The deadline for
submission is June 1, 2000. Submit by
e-mail, by fax, or on computer disk to
Dr. Felicia Coleman, Institute for Fishery
Resource Ecology, Department of
Biological Science, Florida State
University, Tallahassee, FL 32306-

1100. Fax: (850) 644-9829; e-mail:
coleman@bio.fsu.edu. Please include
full contact information for all authors
(name, affiliation, mailing address,
phone number, and e-mail address).

Location and Accommodations

The symposium will be held at the
Mote Marine Laboratory, 1600
Thompson Parkway, Sarasota, Florida.
A block of rooms has been reserved at
the Helmsley Sandcastle Hotel, 1540
Ben Franklin Dr. The conference room
rate is \$95.00 per night (single or double
occupancy), \$115.00 gulf side.

Please make reservations by calling the
Helmsley at either (800) 225-2181 or
(941) 388-2181. Please be certain to
specify that you are attending the FSU-
Mote Fisheries Conference when
making your reservations in order to
receive the special room rate. Any
reservations not guaranteed with the
hotel will not be held beyond 6:00 p.m.
on the arrival day without verification of
arrival time.

Steering Committee

Felicia Coleman (Chair, Florida State
University), David Conover (William
R. and Lenore Mote Eminent Scholar,
1997; State University of New York,
Stony Brook), Ken Leber (Mote Marine
Laboratory), Pamela Mace (National
Marine Fisheries Service, Woods Hole),
Marc Mangel (William R. and Lenore
Mote Eminent Scholar, 2000; University
of California, Santa Cruz), Alec McCall
(National Marine Fisheries Service,
Santa Cruz), Andrew Rosenberg
(Assistant Administrator for Fisheries,
NMFS), Joseph Travis (Robert O.
Lawton Distinguished Professor, Florida
State University)

Registration Information

The registration fee is \$200. Make
checks payable to Mote Marine
Laboratory. For registration information
call the Mote Marine Laboratory at (941)
388-4441. The fee includes continental
breakfasts, an early-check-in reception
on 30 October at the Helmsley
Sandcastle Hotel, a reception at the
Mote Marine Laboratory on November
1, and a dinner banquet on November 2.

RESTORING SUPERIOR COASTERS

Last September, Trout Unlimited, TU Canada, and Great Lakes United announced a new partnership to restore Lake Superior's "coaster" brook trout, a spectacular fish once abundant in the Great Lakes.

Known as "coasters" because of their preference for near-shore lake habitat, this leviathan form of brook trout provided a highly valued and productive fishery along Lake Superior shoreline areas and in tributary streams. Today, coasters are characterized as "spending part of their life in the Great Lakes." Habitat loss and overharvest have contributed to their decline.

Only three viable populations are known to exist in the U.S.: two on Isle Royale and one in the Salmon-Trout River, located in Michigan's Upper Peninsula. The Canadian lakeshore supports slightly more populations, including the healthiest in the basin – in the Nipigon River. The Nipigon produced the world-record coaster, which weighed 14 pounds.

Last fall, the state of Michigan announced plans to reintroduce coasters in its Upper Peninsula, and TU members began assisting the Department of Natural Resources with stocking in Sevenmile Creek, and the Gratiot, Little Carp, Hurricane, and Mosquito rivers.

For background information, see the "Newsstand" on www.tu.org.

From — Trout, Winter 2000

Atlantic and Gulf of Mexico Marine Mammal/Sea Turtle Field Guide Available

NOAA's Rhode Island Sea Grant at the University of Rhode Island has just published, "*Guide To Marine Mammals & Turtles of the U.S. Atlantic & Gulf of Mexico*," by Kate Wynne and Malia Schwartz, with illustrations by Garth Mix. This field guide is designed to familiarize users with distinguishing characteristics of the species of whales, dolphins, porpoises, seals, manatees, and sea turtles commonly found in U.S. Atlantic waters and the Gulf of Mexico.

Kate Wynne also authored "*Guide to Marine Mammals of Alaska*," published by the Alaska Sea Grant College Program at the University of

Alaska Fairbanks in 1992. Both guide books were sponsored in part by the NMFS Office of Protected Resources, and are designed to stand up to a variety of weather conditions encountered by mariners, fishers, and biologists alike, although they are also ideal for shore-based users of all ages and backgrounds.

The Atlantic field guide can be purchased for \$25. The NMFS Office of Protected Resources plans to distribute several hundred guides free of charge to commercial fishers that participate in MMPA Category I and II commercial fisheries (those that have a frequent or occasional take of marine mammals). The guides will assist fishers in identifying marine mammal and sea turtle species that become entangled in gear.

To obtain copies of the Atlantic field guide, contact Rhode Island Sea Grant at (401) 874-6842, or write to Rhode Island Sea Grant, University of Rhode Island, Narragansett Bay Campus, Narragansett, RI 02882-1197.

To obtain copies of the Alaska guide, contact the Alaska Sea Grant College Program at (907) 474-6707 or write to Alaska Sea Grant College, University of Alaska Fairbanks, Fairbanks, AK 99775-5040.

From — MMPA Bulletin: 16

SNAKE RIVER DAM REMOVAL:

Two new reports address economic concerns

American Rivers released the report, "Grain Transportation After Partial Removal of the Four Lower Snake River Dams: an affordable and efficient transition plan," in October. The report, authored by Dr. G. Edward Dickey, a former Army Corps of Engineers official, concludes that prudent, timely investments in rail and highway infrastructure could provide an affordable transportation alternative to the lower Snake River waterway.

One month later, American Rivers released a second report, "Irrigation After Partial Removal of the Snake River Dams." The report proposes that providing an alternative irrigation system would permit farmers in rural eastern Washington to continue growing irrigated crops if the four lower Snake River dams are removed.

Both reports are available at www.amrivers.org/snake.html.

From — American Rivers, Fall/Winter 1999

*The American Institute of
Fishery Research Biologists*
announces the call for applications for

Research Assistance Awards
(Range of past awards: \$100-\$350)

PURPOSE To provide travel assistance to present research findings at scientific meetings or conduct off-site research

ELIGIBILITY All AIFRB professional and student associate members in good standing (must have dues paid for the award period)

SUBMISSION Submit:

- Written request for the award
- Letter of support from research sponsor or supervisor (if student associate)
- Abstract of the paper or poster to be presented; or, short description of the research activity
- Acceptance letter from meeting sponsor (may be submitted after award deadline)

To: Colleen Caldwell
USGS/BRD
New Mexico Cooperative Fish and Wildlife
Research Unit
Box 30003, MSC 4901
Las Cruces, NM 88003
ccaldwel@nmsu.edu
Phone: 505-646-8126

NOTE: If you are not a member or require membership renewal, please request a membership application from:

Thomas R. Lambert
AIFRB, Membership Chair
3162 Mariola Road
Sebastopol, CA 95472
lambert5@pacbell.net
Phone: 707-829-7882

DEADLINE
April 21

NOTE: Research award recipients will be notified by May 21 and their abstracts or description of research activities will be published in *BRIEFS*.

WHO'S WHO MATERIAL SOLICITED

I recently requested the aid of the officers and directors in preparing material for the "Who's Who in the AIFRB" series. I also encourage the membership at large to help out. Recognize a colleague who may not have received the attention that their accomplishments, dedication to the profession, or promotion of the general welfare of humankind merit.

Submissions may be of any length, 500 to 700 words is a good target, but don't feel inhibited about longer or shorter contributions. A photo is invaluable, although not an absolute requirement. In addition to recounting professional aspects of the subject's life, the article should tell a story about the person, his/her personality and passions, idiosyncrasies and avocations. More than one photo can be used if they help tell the story, and, in fact, I encourage multiple photos. So few of our members have been described in Who's Who that it is unlikely that you will choose a subject already covered, but if there is any doubt, check with me. I am reviewing past Briefs to prepare a list of previous honorees.

— Editor

Schuck's Photos Find Good Home

Dear Dr. Huntsman:

Regarding "Schuck Offers Photos" in the November-December, 1999 issue of ...BRIEFS..., I've written to Mr. Schuck asking that he might consider donating the photos to the Northeast Fisheries Science Center of the National Marine Fisheries Service in Woods Hole, Massachusetts.

Sincerely,
Alan Kohuth

Since Kohuth's letter arrived Shuck has had other good offers. He is deliberating. — Editor

News Notes From the President

COMPUTER FILE OF RECRUITMENT BROCHURE

Al Shimada worked with Tom Lambert to create a computer file of the Institute's recruitment brochure. The process included up-dating and correcting typos that were in the earlier version. To view or print this file you will need Adobe Acrobat Reader. This software can be downloaded free from: <http://www.adobe.com/products/acrobat/readstep.html>.

LINE OF CREDIT FOR RECRUITING NEW MEMBERS

I remind the District Directors that, this year, you have a special line of credit of \$50 to support activities related to recruitment of new members. You are encouraged to tap into the credit. So far, I understand that Tom Moore will be using his credit for recruiting members related to establishing a new Central California District, and Bruce Miller will be using his credit to off-set cost of graduate students to attend his district meetings. Start thinking of innovative ways to use your credit before the year is up, if you don't have a plan yet.

SYMPOSIUM FOR 2000

Dora Passino-Reader is well on her way in completing preparations for our Symposium 2000. She has secured a time slot in the agenda of the 2000 AFS meeting (St. Louis, MO.) for a symposium on "Aquatic Invaders". A full day's session is being organized jointly with the Introduced Fish Section of AFS.

TREASURY MATTERS

I have authorized Al Shimada to engage the services of Bond Beebe partners (tax consultants) to complete a package of services for about \$1,500.00. The services include reviewing the Institute's IRS status, providing guidance for up-grading the status, reconstructing the Treasurer's account (for up-grading application), realigning accounting procedures, and filing documents related to income and moving of the treasury accounts to Maryland (home state of Al).

ICCAT's New Plan to Save Swordfish 'Weak': International Game Fishing Association Opinion

At a November meeting in Brazil, the 27 member nations of the International Commission for the Conservation of Atlantic Tunas (ICCAT) narrowly approved a 10-year rebuilding plan for swordfish. Unfortunately, the agreed upon restrictions on swordfish landings in the Atlantic will theoretically give swordfish only a 50% chance of recovering within 10 years. Japan, the European Union, and some other member countries opposed even this obviously weak rebuilding plan. The plan is based on at least two false premises. The first is that all 27 member countries will comply with landing quotas although it is already well known that many members routinely ignore their quotas. Second, the rebuilding plan is based on the assumption that no non-ICCAT member countries land any swordfish in the Atlantic. This is a false assumption and, in fact, some countries have already been disciplined because of unauthorized landings of swordfish. It looks like business as usual at ICCAT, and any rebuilding of the severely stressed Atlantic swordfish stocks remain a lofty, but distant, goal.

*From—International Angler, 62 (1),
Jan.-Feb. 2000*

AIFRB Members Lauded by U.S. Department of Commerce

A recent listing of winners of the U.S. Department of Commerce Bronze Medal included three AIFRB members:

Stephen Murawski (Associate 1983, Member 1990) and Frank Almeida (Member 1985) for the rapid and successful implementation of a fishery management program of principal importance to the agency.

Gary Matlock (Member 1990, Fellow 1994) for the development and negotiation of international conservation plans for sharks, seabirds and the reduction of fishing capacity.

GREAT LAKES COASTAL WETLAND INDICATOR PROJECT BEGINNING

By Thomas Simon

Severe degradation and destruction of coastal wetlands along the Great Lakes has reduced what were once expansive wetlands to only a remnant. The loss of coastal wetlands has formed an immense void for aquatic life found in the transition between terrestrial and aquatic habitats. These habitats are important spawning, nursery, and feeding areas for a majority of Great Lakes' fish species during a portion of their life cycle. The U.S. Fish and Wildlife Service in collaboration with the U.S. Environmental Protection Agency is beginning a project to develop environmental indicators for assessment of remaining Great Lake coastal wetlands.

The fiscal year 1998 priorities for the International Joint Commission and the focus of the State of the Lakes Ecosystem Conference (SOLEC) included the establishment of environmental indicators for the nearshore habitats and coastal wetlands of the Great Lakes. Development of reference conditions for the Great Lakes is an imposing task when confronted by the need to account for differences among Great Lakes, wetland types, and size dimensions. The Great Lake coastal wetlands are affected by filling and disturbance, urbanization, and are heavily impaired by a variety of land uses. Coastal wetlands possess substantial spatial heterogeneity and are vulnerable to contaminants from industrial sources, atmospheric deposition, non-point sources, erosion, and invasion by alien species.

Efforts to characterize Great Lake biocriteria and establish regional reference conditions have generally concentrated on tributary watersheds of several States. A greater portion of the Great Lakes nearshore and coastal wetlands have not been sampled, thus restricting a more global spatial depiction. However, efforts to describe Great Lake wetland reference conditions for fish, plants, and invertebrate assemblages are ongoing (U.S. Geological Survey, BRD). This will impact future data needs for the establishment of reference conditions, numerical biocriteria development, and State-Regional monitoring and trend assessment. The current strategy for compiling this random-stratified design is that an unbiased selection of sites can be chosen to estimate the range of conditions in their "true" abundance for fish assemblages within four Great Lakes and provides an unbiased validation of pending reference conditions for fish, wetland plants, and invertebrates.

Information obtained from this study may be used for the 305(b) assessment of surface waters, for the assessment of 404 and 401 permits, for the monitoring of the Great Lakes, for the establishment of baseline, and for the assessment of watershed indicators and management of Areas of Concern, Remedial Action Plan Stage II and III, and Lakewide Management Plans.

The project will consist of two parts. The first is an evaluation of the status of Great Lakes coastal wetlands using a monitoring network of stations selected by the Environmental Monitoring and Assessment Program

(EMAP). Sites will be selected using a random-stratified sampling design and data will be used to develop a multimetric index for fish and benthic macroinvertebrate communities stratified by Great Lake and wetland type. The second part of the study will consist of a comparison of methods for aquatic macrophytes, benthic macroinvertebrates, and fish collection. The data from 20 drowned river mouth wetlands in Lake Michigan will be used to validate multimetric indices developed by U.S. Geological Survey, BRD-Ann Arbor, for wetland plants and invertebrates assemblage reference condition. Wetlands will be randomly chosen using the intensified EMAP design. Drowned river mouth wetlands in Lake Michigan will be sampled to allow validation of metrics for comparison of latitudinal differences between northern and southern Lake Michigan. Data will be analyzed using established Index of Biotic Integrity indices, indices for specific Great Lakes wetland types now nearing completion (Wilcox and others), and multivariate analysis. These multimetric indices for fish assemblages are for littoral areas of Lake Erie (Thoma 1999) and Lake Ontario (Minns et al. 1994), and drowned river mouth wetlands of northern Lake Michigan.

Fish and macroinvertebrate assemblage indicators will be collected at 100 randomly selected sampling units in Lakes Michigan, Huron, Erie-St. Clair, and Superior. An additional 20 targeted sampling units will be sampled so that least-impacted sampling units will be targeted in each Great Lake. This project is part of the Environmental Protection Agency's strategic plan and SOLEC environment indicators through Fiscal Year 2002.

Contact: Thomas P. Simon, Ph.D.
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620 South Walker Street
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Ph: (812) 334-4261 ext. 213
E-mail: thomas_simon@fws.gov

References:

Minns, C.K., V.W. Cairns, R.G. Randall, and J.E. Moore. 1994. An index of biotic integrity (IBI) for fish assemblages in the littoral zone of Great Lakes' areas of concern. *Canadian Journal of Fisheries and Aquatic Sciences* 51: 1804-1822.

Thoma, R.F. 1999. Biological monitoring and an index of biotic integrity for Lake Erie's nearshore waters. Pp. 417-461. In: T.P. Simon (ed). *Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities*. CRC Press, Boca Raton, FL.

Editor's Note: Auxiliary information suggests there is controversy about the efficacy of the work described above. Those with a special interest should contact Dr. Simon and other associated regional scientists. District Director Passino-Reader, I'm sure, would assist you in making appropriate contacts.

Menhaden Board to be Reorganized

Fishing industry representatives will be removed from the committee that oversees the East Coast menhaden fishery when a new plan is written next year to manage the small fish. The Atlantic States marine Fisheries Commission's Atlantic Menhaden Management Board, at its November meeting, directed the commission's staff to draft changes to the fishery management plan that would reorganize the menhaden board to resemble other ASMFC committees. ASMFC – a compact including all East Coast states that manages migratory fish – has a separate board for each species it is responsible for. But its menhaden board is the only body that includes industry representatives, who account for half of the membership. The makeup of the menhaden board was the top complaint ASMFC received this year when it took public comments about potential changes in menhaden management.

Menhaden, whose numbers have been declining, have become

a contentious issue in the Bay and along the coast. Many sport anglers have expressed alarm about the demise of the small fish, which is an important food source for striped bass, bluefish, weakfish and other popular recreational species. Some people, including scientists, have faulted the ASMFC's current menhaden management plan for not taking into account the need for a greater population of "forage" fish such as menhaden while populations of predator species, like striped bass, are rebounding. In the Chesapeake Bay, some have speculated that a recent decline in menhaden has slowed the growth of striped bass and affected their health in some areas.

While menhaden are not the target of recreational anglers, they are the largest commercial catch in the Chesapeake, measured by weight and numbers. They are processed into oil, animal feed and other products.

Besides changing the board's composition, a revised fishery

management plan for menhaden will likely recommend other changes, such as taking into account the ecological role of the fish when making decisions. Joe Desfosse, ASMFC management plan coordinator for menhaden, said potential management plan changes could be available for review by the menhaden board's February meeting. But, he said, the Commission's Interstate Fishery Management Program Policy Board – which oversees menhaden and other management boards – has suggested that the menhaden board be restructured before a new management plan is developed, so that may be addressed in February instead. In either case, it is possible that a fully revised draft management plan could be acted upon by the board at its spring meeting, and then go out for public comment in the summer. In that case, Desfosse said, it's possible the revised plan could be adopted by the ASMFC in fall 2000.

From—Bay Journal, December 1999

MEET US IN ST. LOUIE, LOUIE – AND BOB & RALPH, ETC.

Members Encouraged to meet with Board of Control

The Board will hold its annual meeting on Aug. 19 (Sat.) and 20 (Sun.) in the Adam's Mark Hotel, St Louis, MO. For the evening of Aug. 19, a dinner is being planned for Board members and past Board members. Past members wishing to participate should contact Barbara Warkentine. For the evening of Aug. 20, the Institute will host a reception for AIFRB members and other participants of the AFS meeting in the Adam's Mark Hotel. The reception will be held from 5:00 to 6:30 pm and prior to the AFS Welcoming social.

As a native of the St. Louis area, I can assure you the area has many wonderful attractions: for archeologists - one of the most significant native American sites in the New World, Cahokia Mounds State Park – 15 minutes from Adam's Mark; history buffs – the Jefferson National Expansion Memorial Museum under the arch – fabulous; natural history? St. Louis Zoo and Missouri Botanical Garden; Food – multiethnic – don't miss Pietukowski's office – sized meat market which is the Polish Pope's favorite supplier of Polish sausage – (what's wrong in Warsaw?).

Missouri's many beautiful, spring fed streams offer excellent canoeing and fishing. And it is rumored that in St. Louis is a brewery — Editor.

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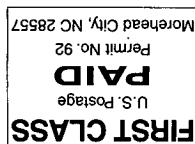
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BRIEFS, the newsletter of the American Institute of Fishery Research Biologists, is published six times a year. It is intended to communicate the professional activities and accomplishments of the Institute, its District, and Members; the results of research; the effects of management; unusual biological events; matters affecting the profession; political problems; and other matters of importance to the fishery community. Comments and contributions should be sent to the Editor, Dr. Gene R. Huntsman, 205 Blades Road, Havelock NC 28532, susan.huntsman@noaa.gov. Subscription \$30 a year to Institutions and Non-Members. Officers-Gary Sakagawa, P.O. Box 271, La Jolla, CA 92038-0271, gary.sakagawa@noaa.gov -President; Barbara Warkentine, 1329 Balcom Ave., Bronx, NY 10461, bewlc@cunyvm.cuny.edu -Secretary; Allen Shimada, NMFS, Office of Science and Technology, 1315 East West Highway, Silver Springs, MD 20910, allen.shimada@noaa.gov -Treasurer. ISSN-8755-0075

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... BRIEFS ...

VOL. 29, NO 2

MARCH, APRIL 2000

Who's Who in AIFRB: G. Morris Southward

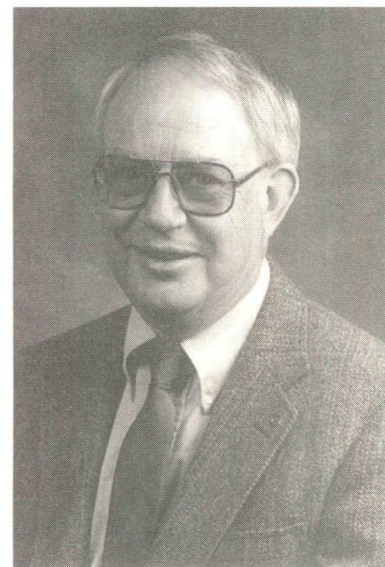
Morris Southward was born October 8, 1927, in Boise, Idaho, to Emma M. and Glen P. Southward. After graduation from high school in 1945 he attended Boise Junior College and in 1947 enrolled in the School of Fisheries at the University of Washington in Seattle. In 1949, after completing a Bachelor's degree in Fisheries, he started work for the Idaho Fish and Game Department. In 1950, he returned to Seattle and for a short time worked for the Washington State Department of Fisheries. In the late fall of 1950, Morris started to work for the International Pacific Halibut Commission (then known as the International Fisheries Commission). This is an international treaty commission between Canada and the United States. Also, he entered Graduate School at the University of Washington and completed a Master of Science degree in Fisheries in 1956. Morris continued working for IPHC and continued in Graduate School, completing a Doctor of Philosophy degree in Fisheries in 1966 with a major in bio-mathematics and a minor in mathematical statistics. His early work at the Commission involved studies of growth and the effect of the fishery on the growth of halibut.

In 1967, Morris joined the faculty at Washington State University as an Experiment Station Statistician with responsibility for consulting and teaching. In 1970, he joined the faculty at the University of Wisconsin, Madison in the Department of Statistics as a Visiting Professor. In 1971, he returned to the IPHC as a Biometrician with responsibilities for collecting production and effort data. During his two tenure periods with IPHC, he served as a scientific advisor to the International North Pacific Fisheries Commission, an international commission between Japan, Canada, and the United States.

In 1975, Morris joined the faculty of the Department of Experimental Statistics at New Mexico State University. He retired with the rank of Emeritus Professor in 1993. In 1991, Morris received the Donald C. Rousch award for outstanding teaching. Morris joined the American Institute of Fishery Research Biologists as a Member in 1959 and was promoted to Fellow in 1972. He was granted Emeritus standing in 1995. Morris is currently District Director for the Arizona-New Mexico District of AIFRB. He also was a member of the American Statistical Association and The International Biometric Society where he served as a Secretary/Treasurer of the Western North American Region for 8 years during the 1980's.

In 1980/81, Morris spent a sabbatical year on the Faculty of Statistics as a Visiting Professor at the University of Edinburgh, Edinburgh, Scotland. He visited many agricultural experimental stations in the UK during this year. In 1990, he was asked to serve as a Statistical Consultant at New Delhi, India for the Food and Agricultural Organization of the United Nations. In 1993, Morris taught a course in sampling theory at an agricultural experiment station in Valencia, Spain.

Morris is active in St. James' Episcopal Church of Mesilla Park, New Mexico serving as Junior Warden and Senior



Warden. In addition to serving in the St. James' Parish, he often helps at the El Caldito soup kitchen.

Morris has had a lifelong interest in photography, having started when he was first a student at the University of Washington. He has had work in the Basalt Gallery in Basalt, Colorado and the former Adobe Horse Gallery in Mesilla, New Mexico. Presently he is a member and Secretary of the Mesilla Valley Fine Arts Association and has work in their Gallery in the Mesilla Valley Mall, Las Cruces, New Mexico. In addition to photography, Morris has had a lifelong interest in cooking and enjoys preparing dinner for small groups of friends. He was inducted into Rotary in the mid-1980's and was named a Paul Harris Fellow in 2000.

Morris is married to Lorraine and they celebrated their 25th anniversary in 1999. Two children, Judith and Todd live in Colorado. Judith is Head of Conservation Department of the Natural History Museum in Denver, and Todd works for a software company in Aspen. Todd is married and has two children.

Note: Many thanks to Morris for this biography. Morris is the only Director, so far, to respond to the President's request for Who's Who submissions, (due April 10) but I'm sure all of the other Directors are working diligently on their documents.

— Editor

W.F. THOMPSON STUDENT PAPER AWARD – 1998

Prof. Thompson was an outstanding fishery scientist in North America and is honored by the award through the activities of the American Institute of Fishery Research Biologists (AIFRB).

The W.F. Thompson Best Student Paper Award (1998) is given by the AIFRB to recognize excellence in research as well as to encourage student professionalism in fisheries and aquatic sciences and publication of research results. The award includes a plaque and check for \$1,000.00.

All scientists are eligible so long as the senior author conducted the research while a student of fish or some aspect of aquatic science.

Papers nominated for the Best Student Paper Award must have been accepted for publication in a recognized scholarly journal, or as part of a book or proceedings, within three years of termination of student status. Each member of AIFRB has a serious responsibility to nominate a student paper and to encourage academic colleagues to do so. The Thompson award is an important mechanism to promote good science and the careers of serious students of fishery research.

For papers published in 1998 to be nominated for the Award; send a resume with details of student author's educational and recent employment history, as well as six copies of the paper to:

Dr. Jack B. Pearce, Chair
W.F. Thompson Best Student Paper Award
Buzzards Bay Lab
54 Upland Rd.
Falmouth, MA 02540
508-540-4572; Fax 508-457-0105
buzbay@cape.com

To be eligible, papers must be received by July 7, 2000.

NEW ENGLAND COD PROTECTIONS EXTENDED

The New England Fishery Management Council voted in January 2000 to extend the seasonal closure of several fishing grounds in the Gulf of Maine in order to rebuild depleted cod stocks. The areas are currently closed for February, March, and April. Beginning next year they would also be closed in January. The Council also extended for another year the no-codfishing zones in the western Gulf of Maine.

The closures came in response to the latest stock assessment for ground fish in the region, which revealed that cod in the Gulf of Maine are still near record low levels, although some populations of once depleted flounder are recovering due to large closed areas in waters south of the Gulf of Maine.

From, Marine Conservation News — Spring 2000

Rebuttal: Simon Article Flawed

Editor's Note: The assertion by the signatories below that I had in hand, or knew of, their criticisms of Simon's article but chose not to publish that criticism is wrong, and perhaps absurd. As anyone who has examined more than two issues of Briefs would know, I am so desperate for novel material that I would have relished having the critique two months ago. Whatever the method chosen by the critics to convey their comments to me, it did not work. I had available only a general negative comment and conveyed that. In general, I suggest to those feeling impugned by some aspect of Briefs that they establish the facts before attempting indictments.

AIFRB *Briefs* chose to publish an article by Thomas Simon in the Jan/Feb 2000 issue (Volume 29, No.1, p.10) despite prior knowledge that it contained erroneous information. Although a disclaimer was placed at the end of the article, we are not pleased that an article containing false information about our ongoing work was published without correction, even though the editor had been notified of the problem. The article states, "The data from 20 drowned river mouth wetlands in Lake Michigan will be used to validate multimetric indices developed by the U.S. Geological Survey, BRD-Ann Arbor, for wetland plants and invertebrates assemblage reference conditions" and "Data will be analyzed using established Index of Biotic Integrity indices, indices for specific Great Lakes wetland types now nearing completion (Wilcox and others), and multivariate analysis." The conclusions drawn from our work are that severe constraints must be placed on any IBI developed for use in Great Lakes wetlands because the natural changes in biological communities caused by the extreme hydrologic variability of the lakes mask changes caused by anthropogenic disturbance. Those constraints precluded development of a valid IBI, and we do not endorse the methodology for that purpose. There will be no multimetric indices nor IBI for Great Lakes wetlands from our work for Dr. Simon to validate. A manuscript will be submitted for journal publication in the near future that details the data and rationale for the conclusions that were drawn. AIFRB District Director Passino-Reader received an advance copy of the Simon article and requested verification of facts from Dr. Wilcox. The errors in the article and the general nature of our conclusions were provided to the editor of AIFRB *Briefs* in February 2000 before the article went to press.

¹Douglas A. Wilcox

²James E. Meeker

¹Patrick L. Hudson

³Brian J. Armitage

¹M. Glen Black

¹U.S. Geological Survey, Great Lakes Science Center

²Northland College

³Ohio Biological Survey

First Whale Sanctuary In Northern Hemisphere Wins Approval

The Ministers of the Environment of Italy, France, and Monaco recently signed a treaty creating the first whale sanctuary in the Northern Hemisphere. The treaty is the result of a 10-year effort led by World Wildlife Fund and other conservation groups.

The new sanctuary, the largest marine protected area in the Mediterranean Sea, covers approximately 32,424 square miles, an area twice the size of Switzerland. It is bounded by the French Cote d'Azur, Monaco, the Ligurian coast in Italy, and the islands of Corsica and Sardinia.

The treaty creating the sanctuary for whales and dolphins commits the three signatory governments to coordinate monitoring activities and to intensify actions against land-based and marine sources of pollution in the sanctuary. The treaty also recognizes the need for the three signatories to coordinate research programs and public awareness campaigns about the importance of these marine mammals and their environment.

The new protected area plays a primary biological role in the Mediterranean Sea. It is the most important feeding ground for a number of small and large cetaceans, with two to four times as many whales and dolphins in the area as in the rest of the Mediterranean Sea. Thirteen different cetacean species live in the area, and seven of them – pilot whale, fin whale, sperm whale, common dolphin, striped dolphin, bottlenose dolphin, and Risso's dolphin – can be observed throughout the year.

The creation of the whale sanctuary is a major breakthrough in conservation cooperation and has been designated as a Gift to the Earth in WWF's Living Planet Campaign. Although the agreement focuses on the cetaceans, the new measures will benefit many other marine species and help conservation of the entire environment.

From, Focus — March/April 2000



Quinn and Deriso (Fellows) Reviewed

Why should a terrestrial ecologist be interested in a book on fish population dynamics, and especially a book on quantitative fish population dynamics? There are at least two compelling reasons. First, much of the foundational work in population ecology was motivated by problems in fisheries. For example, Vito Volterra's analysis of predator-prey systems (that showed biological interactions are sufficient to create oscillations in population size) was motivated by a desire to understand the fluctuations in the market statistics of the Adriatic fisheries. Indeed, early-on fisheries biologists realized that because their systems were impossible to fully observe (versus, say, a forest or agricultural field where trees or crop plants are generally more visible than fish and do not move), quantitative methods were essential to the success of their work. Second, mathematical methods are not taxon biased; theoretical methods have made a considerable contribution in ecology because they allow us to see connections between apparently disparate systems. For example, in my own work in life history theory for salmon (both Pacific *Oncorhynchus* spp. and Atlantic *Salmo salar* L.) and various thistles (e.g., *Cirsium* spp. or *Onopordon* spp.), I can use the same kinds of methods (although parameters vary, of course), because the life history problem of a semelparous or nearly semelparous organism is always the same: how to make the tradeoff between growth and current (one-time) reproduction.

There are few books to compete with this volume. The classic text was written by Ray Beverton and Sidney Holt when they were youngsters, just after the Second World War. Although it was long out of press, the volume was republished about six years ago (Beverton, R.J.H., and S.J. Holt. 1993. *On the dynamics of exploited fish populations*. Chapman and Hall, New York). Hilborn and Walters (Hilborn, R., and C.J. Walters. 1992. *Quantitative fisheries stock assessment: choice, dynamics and uncertainty*. Chapman and Hall, New York) is an update of a portion of the book by Beverton and Holt and contains some of the material in the volume under review, but at a less sophisticated mathematical level. The volume by Smith (Smith, T.D. 1994. *Scaling fisheries: the science of measuring the effects of fishing, 1855-1955*. Cambridge University Press, New York) provides an excellent introduction to the background of the science of fisheries.

Quinn and Deriso give a broad and deep synthesis of the quantitative models used to study the dynamics of fish populations and the methods for fisheries stock assessment. They say that the book is aimed towards upper-division and graduate level courses in fish population dynamics (although the text could clearly be used for any course in population dynamics) and fish stock assessment. But, be warned, these students had better be prepared. Minimal pre-requisites are a year of calculus, a year of applied statistics, and the ability to compute (at least with a spreadsheet). I suspect that some

familiarity with differential equations and statistical methodology will be very useful too. I mention this not to scare any readers away, but to emphasize that solving important problems requires both breadth and depth of tools.

The book begins with models for population growth, mortality, and the fishing process and then moves into the theory of stock productivity. I especially like that the authors present a variety of models (I'm sure that they have a favorite, but it is not clear which that is) and that early on they discuss how to estimate parameters of the models and provide examples of the results. They then discuss stock and recruitment, again providing a number of different models and a clear and thorough discussion of how parameters for these models can be estimated.

At this point (about 130 pages into the book), the reader is surely captured and has a solid understanding of models that could be considered "structureless" in that a single variable represents the biomass or size of the stock. Most of the rest of the book (roughly 300 pages) deals with different kinds of structure in population models: size (which affects both mortality and fecundity), age structure (either delay-difference models or different versions of the Leslie matrix), or space (migration and movement). The book ends with a discussion of optimal harvesting, including a discussion of optimization goals, optimization methods, and biological reference points that can be used in fisheries management. The final section treats risk, uncertainty, and decision analysis, which is a topic fully developed by Hilborn and Walters (Hilborn, R., and C.J. Walters. 1992. *Quantitative fisheries stock assessment: choice, dynamics, and uncertainty*. Chapman and Hall, New York).

Modern mathematical methods, based on differential and difference equations and likelihood analysis, are the tools that Quinn and Deriso are teaching the readers and they do a fine job of presenting the material, although a neophyte might want to start with a somewhat more introductory text such as Hilborn and Mangel (Hilborn, R., and M. Mangel. 1997. *The ecological detective: confronting models with data*. Princeton University Press, Princeton, New Jersey) for the likelihood methods.

Throughout the book, as methods are introduced, they are illustrated with examples based on either hypothetical data (to make a specific point about the analysis) or real data, so that one can learn about Pacific halibut, shrimp in the Gulf of Mexico, Pacific Ocean snappers, various salmon species, Atka mackerel, rougheye rockfish, rainbow trout, yellowfin tuna, walleye pollock, West Coast of North America sablefish, Hudson River striped bass, and others. This book is really about fish.

This will not be an easy book to read, either for students or for most colleagues. Some people will surely misunderstand its point. Flipping through Quinn and Deriso, they will say "this is a book about math." To them I say: "Flip through the pages, and you'll see a book of numbers. Read the pages, and you'll discover that this is really a book of ideas." Reading and studying the book by Quinn and Deriso will definitely be worthwhile because one will see that this is really a book about fundamental problems in ecology: individual growth, movement and reproduction, connecting individuals and populations, removing individuals from populations in a sustainable way, and connecting models and data. The book will set a very high standard for analysis of fish population dynamics and stock assessment as we move towards a sustainable future.

Marc Mangel: University of California
Department of Environmental Studies, Santa Cruz, California 95064
From, *Ecology* 81(1) 2000

MEETINGS OF NOTE

The Third FSU Mote Symposium in Fisheries Ecology: Call for Papers

"Targets, Thresholds, and the Burden of Proof in
Fisheries Management"

October 31- November 2, 2000

Sarasota, Florida

Abstract deadline: June 1, 2000

Abstracts should reflect work in one of the topic
areas and should be no longer than 250 words.
Submit by e-mail, by fax, or on computer disk to:

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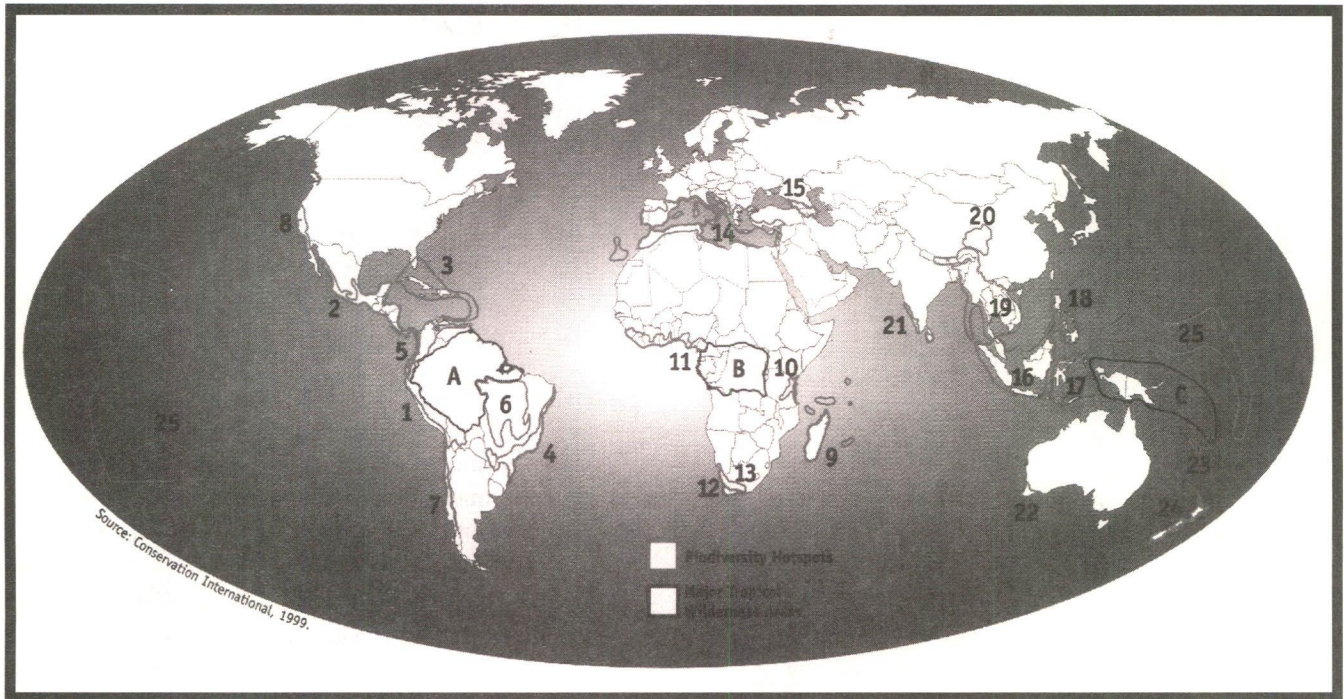
Please include full contact information for all authors
(name, affiliation, mailing address, phone number,
and e-mail address).

Symposium website: [http://www.fsu.edu/~biology/
mote.html#international](http://www.fsu.edu/~biology/mote.html#international).

Annual Larval Fish Conference: Global Climatic Change, Essential Fisheries Habitat, and Early Life History Stages The 24th Annual Larval Fish Conference Gulf Shores, AL • November 5-10, 2000

The program will include a 1-day session: Global
Climatic Change (GCC) research as it pertains to
impacts on coastal Essential Fisheries Habitat (EFH),
followed by a 1-2 day "working group meeting" for
those interested; a second 1-day theme session
(organized by J.H. Cowan, Jr.: 334-861-7535 and D.
DeVries: 334-844-9322, University of South
Alabama and Auburn University, will be devoted to
GCC, EFH and fish early life history; and a third 1-day
theme session (organized by J. Shardo, USA, 334-
460-7523) will be devoted to fish embryology and
larval development. The remainder of the conference
will be comprised of contributed papers. The first
call for papers and early registration will occur in
May; abstracts for contributed papers will be due by
September, 2000. The conference will be held in a
self-contained, 144-room conference center located
at Gulf State Park, in Gulf Shores, AL. Room rates
will be \$39/night. For more information, feel free to
phone or e-mail Jim Cowan at 334-861-7535 or mail
to: jcowan@jaguar1.usouthal.edu.

The Global Biodiversity Hotspots and Major Tropical Wilderness Areas



Hotspots

1. Tropical Andes
2. Mesoamerica
3. Caribbean
4. Atlantic Forest Region
5. Choco-Darien-Western Ecuador
6. Brazilian Cerrado
7. Central Chile
8. California Floristic Province
9. Madagascar and Indian Ocean Islands
10. Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya
11. Guinean Forests of West Africa
12. Cape Floristic Province
13. Succulent Karoo
14. Mediterranean Basin
15. Caucasus
16. Sundaland

17. Wallacea
18. Philippines
19. Indo-Burma
20. Mountains of South-Central China
21. Western Ghats and Sri Lanka
22. Southwest Australia
23. New Caledonia
24. New Zealand
25. Polynesia/Micronesia

Major Tropical Wilderness Areas

- A. Upper Amazonia and Guyana Shield
- B. Congo Basin
- C. New Guinea and Melanesian Islands

From Nature's Place: Population and the Future of Biodiversity

Bull Trout Listed, Fish Activists Celebrate

The U.S. Fish and Wildlife Service has declared the western Washington bull trout population threatened. The Puget Sound-area bull trout has suffered under decades of logging and urban development. Environmental groups had threatened to sue if the species was not listed. The USFWS announcement means local governments and timber companies will have to work over the next decade to repair the Puget Sound environment. Logging robs streams of shade that keeps them cold, which the bull trout requires, while development has introduced pollution into once-pristine rivers.

According to executive director Mike Bader of the Montana-based Alliance for the Wild Rockies, the listing of the Puget Sound bull trout will "...complete the protection of the bull trout.... Better late than never."

The action protects the cold-water fish across a 245,000-square-mile area in Washington, Oregon, Idaho, and western Montana. New land development codes will require builders working near water bodies to install large greenbelts that will filter runoff. And logging companies are already leaving wider streamside timber buffers to help salmon and bull trout.

From, In Brief — Winter 2000

SANCTUARIES KEY TO OYSTERS' RECOVERY

Nearly 50,000 acres of the Chesapeake Bay's bottom – an area slightly larger than Washington, D.C. – may eventually be permanently zoned as a safe harbor for oysters. Setting aside 10 percent of the Chesapeake's historic oyster beds as permanent sanctuaries was one of the key areas of agreement reached among scientists, managers, watermen, and environmentalists, from Maryland and Virginia during a recent workshop. Ultimately, the sanctuaries would become the focus of oyster restoration efforts in the Bay, where reefs would be built, and oysters would be allowed to grow old, large and – hopefully – disease tolerant. As they reproduce, those protected oysters would form the base of the Bay's future oyster population and support a growing harvest in areas outside the sanctuaries.

An agreement document stemming from a two-day January workshop lays out the path that states will follow to achieve the tenfold oyster increase called for in the draft Chesapeake 2000 Bay Agreement. The agreement – expected to be backed by millions of dollars of increased state and federal spending – is the latest sign of growing optimism that the beleaguered oyster, whose population is near an all-time low because of decades of over harvesting and disease, can make a comeback in the Chesapeake. Restoring a healthy oyster population is increasingly seen as a critical element of the Bay's recovery. The Chesapeake was once filled with oyster bars rising far above the bottom and sometimes breaking the surface of the water. The reefs support not only oysters but provide habitat for a variety of fish and the food they prey upon. Over the years, the reefs were knocked down, the oysters over harvested and – in recent decades – diseases piled on, driving the oyster population to only about one percent of its historic level.

Now, scientists and managers see efforts to bring back the oyster as a way to not only revive a fishery, but to enlist a new partner in Bay restoration. Oysters are powerful water filterers, which could help the states meet water quality goals. Historically, cleanup efforts have focused only on curbing runoff and reducing discharges into the water.

Scientists estimate that oysters were once able to filter all of the water in the Chesapeake, removing water-clouding sediment and algae, in a matter of days. It takes today's depleted population about a year to do the same job.

For years, efforts to restore oysters have been stymied by two diseases, MSX and dermo. Although harmless to humans, they can kill huge numbers of oysters before they grow old enough to reproduce.

The new oyster restoration agreement seeks to outpace disease mortality by focusing on habitat improvements that improve reproduction and survival. To that end, the agreement largely adopts a strategy laid out last year in a first-ever consensus among oyster scientists from universities in Virginia, Maryland and North Carolina. But the new agreement is significant because it broadens that consensus beyond scientists by getting others – most importantly managers from both states – to agree.

The agreement envisions a series of sanctuaries that stretch up each major river, covering a range of salinities. Because oyster spawning is unpredictable, the hope is that having oysters exposed to variety of different conditions will increase the odds each year that some areas will have good reproduction.

Reefs would be built in the sanctuaries and stocked with large oysters bought back from watermen and with oysters obtained from hatcheries or "oyster gardeners" who rear oysters in rivers,

Then, the sites would be left alone.

In the past, oysters were harvested when they reached market size. Under the new plan, scientists say, older oysters – which have shown some ability to withstand disease – will be protected and allowed to reproduce in the hope that they will pass on disease-resistant traits to their offspring.

Maryland and Virginia have already set aside 27,000 acres of sanctuaries, but only about 200 acres of habitat has been restored in those areas. Even a stepped-up program will be doing good if it is able to construct 1,000 acres of reefs over the next decade.

From, Bay Journal — April 2000

MARINE CONSERVATION IN THE CARIBBEAN: A PUBLICATION

Mangroves, coastal wetlands and estuaries around the world are being cleared for croplands and urban development. Coral reef bleaching has emerged as a worldwide crisis possibly related to increasing water temperatures caused by global warming. Many marine species are now considered threatened or endangered due to over fishing, over hunting and habitat destruction. A new publication, *Setting Geographic Priorities for Marine Conservation in Latin America and the Caribbean*, represents the third and final component of a larger effort undertaken by the Biodiversity Support Program (a USAID-funded consortium of The Nature Conservancy, World Wildlife Fund and World Resources Institute). The book focuses on the transboundary nature of the marine environment, reaffirming the notion that solutions to the widespread problems of fleet modernization, over-subsidization and ineffective management may only be attained if tackled across geo-political boundaries, on an ecoregional basis. It stresses that these threats can only be ameliorated if regional waters are protected evenly throughout the area. For more information on how to purchase the book, please contact Eva Vilarrubi at evillarubi@tnc.org.

From: Global Currents — Winter 2000: 3(2)

Bad to the Bone

by, *Michael A. Rivlin*

Shark-cartilage evangelist I. William Lane announced that the renowned Mayo Clinic was preparing to conduct a study, initiated by the ultra-conservative National Cancer Institute (NCI), of a brand of shark cartilage pills called BeneFin.

The legitimization of cartilage research by the federal government (NCI being part of the taxpayer-funded National Institutes of Health) poses disturbing questions, because sellers and buyers of cartilage are not, as might appear at first glance, engaged in a victimless crime. Nor is the NCI BeneFin study merely an ill-conceived project. When the study was announced, many legitimate cancer researchers were demoralized by the loss of public funds it represented, funds that might have underwritten research into more promising treatments. And they anticipated a reprise of what had happened after a previous NCI cartilage trial was announced a couple of years ago – when unscrupulous cartilage marketers had trumpeted the study in order to induce even more cancer patients to spend thousands of dollars on their product, through the study eventually showed that the pills are worthless.

Marine conservationists also have good reason to worry about the unquenchable demand for shark cartilage, which is now being fueled on Capitol Hill itself. Other threats to sharks exist, notably the more serious danger posed by the demand for fins to be used in soup. And the one serious attempt by environmental advocates to find proof that the cartilage hunt harms sharks had to be shelved, due to scientists' scanty knowledge of shark biology and numbers. But there is a thriving, worldwide gray-market trade in shark skeletons, supplied by mostly unregulated fisheries, whose impact on global shark populations is poorly understood. Several recent developments have made re-examination of those impacts increasingly urgent.

Sharks are fish but of a very unusual sort. From a marine conservationist's point of view, what makes them noteworthy is their biological vulnerability to over-fishing. Like large land predators, sharks grow slowly, mature late, have very low reproductive rates when they do spawn, and live for long periods. For most species, when a shark dies, it takes the population a long time to replace it. That life history makes sense for a creature at the top of the food chain, since an ecosystem can support only a relatively small population of apex and near-apex predators, and it has served sharks well for more than 400 million years.

In recent decades, however, fisherman around the world have depleted traditional food fishes and turned to "underutilized" species. And though shark catches have risen steadily since the 1940s, most shark fisheries are still unregulated. Even those that are regulated are managed according to principles designed for the faster reproduction rates of traditional food fishes – and with little help from science, given the prevailing profound ignorance of basic shark biology and behavior.

Another factor behind the dramatic rise in shark fishing was the Pacific Rim economic boom that began in the mid-1980's. In Hong Kong, Singapore, Taiwan, and southern China, shark-fin soup, once considered a delicacy for the wealthy elite, began to appeal to the burgeoning middle class. Demand for shark fins went through the roof. Though demand has declined in the region's recent recession, the shark-fin market is now well established.

The fishermen who answer the demand are usually subject to no oversight whatsoever, because most landings of blue sharks, the species commonly used in shark-fin soup, take place in the international waters of the open ocean. In these waters, governments have had little incentive to manage fisheries, and management is nonexistent except for some overarching and largely unenforceable treaties. One biologist has estimated that in 1994, roughly 4 million sharks were caught worldwide in unregulated international fisheries. But the new market for shark fins has also affected our national waters. By 1993, when the United States first began managing its shark fisheries, many U.S. shark populations had already declined by as much as 85 percent from the levels of the 1970's.

Some of the smaller, inshore species of sharks reproduce quickly enough that, with proper management, they can be fished indefinitely. The gummy shark of Southern Australia has supported a carefully managed, and most would say sustainable, fishery for more than twenty-five years. But many of the larger, longer-lived sharks of the open ocean recover far more slowly. Sandbar sharks, one of the two most important commercial species in the Atlantic, take up to sixteen years to mature, and then produce only eight to thirteen pups every other year.

Because of such biological profiles, most shark fisheries have experienced brief booms, followed by long busts. To take one notorious example, in 1961 Norwegian longliners began catching porbeagle sharks in the Northwest Atlantic. By 1964 the catch was 8,060 tons each year; just four years later it had dropped to 207 tons. The porbeagle population has never recovered.

The trade in cartilage is less well documented than that in fins. It takes place in an unsavory underworld. Even in the United States, where rules and regulations abound, an informal, shadowy network of small-time dealers roams the docks along the Atlantic and Gulf coasts from Florida to New Jersey, buying up spines and skulls from returning boats and selling them to a web of traders, resellers, processors, and marketers. From the United States and dozens of international ports, the raw shark parts are shipped all around the world, passing through many hands before being crushed into powder, and the powder is often resold many times before being packaged in capsules. No one knows how many sharks or what species are involved. Given this terra incognita, combined with the enormous gaps in scientific knowledge of the roughly 400 shark species throughout the oceans. It is impossible to say with any precision just how much of a conservation problem the cartilage trade poses.

The United States first set limits on shark fishing in 1993: quotas were established, and finning, the practice of slicing off the fins and dumping the rest of the carcass overboard, virtually eliminated. Fisherman could still land the fins, but fins could make up only 5 percent of the total weight of shark meat brought back to the docks. In other words, anyone who wanted to sell the fins also had to haul along many pounds of far less valuable meat. But the law was not applied in the western Pacific waters of Hawaii, Guam, and American Samoa, where tuna and swordfish boats, most of them operating out of Honolulu, continue to take the fins of their blue shark bycatch.

Before the market for fins existed, all blue sharks were released, 86 percent of them still alive. According to Paul Dalzell, a biologist with Western Pacific Regional Fishery Management Council (WPRFMC), today the fishing lines designed to catch tuna and swordfish hook roughly 100,000 blue sharks every year. In 1998, close to 61,000 were finned. And the Japanese, Korean, and Taiwanese boats operating in the western Pacific take even more. An assessment of the size of the blue shark population is due later this year, but in the meantime, speculation substitutes for the missing science.

Dalzell says there are no signs that western Pacific blue sharks are overfished. Craig MacDonald, a marine biologist with the Hawaii Department of Business, Economic Development, and Tourism, points out that blue sharks are one species with a large population and relatively high rate of reproduction. Even some environmentalists concede that a sustainable fishery for blue sharks may be possible. But they argue that if ever there were a case when fisheries managers should take the precautionary approach – err on the side of caution and halt all finning until the stock data are in – this is it.

Though the precautionary approach is not actually mandated in the federal law governing U.S. fisheries management, legal experts say it is implied or embodied in many of the law's statutes. Says National Marine Fisheries Service spokesman Gordon Helm, "Congress tells us to manage conservatively, and we identify that as the precautionary approach." Moreover, in 1996 the United States signed an international treaty governing fishing on the high seas, though it has not yet been ratified. According to Natural Resources Defense Council attorney Sarah Chasis, one of the treaty's striking successes was its endorsement of the precautionary approach.

Enter Diamond Bay Specialty Seafoods, a Hawaii fish processor, and Dr. Lawrence Raithaus, head of the new health food company BioStim. Raithaus has isolated an extract from shark livers that he says has been shown to bolster the immune system. Diamond Bay proposes processing blue shark livers for Raithaus and distributing the meat in vacuum-sealed bags to food banks and disaster relief agencies. John Muder, Diamond Bay's CEO, assures me, "The blue shark meat is very tasty. We're going to see if we can flavor it right." (Adds Muder, without pausing, "If I can't use the meat for people, I'll turn it into cat

food.") He's been in touch with a Seattle shoemaker who'll make boots from the skin, with a company that wants the oil from livers, and with cartilage processors.

In fact, that is MacDonald's aim. And once a profitable blue shark fishery is established, even bad news in the stock assessment may not dislodge it.

An improbable venue for the merging of cartilage and conservation issues is Capitol Hill, where – thanks to alternative-medicine believers pushing NCI to initiate its studies – shark cartilage has been born again.

There is no pressing reason why shark cartilage studies should be ordered up by NCI. Only two years ago, Dr. Dennis Miller of the Cancer Treatment Research Foundation in Arlington Heights, Illinois, published in the *Journal of Clinical Oncology* the results of an important clinical trial of shark cartilage in patients with advanced disease. He found absolutely no anti-cancer activity.

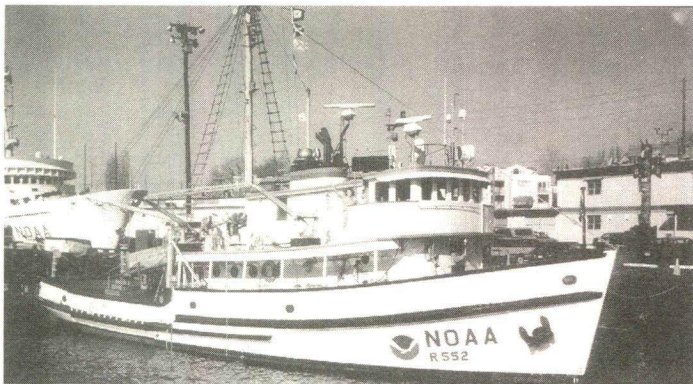
In the worst cases, shark cartilage – or rather, the shark cartilage myth – can even kill. One chilling example took place after Dr. Max Coppes, an oncologist at the Alberta Children's Hospital in Calgary, performed surgery, on a nine-year old girl with brain cancer. Coppes recommended chemotherapy and radiation after surgery, which would have more than doubled the girl's chances for survival. Instead, the parents decided to treat their daughter with shark cartilage. In a letter to the *New England Journal of Medicine*, Coppes wrote, "Four months later, marked tumor progression was documented, and the patient subsequently died."

But the ethics of promoting cartilage apparently did not give pause to NCI's Office of Cancer, Complementary and Alternative Medicine. In July 1998, NCI officials assured the influential House Committee on Government Reform and Oversight, chaired by Dan Burton (R-IN), that while previous studies has not shown cartilage to be an effective anti-cancer therapy, with the encouragement of Burton and other committee members they were willing to fund more. NCI later initiated not only the BeneFin trial but also a clinical study of Neovastat, a liquid shark-cartilage extract.

Some cancer experts believe these new studies have nothing to do with science and everything to do with Capitol Hill politics. Confirms Dr. Dean Edell, who hosts respected medical television and radio shows based in San Francisco, "The reason you're seeing studies being done today by mainstream conservative medical organizations on things that 99.9 percent of doctors would say, 'Don't waste your money on' has in large part to do with congressmen and senators who are very high on alternative medicine."

Biologists say that without careful management all shark fisheries are unlikely to be sustainable beyond the next few decades. Yet the United States, Australia, Canada, and New Zealand are the only major shark-fishing nations with any management at all.

Condensed From, The Amicus Journal — Spring 2000



Cobb Celebrates Half Century of Service

A celebration at the Pacific Marine Center in Seattle, Wash., Feb. 18 honored the golden anniversary of the commissioning of the oldest vessel in the NOAA Fleet – the NOAA Ship *John N. Cobb*. The celebration, exactly 50 years to the day after the commissioning, was attended by many who have worked with and served on the ship over its one-half century of service, including the ship's designer, Gordon Snyder, and the second master Jose Franco.

Rear Adm. Nicholas A Prah, director of the Marine Operations Center, presented the ship with its commissioning certificate and a painting of the ship mounted side-by-side in a gold leaf frame. An inscription in the frame says, "Golden Anniversary Celebration. Dedicated to all who have served. February 2000." *John N. Cobb* is NOAA's only wooden research ship, built along the lines of mid-1900s Pacific trawler designs. Its namesake was the first dean of the University of Washington's College of Fisheries, established in 1919 as the only college of fisheries in America.

Over the past 50 years, the ship has plied the waters from Mexico to the Chukchi Sea north of the Bering Strait. Today, the 93-foot Cobb conducts fishery and living marine resource research in Southeast Alaska and in U.S. Pacific coastal waters for the National Marine Mammal Laboratory.

From, NOAA Report — March 2000

GROUPE AGGREGATIONS PROTECTED

The sight of a grouper aggregation is a natural phenomenon that few will ever see – a throng of fish in a primal breeding dance that can leave even the most seasoned fisherman or scientist speechless.

Influenced by the schedule of the moon, grouper have been known to travel as far as six miles to reach aggregation sites where they release and fertilize the eggs that become the next generation of their species. Without aggregation sites species perpetuation is impossible.

The lunar schedule that grouper live by has for thousands of years guaranteed their endurance. Unfortunately, it is precisely this biorhythm that is contributing to their demise. Driven by conditions like current and ocean floor topography, aggregations occur at consistent locations and times with unfailing regularity year after year and fisherman have learned to exploit this.

With the increase in demand for grouper in the Asian market, specifically Hong Kong, many aggregation sites are being over-fished and are running the risk of depletion. With this knowledge in mind, Robert Johannes, renowned coral reef ecologist, conducted a groundbreaking study on the spawning aggregations of food fish grouper in the Republic of Palau. Conducted from 1994 to 1996, the part of Johannes' Pew Fellowship and funded in part by The Nature Conservancy and other organizations, was the first such long-term study of grouper aggregation sites.

It monitored the spawning of three species of grouper at three sites in Palau and yielded substantial information verifying an urgent need for management. It was discovered that significant aggregations formed during Palau's open season for grouper fishing. So a large portion of the grouper population was going unprotected. As a result two aggregation sites and surrounding channels and buffer zones – one in Koror State and one in Ngarchelong State – were closed permanently to grouper fishing by the government.

It was also found that the sites used by the grouper in the study are used by at least 57 other species on food fish and thus play a significant role in the biodiversity on the reefs in Palau making their protection paramount in conservation efforts. Conservation techniques developed during the study have since been transferred in Conservancy mariculture efforts in Indonesia.

"The grouper aggregation study has given us a great return on our investment," says Andrew Smith, director of the Conservancy's Palau Country Program. "The closures that have resulted will not only protect the groupers themselves but the fellow fish and reefs they live amongst."

From, Global Currents 3(2) — Winter 2000

Editor's Note: Protection of spawning aggregations of groupers is also an issue of concern in fisheries management in the southeastern U.S. and Caribbean. Ignorance of specific sites and times of aggregations is hampering development of regulations.

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... BRIEFS ...

VOL. 29, NO 3

MAY, JUNE 2000

Institute Assists Student Presentations

Colleen Caldwell, chair of the Research Assistance Award Committee has announced that the Institute will provide travel grants of \$350 for each of six students to present a total of eight papers or posters at scientific meetings. The recipients are: Inga M. Fredland, Lenny Grimaldo, Haian He, Justine Hoffman, J. Jaczynski and Erin L. Rechisky. The abstracts follow.

THE REPRODUCTIVE ECOLOGY OF THE NORTHERN PIPEFISH, *SYNGNATHUS FUSCUS* INGA M. FREDLAND

Boston University Marine Program

ABSTRACT

Field surveys and laboratory experiments were performed to examine the reproductive ecology of *Syngnathus fuscus*, the only local member of the family *Syngnathidae*. The hypothesis tested was that *S. fuscus* is sex role-reversed, with higher sexual selection pressures experienced by females of the species. Several aspects of the species' natural history and reproductive ecology were examined including: density distributions and size ranges of adults, the potential reproductive rates of both sexes, the operational sex ratio of a local population, behavioral differences between the sexes that may reflect reversed sex roles, and the presence of secondary sex characteristics in either sex. Results showed that the density of males decreased throughout the study. Female rate of reproduction was potentially greater than that of the male and the operational sex ratio was female biased. Females were more active, more often seen interacting with members of the same sex, and were more likely to engage in "high risk" behaviors such as swimming in exposed areas and hovering up in the eelgrass or water column. The female was the more active sex in courtship and used a colorful ornament to increase her attractiveness to males. Based on these results, it was concluded that *S. fuscus* is sex role-reversed.

To be presented at the American Society of Ichthyologists and Herpetologists annual meeting La Paz, Mexico.

FISH AND THE FOOD WEB IN *EGERIA Densa* IN THE SACRAMENTO-SAN JOAQUIN DELTA (CA)

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The objective of this study was to evaluate the potential to enhance native fish populations through restoration of tidal wetland habitats in the Sacramento-San Joaquin Delta (CA). We compared biological and physical attributes at a reference site and three restored sites to determine their functional equivalency between March 1998 and July 1999. Because all sites were overgrown by dense mats of invasive Brazilian waterweed *Egeria densa* (native to South America), we designed our study to compare fish species composition and abundance between *Egeria densa* habitats and open water habitats to determine its influence on shaping the local fish community. Stands of *Egeria densa* supported large numbers of introduced species and very few native species. A diet analysis of fishes associated with *Egeria densa* indicated their high abundance was supported by the high densities of invertebrates associated with the *Egeria densa*. Multivariate analysis revealed species composition was most influenced by the density of *Egeria densa*, suggesting its presence was more important than wetland status (age and geomorphology) in determining fish species use. If newly restored tidal wetlands are colonized by *Egeria densa*, our results suggest the potential benefits to many native fish will be minimal. The physical attributes (elevations and geomorphology) of potential restoration sites should be evaluated prior to any restoration activity in the Delta.

To be presented at the American Fisheries Society annual meeting, St. Louis.

(Student Presentations Continued...)

THE USE OF HIGH HYDROSTATIC PRESSURE TO SHUCK OYSTERS AND EXTEND SHELF-LIFE

Haian He, Roger M. Adams, Michael T. Morrissey
Oregon State University Seafood Laboratory, Astoria, OR

Consumer demand for oysters that retain original nutrients, flavor and appearance presents a tangible obstacle towards insuring microbial safety. Hydrostatic pressure (HHP) is a 'heatless process', which has an effect on microorganism survival and enzymatic activity. Preliminary work with HHP and whole oysters has indicated that this treatment could be used for mechanically shucking oysters. The objective of this study is to determine HHP conditions (time/pressure) for shucking oysters without altering the sensory characteristics. Microbial, chemical and descriptive evaluations were performed over a 3-4 week period for HHP samples and controls.

Results from this study demonstrated that HHP was effective in shucking oysters at 35,000 to 40,000 psi. Results showed that HHP treated oysters maintained higher pH than control over the storage period. Moisture content of the control decreased about 3% while HHP treated samples increased 2%. Pressure treatment did not significantly inhibit lipase activity during the shelf-life study. It was observed that HHP had a significant effect on reducing initial microbial load by approximately 2 to 3 logs. Descriptive evaluation showed HHP treated oysters had better quality than that of control during the shelf-life period. HHP proved to be an effective method for shucking oysters and extending their shelf-life.

To be presented at the 2000 annual meeting of the Institute of Food Technologists.

IMPROVED TORSION TEST USING MOLDED SURIMI GELS (POSTER)

Justine Hoffman, Jae W. Park
OSU Seafood Lab and Dept. of Food Science & Technology, Oregon State University, 2001 Marine Drive, Astoria, OR 97103

ABSTRACT

The effects of cross-section diameter on shear stress and strain and effects of individual variation in measuring diameter were studied. Gelation properties of surimi using milled and molded gels were compared. The possibility of skin formation using various cook times was also evaluated. Shear stress values were significantly affected by the accuracy in diameter, whereas the effect was not as significant for shear strain values. Individual variation in measurement was also greatly noted. Molded gels resulted in significantly lower strain values than milled samples, whereas stress values were significantly higher in molded gels than in milled gels. Using a lecithin-based spray appeared to eliminate skin formation on all samples.

To be presented at the 2000 Annual Meeting on the Institute of Food Technologies.

EFFECTS OF FREEZE-DRYING AND FLAKE FREEZING ON THE GELATION PROPERTIES OF WHITING SURIMI

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JUSTIFICATION

In commercial surimi processing the product is produced in frozen blocks, which exhibits a few disadvantages. Along with a gradual reduction in quality, logistical parameters are concerned. Frozen blocks occupy large space and frozen storage costs are high. It is also inconvenient because frozen blocks must be broken before use. It freeze-fried (powder) surimi or quickly frozen flake surimi can maintain quality they can contribute cost savings and convenience.

OBJECTIVE

To determine the effects of freeze-drying and flake freezing on physicochemical properties as affected by various storage conditions using conventionally frozen block surimi as a control.

METHODS

Fresh surimi was frozen into various forms: blocks using a plate freezer, flakes using liquid nitrogen, powder using a freeze-drier. Blocks and flakes were stored at -18°C and freeze-dried surimi at room, refrigerator, and -18°C. During the 9 months storage, salt extractable proteins, trimethylamine oxidase, protein degradation, color, and gelation properties were measured.

RESULTS

Freeze-dried surimi retained a higher quality possibly due to the elimination of water that is a driving force behind chemical deterioration of surimi proteins during long-term storage. This was further supported by biochemical data, which showed that while denaturation occurred in all samples over time it occurred at a slower rate in the freeze-dried surimi.

SIGNIFICANCE

Freeze-dried surimi appears to be a beneficial process for the shelf life stability of Pacific whiting surimi. In finding that freeze-dried samples stored in the freezer maintained the highest quality, the frozen storage is still preferred. However, it can eliminate some costs. Like freeze-dried surimi, flake frozen surimi takes up much less space and provides convenience in handling to users.

To be presented at the 2000 annual meeting of the Institute of Food Technologists.

POST-PASTEURIZATION COLOR AND TEXTURE MODELS FOR SURIMI SEAFOOD

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JUSTIFICATION

The current method for pasteurization in the seafood industry employs thermal processing. From a safety standpoint, this process is necessary to maintain healthy food. However, excessive heat, when applied to foodstuffs, causes textural and color alterations. The two attributes, color and texture, are the most important organoleptic characteristics for surimi seafood. The longer the duration of pasteurization the larger the extent of detrimental changes to both color and texture. Therefore, there is a vital need to be able to predict these changes for various industrial settings while maintaining a safe product.

OBJECTIVES

To develop a model based on experimental data that would predict color and textural changes in surimi seafood. The model has been verified.

METHODS

Un-pasteurized surimi seafood sticks were obtained from a local manufacturer. They were kept in ice slush during transport and experiments. The project was divided into two parts: heat transfer, and color and texture. Surimi seafood sticks were vacuum packed before thermal treatments to mimic industrial practices. Various sizes of packages at different water temperatures (95, 85 and 75°C) were tested. In the heat transfer study a CR10 datalogger (Campbell Scientific) was employed in conjunction with a computer. For color measurement a Minolta colorimeter (CR300) was used. To monitor textural changes, Sintech 1/G was employed.

RESULTS

Based on the data, a model for color and texture changes in surimi seafood as a function of various temperatures and different package sizes was constructed. The model shows how the values for color and texture change under different conditions.

SIGNIFICANCE

The developed model predicts textural and color changes of sample depending upon the applied settings, such as package size, temperature, and time spent in the water bath. From a practical standpoint it enables optimization of the two sensory attributes in order to increase product quality.

To be presented at the 2000 annual meeting of the Institute of Food Technologists.

PASTEURIZATION MODEL FOR SURIMI SEAFOOD USING STAPHYLOCOCCUS AUREUS AS A TARGET MICROORGANISM

J. JACZYNSKI, J. W. Park, and M.A. Daeschel —
OSU Seafood Lab and Dept. of Food Science & Technology, Oregon State University, 2001 Marine Drive #253, Astoria, OR 97103

JUSTIFICATION

Pasteurization is the most important step to secure the microbial safety of the final product. However, different surimi seafood manufacturers use various pasteurization settings, which have not been scientifically validated. Currently, a uniform pasteurization method for surimi seafood is not available. This lack presents a serious potential for microbial outbreaks in the U.S. surimi seafood industry due to under cooking or reduced sensory quality due to overcooking. Consequently, there is a great need to provide the industry with precise pasteurization guidelines that would assure a safe food supply as well as minimal changes in sensory attributes.

OBJECTIVES

To develop a model based on experimental data that would predict pasteurization parameters for surimi seafood. The model has been verified.

METHODS

Un-pasteurized surimi seafood sticks were obtained from a local manufacturer. They were kept in ice slush. A water bath with water circulation was used to mimic industrial practices. The samples were inoculated with a heat-resistant microorganism, *Staphylococcus aureus* and vacuum packed to determine pasteurization values (Pv) and thermal inactivation kinetics (D, z, F) of surimi seafood at various thermal processing conditions (95, 85 and 75°C) and for different packages sizes. Datalogger (CR10, Campbell Scientific) connected with a computer was used to record the temperature history.

RESULTS

Based on the data, a model for surimi seafood pasteurization as a function of various temperatures and different package sizes was constructed. The model enables one to predict pasteurization values depending upon specific settings or conversely, what conditions must be set to achieve particular pasteurization values.

SIGNIFICANCE

The developed model enables the proper design of pasteurization. It provides the maximization of food safety with minimum change to the sensory attributes of the product.

To be presented at the 2000 annual meeting of the Institute of Food Technologists.

EFFECT OF TIDAL CURRENTS ON SHORT-TERM MOVEMENTS OF JUVENILE SANDBAR SHARKS, *CARCHARINUS PLUMBEUS*, ON THEIR NURSERY GROUNDS IN DELAWARE BAY

Erin L. Rechisky¹ and Bradley M. Wetherbee²

¹University of Rhode Island, Fisheries, Animal and Veterinary Science, Kingston, RI 02882

²National Marine Fisheries Service, Northeast Fisheries Science Center, 28 Tarzwell Dr., Narragansett, RI 02882

Acoustic telemetry was used to investigate short-term movements of neonate and juvenile sandbar sharks, *Carcharhinus plumbeus*, on their nursery grounds in Delaware Bay during the summers of 1998 and 1999. Twenty-five sharks were tracked continuously for between 2.5-75 hours. The majority of the sharks caught and tracked on the Delaware side of the bay remained in this area for the entire duration of the tracks. Sharks tracked on the New Jersey side of the bay appeared to roam farther afield into deeper water and farther from shore, and occupied a larger activity space. Several sharks made longer offshore movements into the deepest section of the bay (37 m) and two sharks completely crossed the bay from Lewes, DE to Cape May, NJ and vice versa. In most cases tidal flow appeared to strongly influence the fine-scale movements of these sharks, and in general, sharks exhibited northwest up-bay movements during a rising tide and southeast, down-bay movements as the tide receded. This pattern was observed for the majority of sharks tracked, both in neonate and juveniles and on both the Delaware side and New Jersey side of the bay. Delaware Bay is a shallow bay with strong tidal currents, therefore it is possible that newborn and young sharks take advantage of the tidal currents to conserve energy by moving (either actively or passively) with the tidal flow.

To be presented at the annual meeting of the American Elasmobranch Society, La Paz, Mexico

Editor's Note: The high concentration of awards at Oregon State suggests many student advisors/mentors elsewhere are failing to encourage their advisees to pursue the AIFRB travel/research grants.

"Our Living Oceans" Available Free

Our Living Oceans 1999 is the fifth edition in a series of recent reviews on the biological status of U.S. living marine resources. Previous reports were released covering the 3-year periods ending in 1991, 1992, 1993, and 1995. These reviews have evolved to a triennial reporting effort to better capture the extended time period that is often required to observe and document changes on the marine environment. The biological status of living marine resources is presented for five large regions of the United States: Northeast, Southeast (including the Gulf of Mexico and Caribbean), Alaska, Pacific Coast, and the Western Pacific.

Copies can be requested from Mark D. Chandler:
NMFS Office of Science and Technology
1315 East West Highway
Silver Spring, MD 20910
(301) 713-2363

mark.chandler@noaa.gov or downloaded from
www.st.nmfs.gov/st/

Changes in Board of Control

Recent elections have provided new Directors for the Southern California and Keystone Districts. Michael Hinton of the Inter-American Tropical Tuna Commission is both the new Director of the Southern California District and also the Regional Director for the Southwestern States and Mexico.

A long-time AIFRB worker, Joe Rachlin, having recently relinquished the role of Treasurer will remain active on the Board of Control as Director of the Keystone District.

Membership Report

Tom Lambert, Chair, Membership Committee, submitted the following report on changes in AIFRB membership during the period January 1 to April 30, 2000.

New Associate-Professional	David J. Csepp	AK
New Associates-Students	Cynthia S. Kolar	IN
	Inga M. Fredland	MD
	Patrick J. Schmalz	MI
	Steven J. Cooke	IL
	Lenny F. Grimaldo	CA
Promoted to Member	David C. Love	AK
	Ellen van Snik Gray	WV
New Member	Shawn K. Alam	FL
Promoted to Fellow	John W. Tucker	FL
	Michael G. Hinton	CA
New Fellow	William C. Phoel	NJ

Direct inquires on joining AIFRB or requests for promotion to:

Membership Chair, Tom Lambert, 3162 Mariola Road, Sebastopol, CA 95472-5428
(707) 829-7882, Fax (707) 829-8234, lambert5@pacbell.net

DROUGHT CONDITIONS ENDANGER GALVESTON BAY OYSTERS

Nothing, it seems, can escape the effects of the current Texas drought. Not even Galveston Bay's oysters. The vast numbers of oysters are at risk from high salinity levels caused by continued high temperatures; lack of rain and diminished freshwater inflows; Dermo, a parasitic protozoan disease caused by the microorganism *Perkinsus marinus*; and southern oyster drills, snails that drill into the oysters and eat them.

The bay's good health depends on a delicate balance between freshwater inflow from rivers and rain, and salt water from the Gulf of Mexico. In Galveston Bay, the balance has been upset and the parasites are thriving.

Sammy Ray, Ph.D, AIFRB Fellow and longtime Membership Chair, and Texas A&M professor emeritus, is an oyster expert involved with Dermo Watch, a Web site operated by Texas A&M, Texas Parks and Wildlife (TPW) and Nichols State University in Louisiana. DermoWatch, <www.blueblee.com/dermo>, helps scientists and oystermen track the bay's water temperature and salinity levels, and Dermo's rapid spread among juvenile and mature oysters. "We are now approaching our third successive, dry, warm year," observes Ray. "Dermo and southern drills flourish in high salinity," when the bay's salt content approaches that of the Gulf, 3.5 percent. In better times, the bay's salt content hovers at just under one percent.

Warmer summer air temperatures mean warmer bay water, lessening oysters' ability to fight off Dermo. The protozoa, seen under a microscope, appear as thousands of tiny, round particles. They literally dissolve the oysters. But neither Dermo nor the oyster drills are dangerous to humans, assures Ray.

In order to monitor Dermo's ravages, TPW has been collecting 270 oysters from nine different sites since December 1998. The bay's water temperature and salinity levels have been rising at alarming rates since September 1999. Infection rates are expected to rise if there is insufficient rain this spring and summer.

Larry McEachron, science director of TPW's Coastal Fisheries Division, oversees this project. He regards the current high salinity as part of the ecosystem's natural ebb and flow. "Some animals benefit and some don't," states McEachron. He points out that spotted seatrout will benefit from this "boom or bust" weather cycle. Brown shrimp also will thrive if the dry trends continue.

Lynn Benefield, upper coast regional director for TPW's Coastal Fisheries Division, shares Ray's concerns: "These are the highest salinity levels I've seen since I started to work for Texas Parks and Wildlife in 1966."

Benefield adds that drought effects have been intensified by several man-made obstacles to freshwater inflow, such as the closing of the Wallisville Dam on the Trinity River. Water conservation measures have dropped

Lake Livingston releases to 60,000 acre-feet per month. Galveston Bay oystermen now face critical decisions about harvesting their stock early and leaving enough to replenish stocks in case of a mass die-off.

The solution to the bay's problem, Ray points out, is rain. "1999 was a very dry year, but we were fortunate to get enough rain in late June or early July."

Marsha Wilson - Texas Parks & Wildlife — May, 2000

Tilefish Plan Shapes Up, but Needs Improving

With encouragement from the Center for Marine Conservation and other environmental advocates, the Mid-Atlantic Fishery Management Council is developing its first-ever fishery management plan for tilefish.

Golden tilefish, also known as "rainbow tile fish," (AFS official common name – tilefish, Editor) inhabit deep water of the outer continental shelf. They spend much of their time nestled in burrows they create on the sea floor. Scientists believe some tilefish may spend their entire lives deepening and widening their individual burrows. Collectively the burrows form "pueblo villages" that also provide shelter for a wide range of other fish and crustaceans.

Tilefish are caught year-round and marketed for sashimi and other uses. Due to long-term overfishing, the Mid-Atlantic tilefish stock is now only about one-third of the level needed for a healthy population. In addition to being overfished, the bottom-trawls and dredges used in the tilefish fishery are disturbing their sensitive habitat.

"Tilefish are one of the most habitat-dependent species in the Mid-Atlantic region," said CMC Fisheries Project Manager Sonja Fordham. "Protecting their burrows, as well as stopping overfishing, is essential to their recovery." Fordham was appointed as an advisor to the council's Tilefish Committee in March.

The council noted that tilefish "pueblos" also provide essential habitat for 17 other managed species, and proposed a tilefish Habitat Area of Particular Concern (HAPC) along part of the Mid-Atlantic outer continental shelf. Under their current Preferred Option, however, bottom trawls would be only modified to reduce contact with or impact on the sea floor. CMC supports a full prohibition on bottom trawls in the HAPC.

The legal maximum time limit to restore the tilefish population is ten years; with no fishing, the stock could recover in half that time. The Council has put forth several rebuilding options, but has selected the most lenient time frame (ten years) as their preferred option. CMC is pressing a more precautionary, eight-year rebuilding strategy that would achieve the benefits of recovery sooner and provide some buffer for uncertainty without shutting down the fishery.

At a series of public hearings held over the summer, CMC also called on the council to devise a strategy to investigate and address tilefish bycatch in other fisheries and approve the tilefish plan by the end of October.

Unfortunately, strong opposition to the plan at public hearings now threatens to stall its adoption, already months overdue.

From Marine Conservation News —Autumn 1999

Everglades: Restore More, Sprawl Less **Florida Bay Fisheries depend on a healthy** **Everglades System**

By Johanna Congleton

Last July, the U.S. Army Corps of Engineers presented a plan to Congress to restore the largest wetland in America – the Everglades. The \$7.8 billion, 30-year project, or Everglades Restoration Plan, aims to restore the natural flow of water to the Everglades' damaged ecosystem and supply water to Florida's growing population.

To authorize the plan, the Everglades Restoration Bill, S. 2437 sponsored by Sen. Bob Smith (R-N.H.), was introduced in April.

The Sierra Club applauds the plan's mandate to remove 200 miles of canals and elevate a major road that blocks the natural flow of water. The plan also intends to recover nearly 2 billion gallons of water that are flushed into Atlantic daily.

"But there are no assurances that most of the recovered water will be used for restoration – not to supply future homes built on the edge of the Everglades," said John Ullman, the Club's Everglades representative.

The plan also calls for the construction of giant plastic-lined rock quarries to use for water storage at the south end of the Everglades. This would destroy up to 20,000 acres of pristine wetlands near Miami and encourage sprawl – the proposed storage sites could help supply double or triple Florida's current population of 6 million.

Club activists are pushing for a more environmentally friendly alternative – storage without quarries in the northern Everglades Agricultural Area, which is now used for corporate sugar farming. By storing water at the top of the watershed, instead of at the bottom near Miami, water can naturally flow throughout the Everglades by gravity instead of pumps and canals.

Last, the bill does not call for a continuation of the Committee for the Restoration of the Greater Everglades Ecosystem, which was convened at the behest of the Sierra Club and other environmental groups. The

CROGEE, composed of 16 top scientists appointed by the National Academy of Sciences, provides independent input on the plan that is free of political influence. Their job is to review the proposal and recommend to Congress and the Army Corps how the plan should be implemented.

When *The Planet* went to press, the CROGEE was not included in the bill and was scheduled to disband in four years- 26 years before the plan is fully implemented in 2030. The bill should call for a continuation of committee meetings and input to guide the plan throughout the entire implementation process.

"The CROGEE is the best salvation for Everglades," said Ullman. "The committee's guidance helps assure American taxpayers that their money is going toward restoration and the best possible science. Without it, the future of the Everglades could be compromised."

From The Planet 7(5) — June 2000

Appeals Court Supports Free Speech

A federal appeals court has overturned an earlier ruling that said it was illegal for federal employees to speak on behalf of nonprofit citizens groups. The U.S. Court of Appeals, a three-judge panel, said in February that a federal ethics statute was not intended by Congress "to act as a general gag order on federal employees." The ruling is a victory for Jeffrey van Ee, an electrical engineer with the Environmental Protection Agency's Las Vegas, Nevada, office. Van Ee ran afoul of his superiors because he was speaking out on environmental issues.

From Forest Magazine — May-June, 2000

HUBBS BIOGRAPHY **IN COPEIA**

An extensive and delightfully personal biography of Past President Clark Hubbs written by Dean Hendrickson and Margaret Stewart was presented in *Copeia* 2000(2): 619-6522. Because of the common availability of *Copeia* to fishery professionals I have not reprinted the biography.

Meetings of Note

Gulf of Mexico Fish and Fisheries: Bringing Together New and Recent Research October 24-26, 2000 New Orleans, Louisiana

Overview

More than 1,000 species of finfish inhabit the waters of the Gulf of Mexico. Although only a small fraction is considered economically important, in 1998 finfish represented a substantial commercial resource valued at more than 145 million dollars. Recreational utilization of this natural resource from scuba diving to fishing is also substantial. Fisheries research has had a relatively short history in the Gulf of Mexico and workshops directed specifically at bringing together all aspects of fisheries issues have been uncommon.

About 4000 offshore energy structures play a role as artificial reefs and also directly impact fisheries through enhancement of productivity, as attraction devices, and as a mechanism allowing dispersal of species across the Gulf. It is the goal of this workshop to bring together widely ranging research topics on fisheries biology and ecology of the Gulf of Mexico with some emphasis on the relationship between Gulf fisheries and the oil and gas industry.

Proposed Technical Sessions:

Proposed sessions and themes will include but are not limited to:

- Evaluation of Natural and/or Artificial Reef Productivity
- Offshore Platform Communities
- Outer Continental Shelf and Deepwater Marine Ecology
- Present and Future Fisheries Management
- Offshore Platforms and Their Multiple user Groups
- Coexistence of Natural Features and Hydrocarbon Development

- Oil and Gas Industry Perspective on Research and Partnerships
- Decommissioning and Alternative Uses for Offshore Structures

Location and Accommodations

The New Orleans Airport Hilton
901 Airline Drive • Kenner, Louisiana
(504) 469-5000 or (800) HILTONS

A block of rooms is being held for "MMS-Fisheries" participants at a rate of \$119 per night, excluding taxes. Please make your own hotel reservations by October 2, 2000.

Registration

To Register Contact:

Gulf of Mexico Fish and Fisheries
University of New Orleans
Office of Conference Services
Metropolitan College-ED 122
New Orleans, LA 70148

Or call 1-800-258-8830, FAX (504) 280-7317

To register on the Internet go to:

<http://conferences.uno.edu>

Questions regarding technical issues can be directed to:

David Stanley, (905) 794-2325 or send an email to:
dstanley@beak.com

Other conference questions can be directed to:

Debra Vigil, (504) 736-2406 or send an email to:
debra.vigil@mms.gov

This information, and the agenda, will be posted to the following web site: <http://www.beak.com>

AIFRB Board of Control Meeting

August 19-20, 2000

St. Louis, MO

All members are invited to attend, observe, and contribute.

PROGRESS IN REEF CONSERVATION

In a landmark commitment, the governments of Belize, Guatemala, Honduras, and Mexico have developed a joint plan for protecting the Mesoamerican Caribbean Reef, the largest coral reef system in the Americas and a Global 200 site targeted for priority action by the World Wildlife Fund.

Extending nearly 450 miles from the northern tip of Mexico's Yucatan peninsula to the Bay Islands off the coast of Honduras, the Mesoamerican Caribbean Reef is unique in the Western Hemisphere not just for its size but for its diverse array of reef types and its nearly 60 coral species. The reef also houses such threatened species as loggerhead, hawksbill, and green sea turtles, whale sharks, and the largest population of manatees in Central America.

In recent years, however, the waters surrounding parts of the reef have been seriously degraded by municipal waste contamination, bilge from ships, sedimentation from

inland deforestation, and pesticide and fertilizer runoff from inland banana plantations. Commercial and recreational overfishing are depleting populations of lobster, conch, and finfish, and the steady traffic of oil tankers, transporting more than 1 million tons of crude oil a year through the Guatemalan port of Santo Tomás de Castilla, puts the reef at constant risk of a catastrophic oil spill.

Other threats stem from rapidly growing coastal development and tourism, as well as changes in land use as more land is cleared for agriculture.

As part of the "Year of the Reef" celebration in 1997, Mexico, Belize, Guatemala, and Honduras agreed to manage the entire reef cooperatively as a single ecosystem and signed the Tulum Declaration.

From Focus 22(3) — May-June, 2000

Another European Snuggles Giant Cypriniform -

Recall carp-hugging photo in *Briefs* 28 (2)

Kevin Maddocks sits with his all-tackle wels, a 202 lb. monster he caught last August in the River Ile, Kazakhstan. He used live asp for bait.

From International Angler 62 (2) March – April 2000



Outlook for menhaden mixed: fewer adults, more young fish

As coastal states move closer toward adopting a new management plan for Atlantic menhaden, a new assessment continues to offer a mixed outlook on the health of the stock. Recently analyzed figures from last year's catch data indicate the "spawning stock" – an estimate of the adult population – has fallen sharply for the second straight year.

AIFRB Fellow, Doug Vaughan, a National Marine Fisheries Service biologist who makes an annual menhaden assessment, estimated the spawning stock was 32,800 metric tons last year. That is below the long-term average of 40,000 metric tons, and less than half of the 87,000-metric-ton spawning stock that was along the coast in 1997, according to a revised assessment by Vaughan for that year.

At the same time, though, a preliminary estimate of the number of young fish that joined the coastal menhaden stock shows an increase for last year. Vaughan estimated that 2.7 billion menhaden were "recruited" into the coastal stock in 1999. If that number holds up, it would be the first time since 1995 that the number of young fish was above a key threshold level of 2 billion. But it would still remain

below the long-term average of 3 billion. Vaughan cautioned that the estimate of young fish could be high. He calculates the number of fish of various ages based on catch records from the menhaden fishery.

Last year, the industry caught an unusually high number of young fish – possibly because heavy storms mixed schools of young and old fish together – which could skew age estimates. Catch records from this year and next year will help to give a clearer estimate of how many fish actually "recruited" into the population in 1999, he said. For reasons that are unknown, the menhaden stock has suffered from a series of years with poor reproduction, raising concern about the health of the stock and its impact on other fish that rely on menhaden for food.

Vaughan said that an increased number of recruits would confirm anecdotal reports of large numbers of young menhaden being seen last year in New England, and – to a lesser degree – off North Carolina. But recruitment still appeared poor in the Chesapeake Bay, he said. The future health of the stock, Vaughan said, depends of whether recruitment continues to increase enough to replenish the adult population.

"Everything seems to hinge on what kind of recruitment we're going to get," he said. "If we get a couple of years of moderate recruitment, then I think we'll see the spawning stock in a couple of years start to go back up again. But if we just see one good year and then have a couple more bad years of recruitment, then the spawning stock will continue to decay."

The management of menhaden has become increasingly controversial in recent years as recreational fishermen and others have complained that the commercial menhaden fishery is catching too many of the fish, which provide food for larger predators such as striped bass, weakfish and blue fish.

The Atlantic States Marine Fisheries commission, a panel that represents all East coast states and is responsible for developing management plans for species that migrate across state lines, is expected to release a revised menhaden management strategy for public comment later this year. A new strategy could be adopted by year's end.

From Bay Journal 10(4) —

June, 2000

Frank Mather Dies at 89

Frank Mather III, known and respected as the father of recreational fish tagging, died on Monday, March 27, 2000 in Falmouth, Mass., after more than a year of poor health. He was 89.

Mather had a distinguished career as a biologist and was well known for initiating the Cooperative Game Fish Tagging Program in 1954 at Woods Hole, Mass. The tagging program was transferred to NMFS in 1968 and has provided data for stock assessments of highly migratory species.

Mather published many scientific papers, particularly on Atlantic bluefin tuna. Mather and his wife Natalie for the past 30 years spent six months at their winter home in Key Biscayne, FL and the remainder of the year at their home in Woods Hole.

Since the 1950's Mather received many honors from marine science institutions and recreational fishing organizations around the world for his lifetime of fisheries research. Last January at the International Game Fishing Association annual banquet and auction, he was presented the prestigious IGFA Conservation Award. In 1997, he was given the West Palm Beach Fishing Club's Lifetime Achievement Award, marking only the third time in the club's 66 years that the award had been given.

From International Angler 62 (3) — May-June, 2000

KILLER TROUT

The folly of fish stocking in the Sierra

For thousands of years after the glaciers retreated in California's Sierra Nevada lakes above 6,000 feet were fishless, isolated by precipitous waterfalls.

All of that changed in the mid-1800s, when individual settlers, the California Fish Commission, the U.S. Army, and other groups began introducing trout to the High Sierra to provide food and recreation for backcountry travelers. The California Department of Fish and Game stepped up stocking efforts in the 1950s, airdropping thousands of hatchery-raised fingerlings into even the most remote lakes. The practice persisted throughout the West, with little monitoring of the introduced fish and almost no thought to their ecological impacts.

Now we know better. Fish stocking has profoundly altered lakes and streams throughout the Sierra Nevada, pushing at least one endemic species, the mountain yellow-legged frog, toward rangewide extinction. Unlike most frogs, which transform from tadpole to adult within months, this species lingers in the tadpole stage for two to four years in deep lakes, rendering it highly vulnerable to trout. Two groups, the Center for Biodiversity and the Pacific Rivers Council, are petitioning to have the mountain yellow-legged frog — once the most common amphibian in the High Sierra — listed under the Endangered Species act.

Moreover, ongoing studies demonstrate that fish introduction spurs excessive algal growth, pushes out other native aquatic creatures, and causes declines in terrestrial predators — like the mountain garter snake — that rely on amphibians for their food. "The ripple effects go in all directions, up and down the food chain," says Roland Knapp, an ecologist at the University of California's Sierra Nevada Aquatic Research Laboratory. "There's a whole roster of other species that would benefit if we could conserve the mountain yellow-legged frog."

Where introduced fish have been removed or died off, the prognosis is good. Ecologist Knapp and his colleagues have learned that mayfly larvae, aquatic beetles, and some zooplankton can rebound relatively quickly, restoring the natural functioning of a lake. "Recovery is most dramatic during the first ten years, and after about twenty years things are largely back to normal," says Knapp, who proposes that a network of trout free reserves be created throughout the Sierra by using gill nets (as opposed to poisons) to remove fish.

Most lakes outside national parks in California continue to be stocked, but policies are changing. The Forest Service, the Department of Fish and Game, and the National Park Service are devising a frog conservation strategy for the entire Sierra that is expected to be released for public comment this fall. These agencies hope to head off a federal listing of the species, which would take management decisions out of their hands and put them into those of the U.S. Fish and Wildlife Service.

Reducing trout stocking rangewide will not be easy, however. "There seems to be an entrenched mindset among Fish and Game's controlling bureaucracy that widespread and intensive stocking of trout is absolutely necessary," said Steve Trafton, the California policy coordinator for Trout Unlimited, which opposes the practice. "But many of the field biologists within the department recognize the need to change. It's two different management philosophies butting heads."

Biologists at the Bishop, California, field office of Fish and Game, which manages more than 650 backcountry lakes in the eastern Sierra, have stopped stocking lakes that harbor the imperiled frogs and have removed trout from a pair of lakes in the John Muir Wilderness. "Had we been doing this kind of management years ago, the mountain yellow-legged frog might not have needed listing," says Curtis Milliron, a biologist with the department.

Some residents of nearby towns fear that fish removals could affect their tourist-driven economies, and many anglers don't want to lose opportunities for backcountry fishing. Yet restoring even a small percentage of lakes to a fishless state could save the frog, scientists say. And many anglers actually look forward to a more natural Sierra. "These fisheries are entirely artificial," says Ralph Cutter, owner of the California School of Fly-fishing in Truckee. "It's like a peewee golf course for fishermen."

From Sierra — July-August, 2000

ASMFC expected to act on Virginia's horseshoe crab landings

Virginia appears to be headed toward a showdown with the federal government over how many horseshoe crabs can be caught along the mid-Atlantic coast, an issue that may ultimately be decided in court.

On June 8, the Atlantic States Marine Fisheries Commission is expected to find Virginia out-of-compliance for failing to slash its harvest of the ancient sea creature from more than 1 million in 1998 to 152,495 this year. The cut was to be effective May 1, but Virginia officials contend that the ASMFC lacked adequate data to set the catch limit. State officials are worried that the cut would devastate the state's whelk fishery, which relies on horseshoe crabs for bait. Proponents of the cut are worried about the declining numbers of some migratory shorebirds that rely on the eggs of spawning horseshoe crabs, which are found in the spring on mid-Atlantic beaches, for food.

Virginia officials say state law requires that fishing regulations be based on the best available science. "Clearly, the 152,000 crab quota mandated by the ASMFC does not meet the standards the VMRC must follow," the Virginia Marine resources commission said in a resolution adopted April 25. "Therefore, the agency's counsel has advised that adoption of the ASMFC quota cannot be accomplished by regulation but must be implemented by legislation." The General Assembly won't meet again until next year. In the meantime, the VMRC has set a quota of 710,000 crabs.

If the ASMFC finds Virginia out-of-compliance, it will have 10 days to notify U.S. Commerce Secretary William Daley. He would have 30 days to review the recommendation and take action. Under the law, he could close Virginia's horseshoe crab fishery. All sides agree that final action probably would not happen before late summer, and by that time Virginia would already have exceeded its ASMFC quota. As a result, any extra crabs caught could be subtracted from future allocations — potentially closing the state's horseshoe crab fishery for years. But such action by ASMFC and Daley could be ripe for a court challenge, observers say. In past years, Virginia has questioned the constitutionality of the 1993 federal law requiring all East Coast states to follow ASMFC fishery management plans or risk a federally enforced fishing moratorium. The ASMFC, a compact of all East Coast states, was formed in 1942 to cooperatively manage species that migrate across state boundaries.

Until the 1993 law — which gave the commerce secretary the authority to close fisheries that were out-of-compliance — states often ignored ASMFC management plans, leading to the overfishing of many fish stocks. The new law was patterned after earlier legislation aimed specifically at the striped bass management plan in the 1980s, which was credited with helping to restore depleted rockfish stocks. Spurred by lawmakers who contended the federal government did not have the authority to enforce ASMFC fishery management plans, the Virginia General Assembly passed a bill in 1995 to withdraw from the commission, although that action was never taken. Since the 1993 law, several states have been found out-of-compliance with fishery plans but none has ever been punished with a fishery closure. Instead, states were given more time to come into compliance, usually because the changes required actions state legislatures that were not in session.

But ASMFC officials say that may not happen with Virginia because of the size of its violation. The ASMFC this year called for a coastwide cut of 25 percent from the average annual catch between 1995-97 of nearly 3 million crabs. That would limit this year's catch to 2.27 million crabs coastwide. If Virginia exceeds its catch by 550,000 crabs, it would nearly offset the coastwide effort.

"Nothing of this magnitude has happened," said Tina Berger, of the ASMFC.

The commission's use of the 1995-97 baseline for measuring the cut hit

Virginia hard because its catch didn't begin growing until after 1997 — as other states began voluntarily reducing horseshoe crab catches, resulting in more being landed at Virginia docks.

Virginia averaged only 203,326 crabs from 1995-97, but that jumped to more than 1 million in 1998, before the state imposed its own restrictions. A cut from the 203,326 baseline would result in a cap of 152,495 crabs. Virginia has proposed a catch of 710,000 crabs this year, a cut of more than 25 percent from its peak harvest.

Virginia officials also note that several states are planning to catch less than their ASMFC-allocated quota. The commission could have maintained its coastwide cap, they say, and allowed greater landings in Virginia by having other states transfer unused quotas to Virginia — which relies on horseshoe crabs as bait in its \$14 million-a-year whelk fishery. "Then, Virginia would not be in a position to not be totally devastated by such a draconian cut," said Rob O'Reilly, the VMRC's assistant chief of fisheries management. "But that was not in the cards."

If there is a legal fight over horseshoe crabs, it would deal with a species for which almost everyone agrees has one of the poorest sets of information of any creature managed by ASMFC. The commission acknowledges that the status of the coastwide stock "remains unknown." An ASMFC scientific peer review this year found too little information to determine the population and reproduction of the current stock or the impact of current fishing pressure. The review did conclude that some local areas were probably suffering declines.

Concern about the stock has been mounting as harvest pressure on the crabs appears to have grown over the last decade. At the same time, environmentalists are worried that declining numbers of crabs would affect migrating shorebirds, which depend on horseshoe crab eggs for food when they stop at mid-Atlantic beaches during spring migration. Some

crabs are also taken for medical research, although those are usually released after a portion of their blood is extracted. Because the crabs take years to reach maturity, some biologists worry they are being fished faster than they can reproduce.

Faced with those uncertainties, the ASMFC said reductions are needed to be "risk averse." But Virginia officials say there is a lack of clear evidence that the stock is in trouble. "You like to have some basis to err on the side of the resource, or to be risk averse," O'Reilly said. "In this case, the stock parameters are totally missing."

Tom O'Connell, a biologist with the Maryland Department of Natural Resources who oversees the horseshoe crab issue of the ASMFC, acknowledged that none of the data available was "statistically valid to assess coastwide trends." But, he added, "one of the overwhelming conclusions is that of all of the data that are available, none of it shows an increase. All of it is indicating there are stable or declining trends. Because of that, and its relationship with migratory shorebirds, the ASMFC decided to take a risk-averse approach until more data can become available."

To help assemble that data, New Jersey and Maryland have each chipped in \$50,000 for horseshoe crab research, while Delaware has put up \$25,000. The states are asking the U.S. Departments of Interior and Commerce to contribute matching amounts.

Virginia has not contributed to the fund and, O'Reilly said, "quite realistically, we wouldn't know where to look for that amount of money, with the way our budget is."

In any case, he added, the research will not resolve the immediate conflict because it will take years to gather information to make a valid assessment of the stock. "Even if we were able to come up with the \$50,000, it wouldn't be something that would address the current problems," O'Reilly said. "However, it is needed. Everyone knows there is a need for that data and that information."

From Bay Journal — June, 2000

SHAD RETURNING TO BAY RIVERS IN RECORD NUMBERS

Shad swarmed back to the Susquehanna in record numbers this spring, and — for the first time in nearly a century — found almost the entire river open for their spawning run.

Maryland and Virginia officials also reported strong runs of shad, which have been the focus of major restoration efforts in the watershed.

On the Susquehanna, 131,000 American shad had moved through the fish lift at the Conowingo Dam by mid-May, and the spawning run was still in progress.

"We definitely have our new record solid in hand," said Richard St. Pierre, Susquehanna river Coordinator for the U.S. Fish and Wildlife Service.

The previous best year — at least since shad restoration efforts began in the 1970s — was 103,000 for the entire spawning run. In one day alone this spring, 22,000 shad were lifted over the 100-foot-high Conowingo Dam, far eclipsing the previous one-day mark of 9,300.

The Conowingo is the southernmost of four large dams which had closed the Susquehanna to spawning runs for most of this century. In recent years, the utilities that own it and two upstream dams — Holtwood and Safe Harbor — have built expensive lifts to reopen the river to migratory fish. This year, the fourth dam was breached when a fish ladder opened at the York Haven dam just south of Harrisburg. By mid-May, 600 fish had already used it. Completing that passage reopens almost the entire Susquehanna basin — historically the largest shad spawning area on the East Coast. Shad are an anadromous fish, which means they spend most of their lives along the Atlantic coast, but return to their native rivers to spawn.

Shad restoration has been a goal of the Bay Program because the fish swim so far upstream to spawn that they uniquely tie the Chesapeake with its 64,000-square-mile watershed. "Bringing shad and herring back to our rivers is one of the best ways to repay the farmers, the cities, the industries and others upstream for their efforts to reduce the oversupply of nutrients and sediments washing into the Chesapeake Bay," said Bill Matuszeski, director of the EPA's Chesapeake Bay Program office.

But the fish, once the most valuable commercial species in the Bay, declined dramatically in recent decades as the result of pollution, overfishing and obstructions that blocked access to spawning grounds. Maryland banned shad fishing in the Bay in 1980, and Virginia followed suit in 1994.

In recent years, major efforts have been aimed at stocking hatchery-reared fish in rivers — many of which had lost shad runs altogether — and building passages at dams so the returning fish could reach historic spawning grounds. Early indications from all states show those efforts are paying off this year. But unlike the Susquehanna, where the number of returning shad can actually be counted as they go through mechanical lifts that carry the fish past large hydroelectric dams, biologists in Maryland and Virginia can only estimate what is happening.

In Maryland, where stocking programs in the Patuxent and Choptank rivers began only a few years ago, biologists report encouraging signs for both American shad and their smaller cousin, the hickory shad, which is also being stocked in the state. Surveys have found scores of adult American shad, which take four to five years to mature, returning to the Patuxent to spawn, although stocking only began in 1994. Small numbers were also seen this year in the Choptank, where stocking began in 1996.

An early indication of future success may come from the hickory shad, which the state began stocking in both rivers in 1997. Hickory shad mature faster than American shad — in three years — and were reported swimming back to both rivers in droves.

"We've been seeing several hundred to thousands of hickory shad every time we go out to look" on the Choptank, said Steve Minkinen, of the Maryland Department of Natural Resources. Ultimately, the goal is to establish self-supporting populations in both rivers and move stocking efforts to other tributaries.

Likewise, Virginia rivers have seen "a pretty good year," said Tom Gunter, of the Virginia Department of Game and Inland Fisheries. Workers easily gathered enough American shad to collect 24.9 million eggs to rear in hatcheries, the second-best year ever. "Something's happening," Gunter said. "I think the effects of the moratorium here in Virginia are really starting to kick in."

There was also good news for hickory shad. "One of the most impressive things were the hickory shad, both on the James and Rappahannock," Gunter said. "It was a tremendous run."

From Bay Journal — June, 2000

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American Institute of Fishery Research Biologists

... BRIEFS ...

VOL. 29, NO 4

JULY, AUGUST 2000

PRESIDENT'S REPORT

The Institute had another great year. We achieved most of the objectives set forth in the ambitious plan adopted by the Board of Control at the beginning of the year. We ended our fiscal year with a treasury in sound condition. Reserves are high at approximately \$61,000. This reserve fund is held for use in emergencies, to bridge periods low dues of receipts, and for on-going activities with the interest only. A Capital Management Committee was established during the year to assist in reviewing and up-dating the investment policy of the reserve fund.

We made progress in identifying issues related to our membership level. Our membership level has been falling and strategies were developed to correct this. It is too early for results; however, I am encouraged by recent improvements in recruitment of new members and in the processing of applications. I urge all members to join in the recruiting of new members. Keep in mind, however, that only candidates who are professionally qualified and practice our high professional standards should be encouraged to apply. This will assist the Membership Committee in the screening process.

During the past year, we made significant progress in a wide range of activities. I recap only a few in this report. Emphasis was on improving operations by correcting bottlenecks and by strengthening the infrastructure for delivering membership services. A significant accomplishment was resolution of a long standing tax exemption issue. Since founding of the Institute, the Institute had an IRS 501(c) (6) classification from the U.S. Internal Revenue Service that provides limited tax exemption limits. An accounting firm familiar with the IRS bureaucracy was employed to find a solution. An application for reclassification was filed by the firm for the Institute and a new classification, IRS 501(c) (3), was recently received. The Institute now has wider latitude as a tax exempt entity, including the ability to accept private donations of assets, and donors eligible to claim income tax deduction.

Streamlining the operations of the Institute is an on-going task, and exceptional progress was achieved during the year. A Procedures Manual to guide the Institute's leaders in executing their responsibilities was assembled and is undergoing review before implementation. The Internet system has been harnessed to assist in expediting routine business. For example, more of the Board's routine business is conducted by e-mail; membership renewal notices will be going out by e-mail to those on the internet; the Institute's recruitment brochure is up-dated routinely on-line and is available on-line; and a web site has been established and is under construction to deliver timely Institute news. In the years ahead, I envision further streamlining to assist in reducing costs and in improving response time to better serve members.

The Institute continues to recognize and promote excellence in the profession. During the past year, we recognized our colleagues for exceptional contribution to fishery science by presenting the Outstanding Achievement Award (individual) to Dr. Saul Saila, the W.F. Thompson Award to Dr. Jonathon Hare and the Outstanding Achievement Award (group) to the National Fish Research Health Laboratory, USGS and to the International Pacific Halibut Commission. Our Distinguished Service Award for 1999 went to Katherine Myers. Six Research Assistance Awards were made to Associate Members. The Research Assistance Award provides each recipient with the opportunity to present results of original research at a scientific meeting or to conduct research at an off-site location. We also made special efforts to alert members to apply for advancement in rank. A special symposium on "Aquatic Invaders" was organized for the AFS annual meeting in St. Louis, MO to alert professionals of the problems and issues resulting from unintentional introduction of species in aquatic habitats.

Along with the significant accomplishments, there were some disappointments. In particular, I was not able to spend as much time as was required to fully execute my responsibilities as the chief executive officer of the Institute. Consequently, some assignments failed to receive sufficient supervision and guidance for desired results. Two such assignments were conduct of an election for President-Elect and progress with plans for Celebration 2006. The former is significant because it is mandated by the Bylaws. I will rededicate my efforts to correct this failure. The latter is also significant because an early start will allow sufficient opportunity for membership input. I plan to assist in re-starting the activities of the Celebration 2006 committee.

The BOC and I wish to thank the membership for your support and all the volunteers, members and non-members, for contributing to the accomplishments and progress during the past year. The Institute is membership driven and cannot function effectively without the dedication and energies of volunteers. I'm reminded by the saying that the membership is the heart and soul of an organization while the volunteers are the blood that keeps the organization alive. Our special thanks to the volunteers.

Finally, I wish to reassure the membership that the BOC and I are committed to advancing the interest of the Institute as a professional fisheries organization. We have been making progress, but have much work ahead of us. With your continued support, our team of dedicated volunteers, strong BOC and some luck, we will continue to advance the objectives of the Institute. The BOC and I look forward to greater achievements in the new fiscal year.

Gary Sakagawa, President — August 19, 2000

PRESIDENT SAKAGAWA INVITED AS GUEST SPEAKER

In May 2000, President Gary Sakagawa traveled to Pusan, Korea at the invitation of Dr. Jang-uk Lee, Director General of the National Fisheries Research and Development Institute in Pusan. His visit was for consultation with fisheries scientists at the Institute and to participate in the annual meeting of the Korean Societies on Fisheries Science as a guest speaker. Sakagawa's presentation was on, "Challenges in the New Millennium for Stock Assessment Scientists – particularly for Highly Migratory Species."

The meeting was hosted by the National Fisheries Research and Development Institute in Pusan and held on the park-like campus of the Institute. Several hundred participants, principally from government agencies and academia throughout Korea, attended. They represented all disciplines (biology to engineering) involved with fisheries in Korea. The stock assessment discipline, however, was poorly represented and is a priority for development by Korea. The need is urgent because Korea recently adopted new fishery management procedures that are in line with LOS guidelines that require implementation of the precautionary approach.



Dr. Jang-uk Lee (right), Director General, National Fisheries Research and Development Institute, Pusan, Korea presenting AIFRB President Gary Sakagawa with the Guest Speaker's award at the annual meeting of the Korean Societies on Fisheries Science.

TREASURER'S REPORT – MUCH ABRIDGED

Statement of Cash Receipts and Cash Disbursements

8/9/99 through 7/31/00 (with August 2000 Estimated Expenses)

	8/8/98 to 8/6/99	8/9/99 to 8/31/00	Amount Difference
CASH RECEIPTS			
AIFRB Cap Sales	798.00	0.00	-798.00
Ck Recovery	86.04	0.00	-86.04
Member Dues	19600.00	15405.00	-4195.00
JWR Ck Deposit	20.00	0.00	-20.00
Member List Rental	135.00	0.00	-135.00
Transfer Funds (Capital Acct/NJ Ckng)	0.00	4137.08	4137.08
Interest Income	0.00	95.73	95.73
TOTAL CASH RECEIPTS	20639.04	19637.81	-1001.23
CASH DISBURSEMENTS			
AIFRB Meeting Service	0.00	741.94	741.94
AIFRB Reception	415.73	1513.07	1097.34
AIFRB Awards:			
Distinguished Service Award	133.25	160.00	26.75
Research Assistance Award	3150.00	2177.82	-972.18
W.F. Thompson Best Paper Award	1750.00	1000.00	-750.00
Bank Service Charge	98.10	93.59	-4.51
Board of Control	3356.04	5160.63	1804.59
Bounced Check	40.00	0.00	-40.00
BRIEFS Newsletter	7677.23	7803.44	126.21
Collection	0.00	0.00	0.00
Correction	0.00	0.00	0.00
District Reimbursement	113.02	0.00	-113.02
Foreign Check Collection	60.00	0.00	-60.00
Honorarium	0.00	0.00	0.00
License	20.00	0.00	-20.00
Membership Expense	0.00	0.00	0.00
Other	0.00	0.00	0.00
President's Expense	250.00	119.60	-130.40
Pr-Prof-Conduct	0.00	0.00	0.00
Production	918.09	0.00	-918.09
Reimbursement	0.00	0.00	0.00
Salmon Plaques	908.00	0.00	-908.00
Secretary's Expense	188.60	67.35	-121.25
Transfer Funds (NJ2MD Ckng)	0.00	637.08	637.08
Travel Display	0.00	0.00	0.00
Treasurer's Expense	854.68	3017.41	2162.73
Total Cash Disbursements	19932.74	22491.93	2559.19
Net Change	706.30	-2854.12	-3560.42
Beginning Cash Balance	3327.89	4034.19	706.30
ESTIMATED CASH AT END OF YEAR	4034.19	1180.07	-2854.12



New Treasurer Al Shimada (right) flanking jubilant President Sakagawa during Board of Control Meeting, St. Louis, August 19-20, 2000.

(Treasurer's Report - continued)
SALOMON SMITH BARNEY

AIFRB – ACCOUNT POSITIONS — AS OF 07/31/00

QUANTITY	SYM/CUSIP	SECURITY DESCRIPTION	PRICE	MARKET VALUE
1,358	SBCX	SB MONEY FUNDS CASH PORT CL A.....	1.000	\$1361.64
		3.21 ACCRUED DIVIDEND		
798	WEINX	AIM EQUITY FDS INC	30.950	\$24724.15
		WEINGARTEN FD		
1,200	EVN	EATON VANCE MUNICIPAL INCOME	11.438	\$13725.60
		TRUST NATIONAL FUND SBI		
698	FRHIX	FRANKLIN TAX FREE TR-HIGH	10.460	\$7301.63
		YEILD TAX FREE INCM FUND		
1,500	TFB	MORGAN STANLEY DEAN WITTER	8.594	\$12891.00
		MUNICIPAL INCOME TRUST II		
154	MSCAX	VAN KAMPEN ASIAN GROWTH FD	11.650	\$1803.04
		CL C		
TOTAL ACCOUNT VALUE				\$61807.06

HOW GREEN IS OUR PORTFOLIO? — an editorial

(With apologies to Richard Llewellyn)

President Sakagawa and Treasurer Shimada deserve standing ovations. By pursuing and obtaining the coveted 501(c)(3) tax-exempt designation for the Institute, and, consequently, by formulating the plans for a foundation to encourage professional achievement of the highest quality, these officers have placed the Institute on the exact path towards substantial presence in the world of fishery science. The major condition for that presence is growth of the financial assets of the foundation, growth that, at present, is expected to come from a successful investment strategy. That strategy can have several forms. The most lucrative might be one I call "Money at any price" wherein the Institute pursues investments that provide the greatest rate of return regardless of the nature of those investments. Many of the most rewarding investments may be those associated with activities with high environmental costs — conceivably hydropower in the Columbia basin or clear-cut logging of rainforests. The argument for this strategy is that the destruction will occur despite any conscientious objection on our part and that our goals are so noble that we are justified in taking advantage of otherwise abhorrent practices. An approach that is nearly equivalent in effect, but intellectually more dishonest, is the Two Monkey Strategy (Hear No Evil, See No Evil) in which we pursue gain through mutual funds that provide anonymity for the transgressions of enterprises benefiting from our investments.

Neither of the above strategies should be acceptable to the Institute or its members. The very first entry in the AIFRB Principles of Professional Conduct is "1. PROMOTE CONSERVATION OF FISHERY RESOURCES through development of scientific knowledge." It is inconceivable that we as fishery scientists would be so hypocritical as to, on one hand, promote conservation through research, and, on the other, thwart conservation through investment. Virtually all of us knowingly entered a career wherein the principal products were to be knowledge and the conservation of natural resources rather than fat pockets. The Institute must reflect the values of its members.

On the other hand we all know it is unrealistic to pretend that we do not impact the Earth, its environments, and our fellow denizens with our every action. We live in houses, drive cars, and turn on lights. The best we can hope to do in our lives and our investments is to moderate our impact, to avoid the egregious. Thus to paraphrase a currently famous Texan, I suggest an investment policy of Responsible Capitalism. We must know where our funds are being applied and we must pursue those avenues which combine a reasonable rate of return with minimal impacts on natural environments and resources. To follow any other path would constitute the grossest violation of the integrity of our profession, our Institute, and ourselves.

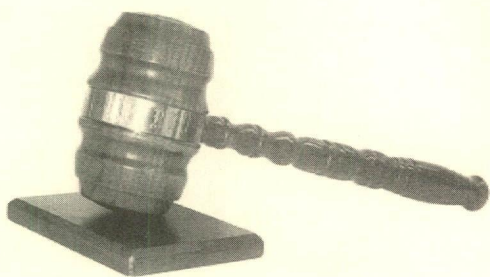
— The Editor

(P.S. I hope every member will convey his beliefs on this subject to an officer, director, or me.)

Sykes Does Another Good Turn

Several in fact!

James E. Sykes, long of Morehead City, NC, but recently removed to the Tampa Bay, FL area, he has once again applied his considerable woodworking skills for the benefit of a charitable organization, this time the AIFRB. Jim has made and presented our organization with a gavel and pad, both of beautiful and beautifully finished American walnut.



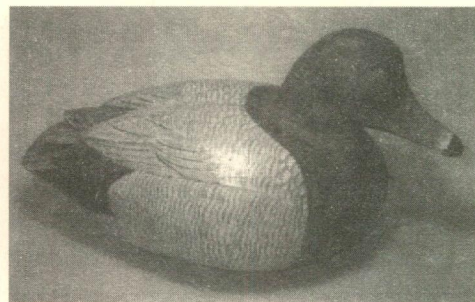
Walnut Gavel created by Jim Sykes for AIFRB.

This gift continues a long history of such donations from Jim. I have personally wielded walnut gavels created and donated by Jim to the Southern Division American Fisheries Society, Marine Fisheries Section American Fisheries Society, and The Carteret County (NC) Wildlife Club, and my recollection

is that numerous other organizations have benefitted from Jim's gavelwrighting and generosity. Additionally Jim performed the woodwork for the miniature walnut trawl doors symbolizing the Sette Award of the Marine Fisheries Section American Fisheries Society, and for the quarter scale walnut trawl door that permanently lists all the Sette Award winners in the AFS office in Bethesda.

Jim has a long history of woodworking and has crafted truly beautiful furniture. But my favorite of all of Jim's wood products are the realistic and handsome duck decoys he extracts from chunks of tupelo. Jim was an early member of the Core Sound Decoy Carver's Guild that has preserved the skills and heritage of decoy making associated with coastal North Carolina's long history of commercial and recreational harvest of waterfowl.

Sykes, a native of Richmond, VA, served in the Army Air Corps in World War II, graduated from Randolph-Macon College and obtained an M.S. in association with the Virginia Institute of Marine Sciences. He began his professional



Drake redhead decoy crafted by Sykes from tupelo.

career at the Beaufort, NC laboratory of the U.S. Fish and Wildlife Service and worked first on American shad, later on striped bass. Jim then went to St. Petersburg, FL where he eventually directed the Federal laboratory. Sykes later spent time at Sandy Hook, NJ with some obligatory time in D.C., but eventually completed his career directing the fisheries-oriented research back at the Beaufort facility, by then part of the NOAA National Marine Fisheries Service laboratory system.

Jim was my supervisor until his retirement, and he was a good one. We didn't always agree on how to do things, but we were almost always in accordance on what to do and on the need to move our research in new directions away from the old Bureau of Commercial Fisheries priorities.

— By Gene Huntsman

Saila Recipient of Outstanding Achievement Award — 1999

"On Wednesday, 14 June 2000, the AIFRB Award for Outstanding Achievement (Individual Category) in Fisheries Research for 1999 was given to Dr. Saul B. Saila, Professor Emeritus, The University of Rhode Island. The presentation was made at the Summer Meeting of the Southern New England Chapter, American Fisheries Society, and included some of Dr. Saila's former graduate students, as well as scores of his more recent students, colleagues, and friends.

The award was presented by Dr. John Pearce, New England District Director, on behalf of AIFRB and President Gary Sakagawa, and acknowledged Dr. Saila's five decades of outstanding professional activities, including unusual levels of accomplishment in research, inordinate numbers of students who attained the highest ranks of science and management, and the total respect of his peers.

It was noted that Dr. Saila continues to be involved at the

highest levels of fisheries and marine sciences and management. In fact, several of his students gave detailed testimony to his past and continuing productivity. One related that he spoke to Dr. Saila recently and he decried the one downside of retirement, i.e., "one has even less time to get the important items of science dealt with!!!"

The AIFRB is proud to honor this most talented of colleagues.

— Jack Pearce

DR. SAUL B. SAILA

Dr. Saul Saila is the 1999 recipient of the AIFRB's Outstanding Achievement Award-Individual. Dr. Saila has been a member since 1959, and a fellow since 1984. Following service in U.S. Army Intelligence and Reconnaissance Platoon (100th Infantry) during World War II, Dr. Saila received his B.S. from the University of Rhode Island in 1949, and M.S. and Ph.D. from Cornell University in 1950 and 1952, respectively. He was a research associate with the Zoology Department, Indiana University, 1952-1954; and fisheries biologist with the Rhode Island Division of Fish and Game, 1954-1956. He was appointed to the faculty of the University of Rhode Island in 1956 where he attained the rank of Full Professor in both the Oceanography and Zoology Departments. Upon retirement from the URI's Graduate School of Oceanography in 1988, Saul was bestowed Emeritus status by the University. While a faculty member, he educated and guided numerous graduate students in

marine fisheries including 39 Ph.D. and 28 Master degree students. In 1989, Dr. Saila was awarded the American Fisheries Society's Excellence in Fisheries Education Award; and in 1994, Saul received the Marine Fisheries Section's Oscar E. Sette Award for sustained excellence in marine biology.

Dr. Saila taught primarily graduate-level courses in limnology and fishery biology, but his interests vary widely. He published papers on the application of computer modeling to studies in fish migration (in the years before computers were readily available), observations on fish behavior and its relevance to fishing gear design, game theory and pelagic fishing operations, systems analysis, effects of ocean disposal of solid waste, optimal control theory in fisheries management, optimum sampling strategies for benthic organisms, and comparative evaluation of diversity measurements. These are but a few of the many research topics he has engaged in, and on which he has published over 100 papers. Dr. Saila is still very active in the field with recent presentations

at the annual AFS meetings on "Neural network applications to space and time variation in fish assemblages" in 1998 and "Uncertainty projection in fishery models: Some examples using internal analysis and fuzzy arithmetic" in 1999.

Dr. Saila has traveled extensively around the world as a fisheries advisor to developing countries. A list of Saul's major consulting and advisory activities consists of about 20 countries. He gained an appreciation for the urgent need to acquire computer power in many of these countries and authored a volume and accompanying microcomputer software on basic programs in fishery science (co-authored with Conrad Recksiek and Michael Prager). His hobby in photography resulted in his well-known artistic slide shows presented evenings at the Graduate School of Oceanography. Saul's subjects included figure studies and other beauties of nature, reflecting the undeveloped environment of southern Rhode Island.

— Submitted by D.S. Vaughan

LEETOWN LAB RECEIVES GROUP ACHIEVEMENT AWARD – 1999

The Outstanding Achievement Award-Group is the Institute's highest award for recognizing organizations that nurture excellence in fishery science and achieve excellence in research. The criteria used to judge candidates include sustained contribution of significant publications, exceptional service to the fishery profession, outstanding teaching or training programs, important discoveries or inventions, or significant contributions to the advancement of fishery science.

The National Fish Research Health Laboratory, Leetown Science Center of the U.S. Geological Survey was nominated for the Outstanding Achievement Award by peers. In making the nomination, colleagues noted that the Lab has had a long history of research excellence and



service to the fishery profession, particularly in improving understanding of infectious disease agents of fishes, and paving the way for development of diagnostic tools for fish health and for fish health management. The American Institute of Fishery Research Biologists is proud to award the 1999 Outstanding Achievement Award-Group to the National Fish Research Health Laboratory for sterling achievement.

Shown above is Dr. Gary Sakagawa, President of the American Institute of Fishery Research Biologists (AIFRB) presenting the AIFRB Outstanding Achievement Award to Dr. Emmett Shotts, Jr., Laboratory Director, National Fish Health Research Laboratory.

HALIBUT COMMISSION EARNS OUTSTANDING ACHIEVEMENT AWARD – 2000



Dr. Bruce Leaman, Director International Pacific Halibut Commission accepts the AIFRB Outstanding Achievement Award-Group from President Sakagawa, March 30, 2000.

The NW Washington District held its second meeting on March 30, 2000, at the new School of Fisheries at the University of Washington; about 50 people were in attendance. The focus of this meeting was President Sakagawa's presentation to Dr. Bruce Leaman, Director of the International Pacific Halibut Commission, with the "AIFRB Year 2000 Outstanding Group Achievement Award" for the IPHC. Dr. Leaman then gave an outstanding talk on the history of IPHC and about some of the management approaches the Halibut Commission has successfully implemented over the years. This seminar was then followed with socializing and the consumption of excellent seafood snacks provided by Ken Chew, with coffee arranged for by Bud Burgner and Don Gunderson, and the tours were conducted of the new School of Fisheries by Kate Myers and several grad student volunteers. By all accounts it was a very successful and informative meeting.

LEAMAN RESPONDS

It was with great pleasure that we learned of the honor the Institute has bestowed on the Commission. As you well know, fisheries research and management is a difficult endeavor, in part because understanding seems to come in such small increments relative to our need to know. The Commission has been working at managing the halibut stock for seventy-six years now, and often it feels like we have just started. To be recognized for our efforts by our peers in the Institute gives the staff of the Commission a very personal sense of satisfaction and accomplishment.

On behalf of the Commission staff, thank you and the Institute very much for this honor.

*Bruce M. Leaman, Ph.D.
Executive Director,
International Pacific Halibut Commission*

Who be a Fishery Biologist?

Another windy editorial

One would assume that after a century or so of maturation of the profession that the question of what or who is a fishery biologist would be well resolved. If resolution exists it clearly has not filtered into the collective consciousness of the Board of Control. Here is the situation. One of the Institute's most noble exercises, in my opinion, is the awarding of travel grants for students to present papers. In 2000 as well as in most recent years a number, perhaps the majority, of awards have gone to food technologists, very bright, accomplished, ambitious, skilled young people focussed on the chemistry and physics of fish flesh. This money, intended to generate membership in AIFRB, but given to these people has been misspent. They are neither fishery biologists nor eligible for membership in the AIFRB. A few Board of Control members, fixing on the phrases in our bylaws concerning utilization of resources, are making the unchallenged assertion that food technologists are fishery biologists and eligible for membership and privileges. By this feeble and unsupported contention we ought also to include one Paul Prudhomme whose research led to a recipe for partially cremated and overspiced yellowfin tuna, which when misapplied to red drum led to fishing a previously unexploited spawning stock to near - devastation, a radical altering of the balance of commercial and recreational fishing interests in the Southeast, action in numerous state legislatures, and ultimately the arrest and resignation of one fishery management council member. (Oh, were my own research to have been so influential!) No, food technologists and creole cooks are clearly excluded from the definition of fishery biologist by three lines of evidence. 1. Common vernacular. Who amongst us, in their wildest excursions, would consider food technologists as fishery biologists? 2. The Policy Statements of AIFRB read in their entirety. The Policy Statements, under the category Educational Standards p. 16, clearly define fishery biology as specifically pertaining to production rates, population dynamics, and fishery exploitation. Even the difficult distinction between fishery biologist, fish biologist, and ichthyologist are addressed, and the Policy Statements imply that the latter two are not the former. 3. The professional interests and accomplishments of the 26 Founding Members all of whom had important connections to fishery biology as defined by the Policy Statements.

Surely the educational programs producing fishery biologists are not so flush with funds that there is no need for the AIFRB travel grants for students. Surely the Institute need not give money to unqualified candidates in order to justify continuation of the grants program. Surely if we lack qualified applicants for the grants we are failing at some level to communicate the availability of funds to students. But that the failure should only be a stimulus to improve communications about our program, not a license to continue misspending our limited funds on surimi squeezers.

~ Editor.

Note: Nothing in this editorial is intended to criticize the diligent and difficult efforts of Colleen Caldwell, her committee or their predecessors who have administered the grants program while following accepted precedents. The goal is to discuss an inconsistency between Institute policies and practices and to seek changes that should strengthen the organization.

AIFRB CO-SPONSORS SYMPOSIUM: PASSINO-READER CARRIES THE MAIL

Led by Director Dora Passino-Reader, the Great Lakes District has been responsible for planning and co-organizing a one-day symposium at the AFS Meeting, entitled **AQUATIC INVADERS: ENTRY, IMPACT, AND CONTROL**, co-sponsored by AIFRB and the Introduced Fish Section of AFS.

This symposium addressed one of the most serious, yet least appreciated, threats to biodiversity. Invasive species affect virtually every watershed in North America. Invading sea lampreys caused the collapse of lake trout and other Great Lakes fisheries, costing the U.S. and Canada \$13 million annually to control. Zebra mussels are replacing valuable native mussels and can shut down electrical utilities by clogging water intake pipes, threatening to cause an estimated \$5 billion in damage by 2002, if unchecked. In response to these threats, in February 1999 President Clinton signed Executive Order 13112, Invasive Species, to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause; the proposed White House budget for fiscal year 2000 included more than \$28.8 million for this initiative. Natural resource managers and fishery and aquatic scientists need to be equipped to meet the challenges and opportunities to provide solutions to problems of invasive species. The objectives of the symposium are 1) present current research and management approaches to understanding freshwater and marine aquatic invaders; 2) to examine modes of entry of invaders to aquatic systems and analyze their impacts on native and endemic species, especially threatened or endangered species; and 3) to develop strategies for control and for evaluating control measures implemented to date. The one-day session included topics related to behavioral interactions between invaders and native fauna, invasion dynamics, problems associated with interbasin water transfers and evaluating water discharge, and control methods and program.



Dora Passino-Reader at Board of Control meeting emotes joy at successful fulfillment of her responsibilities for local arrangements and symposium organization.

SYMPOSIUM

Oral Presentations: 1) Show Them the Door: The Show-Me State's Approach to Dealing with Exotic Species. Sue Bruenderman, Al Buchanan, Bob DiStefano, Steve Fischer, Norm Stucky; 2) Control of Eurasian Ruffe in the Great Lakes: How Are We Doing? Thomas R. Busiahn; 3) Management Options For Asian Swamp Eels (*Monopterus Albus*) in the Southeastern United States. Patricia A. Carter, Shawn Alam; 4) Prevention – The Best Cure: The 100th Meridian Initiative. Linda R. Drees; 5) West Coast Ballast Water: Don't Dump On Us. Dennis R. Lassuy, Mark Sytsma; 6) Giant Salvinia, *Salvinia molesta*, A Threat to Southwestern Waters. Bob Pitman; 7) International Trade in Live Bait: A Potential Source of Aquatic Nuisance Species Introductions. Mark H. Sherfy, Julie A. Thompson; 8) Aquatic Invasive Species in Alaskan Coastal Waters. Gary M. Sonnevil; 9) Establishing a Control Program for Chinese Mitten Crabs. S. Kim Webb; 10) Interbasin Transfers: How Significant is the Problem? Michael T. Weimer, Sandra M. Keppner; 11) How Does Brazilian Waterweed (*Egeria densa*) Influence the Fish Assemblage in the Sacramento-San Joaquin Delta (CA)? Potential Conflicts with Ecosystem Restoration. Lenny

Grimaldo, Robert Miller, Chris Peregrin, Zachary Hymanson, Jason Toft; 12) Food Web and Contaminant Effects of an Exotic Bivalve in San Francisco, California. Janet K. Thompson, Samuel N. Luoma; 13) Aquatic Exotics: Lessons Learned from the Great Lakes. John E. Gannon; 14) Integrated Management of Sea Lamprey in the Great Lakes. Chris I. Goddard; 15) Alteration of Freshwater Ecosystems by the Invasive Bivalves, Zebra Mussels (*Dreissena polymorpha*) and Quagga Mussels (*Dreissena bugensis*). S. Jerrine Nichols; 16) Behavioral Interactions Between Round Goby and Ruffe. Jacqueline F. Savino, Melissa J. Kostich; 17) Factors Affecting Dispersal of Round and Tubenose Gobies in Great Lakes Tributaries. Stephen R. Hensler, David J. Jude; 18) Assessing Ecological Impacts of Exotic Rainbow Smelt (*Osmerus mordax*) in the Major Lakes of Voyageurs National Park. Larry W. Kallemeyn, Guy Fleischer, Gary Glass, John Sorensen; 19) Nonindigenous Fishes of Peninsular Florida: Patterns and Dynamics of Invasion. Leo G. Nico, Jeffrey J. Herod; 20) Largemouth Bass Expansion as a Cause of Topeka Shiner Decline. Matthew R. Winston. ♦

MEMBERSHIP COMMITTEE REPORT – 2000 (Condensed)

Tom Lambert, Committee Chair, Dr. Richard Brodeur, Dr. John R. Moring, Dr. Douglas S. Vaughan, Dr. Barbara Warkentine
The Membership Committee received 22 Applications for membership and Nineteen applicants were accepted. The new members came from the following areas of employment: 11% U.S. Government; 21% State; 16% Private; 5% University Employed; 47% Graduate Student.

PROMOTIONS GRANTED

Member

David C. Love, Ellen van Snik Gray, Trent M. Sutton, Peter Vanriel, William L. Knotek

Fellow

John W. Tucker, Jr., Raymond M. Newman, M. James Allen, Stephen M. Fried, Lawrence L. Moulton, Douglas C. Peterson, Scott E. LaPatra, George H. Darcy, George R. Sedberry, Michael G. Hinton, Samuel P. Felton, Mark I. Farber

Emeritus

Hiroshi Kasahara, Billy S. Batts, Glenn A. Flittner, David T. Hoopes, Harold M. Tyus, Walter R. Courtenay, Jr.

The table below summarizes by year the number of persons assigned to each category for new memberships and promotions.

MEMBERSHIP SUMMARY 1979 TO 2000

(1979-80 may be incomplete)

NEW MEMBERSHIP					PROMOTIONS			
Year	Associate	Member	Fellow	Total	Member	Fellow	Emeritus	Total
1979	3(21%)	10	1	14	13	37	15	65
1980	13(22%)	29	7	59	4	11	4	19
1981	13(23%)	40	4	57	4	10	5	19
1982	31(69%)	12	2	45	2	3	2	7
1983	41(59%)	27	2	70	5	7	21	33
1984	47(67%)	19	4	70	6	13	18	37
1985	26(55%)	19	2	47	10	11	12	33
1986	23(53%)	19	1	43	3	2	8	13
1987	16(35%)	28	2	46	8	10	12	30
1988	20(56%)	15	1	36	8	8	19	35
1989	12(46%)	13	1	26	2	6	15	23
1990	18(69%)	7	1	26	8	21	14	43
1991	10(43%)	9	3	23	3	2	8	13
1992	9(50%)	7	2	18	1	2	5	8
1993	11(50%)	9	2	22	10	10	16	36
1994	20(49%)	17	4	41	16	26	10	52
1995	22(69%)	8	2	32	3	2	9	14
1996	20(45%)	19	5	44	4	2	18	24
1997	9	-	-	9	-	-	-	-
1998	16	10	5	31	3	4	10	17
1999	6	10	2	18	-	6	5	11
2000	14	4	1	19	5	13	6	24

I want to again remind the district directors that the bylaws state "The District Directors shall be responsible for the recruitment of new members and the advancement in rank of members in their districts and shall report annually thereon to the Board of Control."

— Submitted by Tom Lambert

DISTRICT ACTIVITIES-SELECTED

The following are highlights from district annual reports. There were many more district reports than are represented here.

NORTHERN ALASKA

A highlight of this year was the receipt of a personal AIFRB library from longtime member Dr. Julius Rockwell, Jr. (Member-1960). The collection begins in 1963 and documents AIFRB and district activities through 1998. When added to my personal library, a good historical record is now available to local members who wish to research historical issues and policy of the Institute.

Steven K. Davis, Director

NW WASHINGTON

The NW Washington District held two meeting in 1999-2000, with both being well attended and successfully carried out.

The first meeting was the annual "Ken Chew Multi-Course Chinese Dinner", on February 15, 2000. The food was the best yet, and the excellent talk by Bob Lauth (NMFS-Seattle, Sand Point) on "Sea Nymphs and Groundfish" kept the large audience (96 people) in the VERY good mood the "Happy Hour" had begun! However, this year's annual dinner meeting was extra special because our own Dr. Katherine "Kate" Myers received the AIFRB "Distinguished Service Award" for 1999.

The second meeting was held on March 30, 2000, in the auditorium of the new School of Fisheries at the University of Washington; about 50 people were in attendance. In AIFRB a brief business meeting members selected acting District Director Bruce Miller as Director. President Sakagawa spoke about current matters that AIFRB is pursuing at the national level, including going "on-line" and the AIFRB 50-Year Celebration to be held in Seattle in 2006. Dr. Sakagawa then introduced Dr. Bruce Leaman, Director of the International Pacific Halibut Commission, and presented him with the "AIFRB Year 2000 Outstanding Group Achievement Award" for the IPHC. Dr. Leaman then gave an outstanding talk on the history of IPHC and about some of the management approaches the Halibut Commission has successfully implemented over the years. This seminar was then followed with socializing and the consumption of excellent seafood snacks provided by Ken Chew, with coffee arranged for by Bud Burgner and Don Gunderson, and then tours were conducted of the new School of Fisheries.

Bruce Miller, Director

SOUTHERN CALIFORNIA

The District held two meetings. On April 18, Michael Hinton was elected District Director and Joyce Andrew was elected Secretary-Treasurer.

Presentations at meetings included: April 2000. Michael G. Hinton, Senior Scientist, IATTC. Ecology and status of Blue Marlin in the Pacific. July 2000. Marci Yaremko, Associate Marine Biologist, CDFG. Evaluation of potential impacts of light from the southern California market squid fishery on nesting seabirds and resulting developments in management.

The District purchased the domain name "AIFRB.ORG" and registered it to the Southern California District. The objectives were: (1) to ensure that the name remained available to AIFRB and specifically to the District; (2) to prompt action in other districts and at the national level to develop a presence on the web. The site is currently hosted by SCCWRP, though this will soon be changed to hosting by the IATTC in order to facilitate updates and management of the site. Webmaster is currently M. Hinton.

The site is updated on a regular basis and now includes links (email) to officers in all districts as well as a link to the Great Lakes District web page.

The District authorized two awards of \$200 for student papers on fisheries at the Southern California Academy of Sciences meeting May 2000. Selected for awards were: K. Louie, UCLA, Department of Organismic Biology, Ecology and Evolution. Genetic variation in the eastern Pacific bay pipefish; D. Smith, CS Fullerton, Department of Biological Science. Trophic position of southern California estuarine and island population of the silverside fish *Atherinops affinis* (Teleostei: Atherinopsidae): Analysis of 15N and 13C stable isotopes and dietary items.

Michael Hinton, Director

NORTHERN CALIFORNIA

Last year's "business meeting" was conducted via e-mail, mainly among the officers and recent past directors. This was essentially to choose preferred topics and potential speakers for our three dinner meetings. All three of the Dinner Meetings were attended by 14 to 17 members and guests. The annual District Banquet was held again at the Hong Kong Seafood Restaurant in San Francisco in January and was attended by about 40 members and guests who enjoyed a 10-course meal. The fall dinner meeting was on the emerging hot topic of dam removal. Bill Kier gave an illustrated talk on the Battle Creek Salmon and Steelhead Restoration Plan that his firm

prepared, which has led to plans for taking down five hydroelectric dams in the Battle Creek watershed of northern California. When completed in 2002 the Battle Creek project will provide 45 miles of drought-resistant stream habitat for ESA-listed winter-run Chinook salmon, spring-run Chinook salmon and steelhead. The March meeting featured a richly illustrated talk by Dan Howard on the history, geology, oceanography, and biology of Cordell Bank, a National Marine Sanctuary of which Dan is the Director. In May, Dr. Carolyn Friedman of U.C. Davis and Bodega Marine Laboratory gave a technical presentation of her research on withering foot syndrome in abalone and other molluscan diseases that have affected fisheries and aquaculture in California.

Andrew Jahn, Director

SOUTH CENTRAL GREAT LAKES

The principal activities of the Great Lakes District of AIFRB in 1999-2000 have been organizing a one-day symposium for the annual AFS meeting and making all local arrangements for the Board of Control (BOC) annual meeting and the AIFRB reception at St. Louis, Missouri, August 2000.

Dora Passino-Reader, Director



Board of Control (in part) assembled in historic downtown St. Louis August 2000. Left to Right: Tom Lambert, Al Shimada, Joe Rachlin, Andy Jahn, Bruce Wing, Bob Dixon, Gary Sakagawa, Barbara Warkentine, Pete Cole, Clark Hubbs, Michael Hinton, Dora Passino-Reader.

PROCEDURES MANUAL AVAILABLE

Available for review and comment is a draft of the new AIFRB Procedures Manual. The manual, which details the responsibilities and schedules entailed in successful performance by all the elected and appointed personnel of the Institute in 45 pages. If you would like to review a copy contact an Officer or Director.

BILL HOGARTH APPOINTED DEPUTY DIRECTOR OF NOAA FISHERIES

NOAA Administrator Dr. D. James Baker announced that Dr. Bill Hogarth, who heads NOAA's National Marine Fisheries Service Southeast region, will assume the number two position at the agency. Hogarth replaces Dr. Andrew Rosenberg, who will leave NOAA Fisheries to become Dean of the College of Life Sciences and Agriculture at the University of New Hampshire.

A Virginia native, Hogarth comes to the deputy director's position with a wealth of knowledge about marine issues along both coasts. For the past year, he has managed the agency's Southeast region, where he has been working with fisherman and the management council's to rebuild Gulf of Mexico red snapper, a popular game fish and seafood. He oversaw the use of by-catch reduction devices in shrimp trawl nets to reduce the incidental catch of juvenile red snapper. Previously, Hogarth was the southwest region administrator, where he dealt with a variety of national and international issues, including listing of salmon under the Endangered Species Act and working to improve protections for dolphins during tuna fishing in the Eastern Tropical Pacific. Hogarth also coordinated NOAA Fisheries' intergovernmental and recreational fisheries programs, was chief of the highly migratory species management division, and was director of marine fisheries for the state of North Carolina for more than eight years. Carol Ballew, deputy regional administrator, will temporarily take over management of the Southeast region. Rosenberg served as the agency's deputy director since July 1998. He has worked in various areas of the NOAA Fisheries since 1992, as both researcher and administrator. Rosenberg leaves the agency on August 1, 2000.

MEETINGS OF NOTE

2001 SOUTHERN DIVISION AFS MID-YEAR MEETING

1ST CALL FOR PAPERS
FEBRUARY 22-25, 2001
HILTON AND TOWERS HOTEL
JACKSONVILLE, FLORIDA, USA

HOSTED BY FLORIDA CHAPTER AMERICAN FISHERIES SOCIETY

Procedures for Submitting Contributed papers and posters:

Individuals desiring to present research and management results (including on-going work) should submit abstracts to Mike Allen (msal@gnv.ifas.ufl.edu) and Debra Murie (dmurie@ufl.edu).

For postal mail, see address below. Due Date: October 15, 2000. Presentations will be scheduled for 20 minutes which includes a 15-minute presentation followed by 5-minute question/answer period. Moderators will encourage a lively discussion following each presentation and strictly enforce time limits. Slides (2" x 2") are the preferred medium.

The program Committee solicits proposals for half and full-day sessions. Proposed sessions should be submitted to:

Mike Allen — msal@gnv.ifas.ufl.edu

and Debra Murie — dmurie@ufl.edu

Co-Chairs, Program Committee,
Department of Fisheries and Aquatic Sciences
The University of Florida
7922 NW 71st Street, Gainesville, FL 32653
Telephone (352) 392-9617

ROBUST REDHORSE SEARCH ON THE PEE DEE RIVER SUCCESSFUL

A cadre of biologists from North Carolina, South Carolina, and Georgia participated in an intensive survey of the Pee Dee River for the robust redhorse (*Moxostoma robustum*) and the undescribed Carolina redhorse during late April 2000. The posse of biologists was comprised of representatives of the N.C. Wildlife Resources Commission, the N.C. Division of Water Quality, the S.C. Department of Natural Resources, North Carolina State University, the U.S. Fish & Wildlife Service, the N.C. Museum of Natural Sciences, the University of Georgia, and Carolina Power & Light Company. The objective of this intensive survey was to determine if the Pee Dee River still supported populations of these two rare species of suckers. A total of six electrofishing boats spent three days intensively sampling several areas of the river looking for these redhorses as well as inventorying the resident and migratory fish fauna of the river. The survey was successful with a single female robust redhorse collected from the river in the vicinity of Highway 74 Bridge near the Blewett Plant. The fish was collected by Marla Chambers and Lawrence of Natural Sciences. Dr. Wayne Starnes with the Museum confirmed the identity of the specimen. After pertinent data

4TH INTERNATIONAL SYMPOSIUM ON STURGEON (Announcement and 1st Call for Papers)

Sturgeon scientists, biologists, enforcement specialists and commercial interests are invited to attend the:

4TH INTERNATIONAL SYMPOSIUM ON STURGEON
JULY 8-13, 2001

OSHKOSH, WISCONSIN, USA
PARK PLAZA INTERNATIONAL HOTEL AND
CONVENTION CENTER

Call for Papers- Sturgeon specialists are invited to submit abstracts for oral or poster presentations in any area relevant to Acipenseriformes. Information on required format for abstracts is posted www.sturgeonsymposium.org

Symposium Objectives- To provide a forum for exchange of information on the biology, culture and management of Acipenseriformes, and provide an opportunity for sturgeon interests from around the world to share experiences and develop new research/management initiatives.

Special Workshops- Workshops will be held prior to the start of the symposium on sturgeon sexing and staging, pathology, age interpretation, and the long-term recovery and management of lake sturgeon in Lake Michigan. Workshops have limited enrollment and some require an additional fee.

Registration- Registration materials will be available July, 2000, at www.sturgeonsymposium.org or by writing to 4th ISS, P.O. Box 109, Oshkosh, WI 54903-0109. The registration fee will be approximately \$400 (USD)

For Further Information

Contact Ron Bruch

bruchr@dnr.state.wi.us

or visit the 4th ISS web site at www.sturgeonsymposium.org



were collected, the fish was tagged with floy tags and released alive into the Pee Dee River. The presence of this specimen indicated the continued existence of robust redhorse in the Pee Dee River although the size of the population is uncertain at this point.

The robust redhorse is known to maintain populations in limited portions of the Oconee and Ocmulgee Rivers, GA-SC. The presence of this species in the Pee Dee River suggests other Atlantic slope drainages may hold populations of this species where it historically may have occurred. Surveying the Pee Dee River and other Atlantic slope rivers is a research priority outlined by the Robust Redhorse Conservation Committee, a consortium of state and federal agencies, environmental organizations, and power utility companies that has been involved in conservation efforts regarding the robust redhorse since its initial re-discovery in the Oconee River in Georgia during 1991.

John Crutchfield — NC Chapter AFS Newsletter, June 2000

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BRIEFS, the newsletter of the American Institute of Fishery Research Biologists, is published six times a year. It is intended to communicate the professional activities and accomplishments of the Institute, its District, and Members; the results of research: the effects of management; unusual biological events; matters affecting the profession; political problems; and other matters of importance to the fishery community. Comments and contributions should be sent to the Editor, Dr. Gene R. Huntsman, 205 Blades Road, Havelock NC 28532, susan.huntsman@noaa.gov. Subscription \$30 a year to Institutions and Non-Members. Officers-Gary Sakagawa, P.O. Box 271, La Jolla, CA 92038-0271, gary.sakagawa@noaa.gov -President; Barbara Warkentine, SUNY-Maritime College, Science Dept., 6 Pennyfield Ave., Fort Schuyler, Bronx, NY 10465-4198, synodus@aol.com; Allen Shimada, NMFS, Office of Science and Technology, 1315 East West Highway, Silver Spring, MD 20910, allen.shimada@noaa.gov -Treasurer. I S S N - 8755-0075

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VOL. 29, NO 5

SEPTEMBER, OCTOBER 2000

YOUR INSTITUTE AT WORK

BOARD OF CONTROL — MINUTES — MUCH CONDENSED

2000 ANNUAL MEETING ST. LOUIS MISSOURI, 19-20 AUGUST, 2000

Present were officers: President Gary Sakagawa; Past President Clark Hubbs; Secretary Barbara Warkentine; Treasurer Allen Shimada; Membership Chair Thomas Lambert and *Briefs* Editor Gene Huntsman.

District and Regional Directors present were: Alaska & Western Canada: Southeast Alaska - Bruce Wing; SW States & Mexico: Northern California - Andrew Jahn, Southern California - Michael Hinton; Central States & Middle Canada: Great Lakes - Dora Passino-Reader, Northeastern States & Eastern Canada: Keystone - Joseph Rachlin; Southeast States & Eastern Mexico: Carolinas - Robert Dixon.

Committee Chairs attending were: Capital Management Committee Charles (Pete) Cole.

President's Report

President Sakagawa informed the BOC that we have achieved most of the objectives set forth by the BOC at the beginning of the year. A significant accomplishment was the resolution of the Institute's tax-exempt status. The Institute is now IRS classified as 501(c)(3). This reclassification will allow the Institute to explore new avenues for financial growth and investment. One major effort regarding financial growth will focus on establishing an endowment fund or Founder's fund. This activity will be explored by the Capital management Committee.

The Institute is working diligently towards developing its "Procedures Manual". This document will clearly state the responsibilities of all Officers, Directors and Committee Chairs. The Institute continues its important function of recognizing the contributions made to the fishery profession through its various award programs and that we have two major objectives facing us this year. First we must (as stated in our by-laws) hold an election for President-elect. Secondly we must work aggressively on our plans for the Institute's 2006 meeting. This meeting will celebrate the Institute's 50th anniversary. The President also stated that we need to promote more membership involvement in AIFRB. There should be a

rotational appointment protocol for committee members. Another way of outreaching to the membership is through the Internet. Our web site must be kept current. District Directors should develop their district site for linkage to the national site.

President Sakagawa closed his remarks by extending his and the BOC's thanks to all AIFRB members for their continuing support. He further thanked all volunteers, both members and non-members, for the roles they have played in making the daily operations of the Institute run more smoothly.

A *motion* by Director Rachlin to acknowledge the assistance of Michelle DeLaFuentes for her efforts in helping with AIFRB business over the past two years was **seconded** and unanimously **approved** by the BOC.

AIFRB caps & other promotional merchandise

Secretary Warkentine informed the BOC that we still have a stockpile of AIFRB logo ball caps. All requests for caps should be directed to the Secretary. Caps are to be sold at \$12 each and checks for the purchase of these caps sent to Treasurer Shimada. Any caps not distributed throughout the coming year will be brought to the next BOC meeting in Phoenix, Arizona.

Treasurer's Report (Shimada) – see *Briefs* July-August, 2000.

Delinquent members

Treasurer Shimada presented the BOC with a list of all members that are currently in arrears. The shortfall to the treasury as a result of delinquency amounts to \$6,690. According to the by-laws Article I Section 7 (Fees and Dues) "members who have been dropped may be reinstated upon payment of the admission fee and of dues for two years, which shall include the year in which reinstatement is granted." This means that an individual that has been dropped must pay a total of \$70 (Member) or \$50 (Student) to be reinstated.

A *motion* by Past President Hubbs to remove from membership those individuals that are three years in

arrears after District and/or Regional Directors contact them informing them that they must pay arrears dues by 1 October 2000 to remain as members was **seconded** and unanimously **approved** by the BOC.

Application for IRS 501(c)(3) status

Treasurer Shimada, in consultation with an accountant, successfully had the Institute's IRS status changed from 501(c)(6) to 501(c)(3). This new IRS status change required that the by-laws be changed.

A *motion* by Director Hinton to amend the by-laws to read as follows:

Article I: For clarification of Article III of Articles of Incorporation the organization is organized exclusively for charitable, religious, educational, and/or scientific purposes under section 501(c)(3) of the Internal Revenue Code.

No part of the net earnings of the organization shall inure to the benefit of, or be distributable to its members, trustees, officers, or other private persons, except that the organization shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in the purpose clause hereof. No substantial part of the activities of the organization shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the organization shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provisions of this document, the organization shall not carry on any other activities not permitted to be carried on (a) by an organization exempt from federal income tax under section 501(c)(3) of the Internal Revenue Code, or corresponding section of any future federal tax code, or (b) by an organization, contributions to which are deductible under section 170 (c)(2) of the Internal Revenue Code, or corresponding section of any future federal tax code.

- Article I — Membership and Activities will be renumbered Article II
- Article II — Board of Control will now be renumbered Article III
- Article III — Officers and Directors will be renumbered Article IV
- Article IV — Fiscal Year will be renumbered Article V
- Article V — Amendment of Bylaws will be renumbered Article VI
- Article VI — Distribution of Assets upon Dissolution will be renumbered Article VII and will read as follows:

Upon the dissolution of the organization, assets shall be distributed for one or more exempt purposes within the meaning of section 501(c)(3) of the Internal Revenue Code, or corresponding section of any future federal tax code, or shall be distributed to the federal

government, or to a state or local government, for a public purpose.

Article VII — Form of Corporate Seal will be renumbered Article VIII was **seconded** and unanimously **approved** by the BOC.

A *motion* by Director Hinton to change Article I, Section 7 (Fees and Dues) to read "Annual dues shall be payable on September 1st" so that the dates of dues payment is consistent with our fiscal year as stated in Article IV (Fiscal Year) was **seconded** and unanimously **approved** by the BOC.

Endowment ("charitable") fund

President Sakagawa expressed interest in having the Institute explore the establishment of an Endowment fund or Founder's fund. The purpose of which would be to allow the Institute to grow financially and be able to increase funding to award programs, initiate new programs, increase district funding, provide seed money for research, etc. The BOC was receptive of this idea.

President Sakagawa charged the Capital Management Committee to explore the establishment of an Endowment fund (Founder's fund) and to report back to the BOC next year. The Committee is to look for potential contributors, explore how the fund will be managed, and to establish a policy as to how money will be invested.

Since projects of this nature will increase the Institute's financial holdings the BOC discussed increasing the bonding for the Treasurer. A *motion* by Director Rachlin to increase the bonding for the Treasurer from \$50,000 to \$100,000 was **seconded** and unanimously **approved** by the BOC.

Adoption of 2001 authorization for Treasurer

A *motion* by Director Rachlin to authorize the Treasurer, Allen Shimada, to conduct business for the forthcoming fiscal year 2000-2001 (from the AIFRB Annual Meeting in 2000 to the AIFRB Annual Meeting in 2001), was **seconded** and unanimously **approved** by the BOC.

2000 Symposium for AFS meeting (Passino-Reader)

Director Passino-Reader reported on the 2000 Symposium. President Sakagawa prompted a discussion regarding funding policies for our annual symposium. Director Passino-Reader informed the BOC that for this year the Institute has agreed to pay the pre-registration fee for two regular AFS members and two students that were presenting symposium papers. Director Rachlin also informed the BOC that we had on occasion provided honoraria to speakers that qualified. A *motion* by Past-President Hubbs to budget \$1000 for symposium coordinators to use for this event was **seconded** and unanimously **approved** by the BOC.

AIFRB Display

Status for AFS meeting

Director Dixon informed the BOC that Production Editor Merriner had put a display together to replace the one we lost after last year's meeting. Past President Hubbs suggested that we have on hand back-up pictures for the display. This would minimize delay in reproducing a new one should it be lost or damaged. Secretary Warkentine will contact Archivist Myers to get old pictures. The BOC suggested that Production Editor Merriner look into having the display printed as a poster. This would allow for ease of shipping and updating.

Status of special certificate for Fellows

Membership Chair Lambert presented a selection of designs for the BOC to evaluate and discuss regarding special certificates for Fellows.

A *motion* by Director Hinton to maintain the existing certificate and to have the Membership Committee survey Fellow members for indication or dissatisfaction with the current certificate was **seconded** and unanimously **approved** by the BOC.

Progress with implementation of press releases for new Fellows

The Membership Committee will have someone working on this project.

Report on concept of dues sharing with Districts

Some members of the BOC expressed an interest in having dues sharing while others considered it a bad idea. It was also discussed that the currently allocated amount of \$50 to Districts to help in their recruitment efforts should be increased. Directors were reminded of the Institute's refund policy. Directors could request funds and then provide the Treasurer with receipts, or pay the expenses and then provide receipts for reimbursement.

Membership outreach

President Sakagawa expressed a concern regarding Emeritus members. He discussed the possibility of having an individual appointed as their advocate serve as an *ex-officio* member of the BOC. This individual would be given the same level of reimbursement as official members of the BOC to attend this meeting.

A *motion* by Director Hinton to have President Sakagawa appoint an Emeritus Fellow as coordinator for Emeritus members and to have this Coordinator serve as an *ex-officio* member of the BOC and be entitled to the reimbursement, at the same level as official members of the BOC to attend the annual BOC meeting was **seconded** and unanimously **approved** by the BOC.

A *motion* by Director Rachlin to have Director Hinton and Editor Huntsman look at the issue of Emeritus members and their role in AIFRB and changing the by-laws to reflect their role was **seconded** and unanimously **approved** by the BOC.

Report of Research Assistance Award Committee (Caldwell)

President Sakagawa reported for Chair Caldwell.

Awards for 2000

There were six awards given this year. The total amount for this year's awards was \$2,100. One awardee, Lenny Grimaldo, presented his paper as part of this year's AIFRB symposium on invasive species. A question of eligibility was raised regarding food technology studies. Are these really related to fishery science and the mission of AIFRB? The Articles of Incorporation Article IV-Purposes number 1 states: "To advance the theory, practice and application of the science of fishery research biology; and thereby to promote the conservation and proper utilization of fishery resources." Given this the BOC agreed that food technology papers should be considered for this award. (See editorial *Briefs*, July-August 2000.) The BOC discussed the need for the Chair of this committee to get flyers out to as great an audience as possible. In addition to sending them to Associate members of AIFRB and Directors they need to be sent to Universities, Museums, journals and other society newsletters. The announcement must be placed on the web as well.

Report of Outstanding Achievement Awards Committee (Wing)

1999 awards (Sakagawa)

President Sakagawa reported that the 1999 Outstanding Achievement Award was presented to Dr. Saul Saila by Director Pearce at the summer meeting of the Southern New England Chapter of AFS on 14 June 2000.

2000 and 2001 awards (Sakagawa)

The BOC reviewed and discussed the excellent nominees for the Outstanding Achievement Award (Individual). A *motion* by Director Rachlin to give Dr. John Hunter the 2000 Outstanding Achievement Award – Individual was **seconded** and unanimously **approved** by the BOC. A *motion* by Director Rachlin to give Dr. Kenneth Wolf the 2001 Outstanding Achievement Award – Individual was **seconded** and unanimously **approved** by the BOC.

Status of purchase of plaques (Wing)

The Institute needs to purchase more totem-fish award plaques. Director Wing will contact Past President Helle to see if more can be made. The BOC agreed to the purchase of six more plaques.

Proposal to strengthen procedures (Sakagawa)

President Sakagawa presented some suggestions as to how to strengthen the procedures regarding this award. He suggested that a committee be set up that would solicit nominations. The committee would review these

nominations and after careful evaluation submit their top three candidates for each award (individual and group) to the BOC in advance of the BOC meeting. The BOC discussed this idea and strongly encouraged the President to set up a committee that will take this responsibility seriously as past attempts at doing this have not been successful.

A ***motion*** by Director Hinton that the committee present to the BOC their three top nominees in ranked order along with the appropriate supporting documents (i.e. CVs, papers) was **seconded** and unanimously **approved** by the BOC.

The BOC agreed that the two remaining nominees for each award category be sent back to the committee for inclusion in the next award cycle. The committee will be looking for candidates for both the individual and group award for the year 2002.

Distinguished Service Award

1999 award

The 1999 Distinguished Service Award was presented to Dr. Kate Myers (AIFRB Archivist) by Past-President Helle at the annual meeting of the Washington, NW District.

2000 Award

The BOC voted to give the 2000 Distinguished Service Award to Dr. Jack Pearce (District Director – New England & Thompson Award Committee Chair).

Report on Briefs (Huntsman)

Editor Huntsman and the BOC discussed the layout of *Briefs* and what changes might be made if any. Editor Huntsman stated that the priority material printed in *Briefs* is: 1) Institute business; 2) Information about individual members; 3) Announcements regarding meetings of professional interest; 4) Issues of interest to fishery professionals; and 5) Listing of District Directors. His major concern was regarding item 4 in that most of the material that is directed to him is regional to his area. He encouraged members to send him information from other regions.

Updated membership brochure

The membership brochure can now be downloaded from the AIFRB web site. A committee consisting of Membership Chair Lambert, Treasurer Shimada, and Production Editor Merriner will work towards redesigning the brochure.

Project Reports

- a. **2006 AIFRB Conference:** President Sakagawa indicated that he will be working on motivating the committee to begin to explore the logistics associated with this event. The history of AIFRB will be compiled by contributions from each

district. A committee consisting of Bruce Miller (Acting Chair), John Merriner, Joseph Rachlin and Thomas Schmidt was formed.

- b. **Web page and On-line Directory (Hinton):**

Director Hinton informed the BOC that AIFRB has acquired its domain name and we now have our own site. WWW.AIFRB.ORG. All Officers, Directors and Committee Chairs were encouraged to visit the site and to send information to Director Hinton for inclusion into the page. Currently the Southern California District is managing the site, however, the Institute should not assume that this District will always be in charge of it. Therefore, the Institute must have some future plans worked out.

A ***motion*** by Director Hinton to register the Institute's domain name for a period of 10 more years was **seconded** and unanimously **approved** by the BOC.

A discussion regarding how materials for the web site should be sent to the web master was explored. Currently formats include HTML files generated from Front Page, photos as gif files, plain text and/or PDF files. President Sakagawa requested that Director Hinton put together a "guide for submission of materials to the web page" which will clearly state the acceptable formats.

President Sakagawa established a web page committee, which consists of Directors Hinton, Rachlin, Nance and Archivist Myers.

A ***motion*** by Director Hinton to have the web page committee established as a standing committee was **seconded** and unanimously **approved** by the BOC.

Nominations Committee for President-elect

A ***motion*** by Director Rachlin to have the President appoint Past-President Hubbs as Chair of this committee, and that this Chair working with Past-President Cole and President Sakagawa prepare a slate of candidates for presentation to this BOC was **seconded** and unanimously **approved** by the BOC. The committee met their charge and presented their candidates to the BOC. A motion by Past-President Hubbs to accept the slate of candidates for the position of President-elect was seconded and unanimously approved by the BOC. Past-President Hubbs agreed to contact each candidate.

Old Business

Procedures document (Warkentine)

Copies of the Procedures Manual were distributed to all BOC members. They were encouraged to read and comment back to Secretary Warkentine and/or President Sakagawa as soon as possible. We need to have this document in working condition before January 2001.

Professional Development Award

Secretary Warkentine presented an updated outline of this award. The update reflected changes made to the document at last years BOC. After some discussion Past-President Hubbs suggested that this award be further evaluated by a committee. This committee will fully explore the criteria and review process and report their finding at the next BOC meeting. President Sakagawa appointed a committee consisting of Secretary Warkentine, Frank Panek, Director Warkentine and Membership Chair Lambert. Secretary Warkentine will chair the committee.

New Business

Appointments

President Sakagawa acting in accordance with the AIFRB bylaws (Article III, Sec. 6, Pg. 9, Regional Directors and Article III, Sec. 4, Pg. 8, Officers and Directors) made the following appointments for the 2000-2001 year.

Regional Directors:

- a. Bruce Wing – Alaska & Western Canada
- b. Bruce Miller – NW States
- c. G. Morris Southward – SW States and Mexico
- d. Dora Passino-Reader – Central States & Middle Canada
- e. Joseph Rachlin – NE States and East Canada
- f. Thomas Schmidt – SE States and East Mexico

Officers and Directors:

- a. Secretary – Barbara Warkentine
- b. Treasurer – Allen Shimada
- c. Membership Committee – Thomas Lambert (Chair), Richard Brodeur, Joseph Margraf, Douglas Vaughan and Barbara Warkentine
- d. *Briefs* Editor – Gene Huntsman
- e. Production Editor – John Merriner

In addition to the above appointments President Sakagawa made the following committee appointments:

- a. AIFRB meeting (2001): G. Morris Southward
- b. Capital Management: Charles (Pete) Cole (Chair), Joseph Rachlin and William Wilson
- c. Associate Research Award: Jerald Ault (Chair), Colleen Caldwell and Robert Stickney
- d. W.F. Thompson Award: John (Jack) Pearce (Chair)
- e. Outstanding Achievement Award: Clark Hubbs (Chair), Charles (Pete) Cole and Gary Sakagawa
- f. Web page: Michael Hinton, Joseph Rachlin,

Larry Cooper and Kate Myers

g. Archives: Kate Myers

2001 meeting – date and place

The BOC agreed that it would hold next year's BOC meeting in conjunction with the AFS national meeting.

2001 Symposium

The BOC discussed some topics for the 2001 symposium. Some suggested topics were: Fisheries research in marine parks, Fisheries issues of Mexico and various topics on desert fish. A topic was not firmly established.

Special guests

Two guests were invited to address the Board on issues of interest to the Institute. Gene Fritz, Senior Science Advisor at AFS, spoke to the Board about the Oceans Act of 2000 which establishes a commission to make recommendations towards setting comprehensive national ocean policies. Emory Anderson, NMFS Sea Grant Coordinator and Program Director of Fisheries discussed new policies that have been established regarding Sea Grant projects.

A DISTRICT IN ACTION: NORTHERN CALIFORNIA

The 14 October business meeting of the Northern California District was attended by Andy Jahn, Tom Keegan, Tom Moore and Brian Waters. Over a meal featuring baked salmon, sardine pizza, fresh garden vegetables and Tom Moore's excellent wines. Jahn presented highlights of the BOC meeting in St. Louis, and the group brainstormed speakers and topics for the coming year's meetings. Suggested topics were invasive *Spartina*; bay-delta fish monitoring; ocean salmon project; San Francisco airport impacts, mitigation, and fish research; S.F. Bay dredging and disposal; shark research. (Jahn, Keegan and Moore to call potential speakers). Next dinner meeting is set for 16 November, speaker and venue to be announced.

Submitted by — Andrew Jahn, Director

2001 MEMBERSHIP RENEWAL

At its August 2000 meeting, the Board of Control voted to align the annual membership dues collection with the Institute's fiscal year beginning 1 September 2000.

\$30 — Professional Associate, Member and Fellow

\$20 — Student Associate

Emeritus Members and Fellows are not required to pay fees or dues.

Look for your membership renewal card in the coming months.

Submitted by — Allen Shimada, Treasurer

Nick and Barbara Nicholson Celebrate 50th

Longtime AIFRB member (since 1975) William R. "Nick" Nicholson and his wife Barbara celebrated their fiftieth wedding anniversary on September 9, 2000. At a reception at their home on September 30th the Nicholsons entertained their four children, Jan of Boston MA, Dean and Gifford of Omaha NE, and Douglas of Beaufort NC, along with their spouses, numerous in-laws, grandchildren and a healthy collection of families from the fishery biology community. The usual Nicholson spread of gourmet quality seafood appetizers, numerous phyla- many taxa, and several punches of various octanes, kept the gathering energized and entertained for an entire afternoon. In keeping with the family-value nature of the gathering and the amateur status of many of the drinkers Nick, for once, relented and did not prepare one of his knee-dissolving jet fuel punches and all guests left in a jovial, attitude.

Nick, a native of Wildwood NJ where he grew up in a house whose support pilings were washed twice daily by flood tides, is a member of Brokaw's greatest generation and a Purple Heart veteran of the European Theatre of World War II. The GI Bill and commercial clamming on weekends enabled Nick to earn a BS in forestry from Rutgers, and somewhere between the mollusks



and studies Nick found time to woo and win Barbara Gray, also a New Jersey native and a undergraduate at Douglas College, then the distaff version of Rutgers. An MS in wildlife biology from the University of Maine led to a position studying waterfowl for the State of Maryland. A brief and unsatisfying excursion into the world of business convinced Nick that biology was his true calling and in 1956 he joined the staff of the Fish and Wildlife Service's marine fisheries laboratory at Beaufort, NC where he remained until his retirement in 1985. Nick first worked in the Lab's heralded striped bass program, but transferred to the program studying Atlantic menhaden in 1959. Fred June, John Reintjes, and Joe Higham were among Nick's co-workers in the early menhaden investigations.

Nick is a walking abacus with a feel for numbers and a highly tuned sense of logic that made him the perfect match for the menhaden investigations which generated

reams of catch statistics and volumes of size and age frequencies. In the pre-computer era Nick correctly deduced the complex migratory patterns of Atlantic menhaden from catch data and age frequencies alone. Later, over a million tagged menhaden added nothing to Nick's findings. A master of clarity and brevity in writing, Nick ended his career as the laboratory editor where he fine-tuned papers on subjects ranging from classical fisheries research to the trace metal metabolism of phytoplankton.

Nick has an impish sense of humor and a proclivity for insidious and exasperating, but harmless, practical jokes that have made indelible memories in the minds and hearts of his many friends. These friends believe that if singular credit for the longevity of the marriage can be ascribed, it belongs to Nick. Because it was Nick who exerted the extraordinary effort that it had to take to locate the only woman on Earth with the patience and tolerance needed to put up with his shenanigans and eccentricities for half of a century.

The Nicholsons continue to live in Beaufort, North Carolina where Nick is still an active clammer, oyster raker, scallopscooper and fish harasser and Barbara is an ardent weaver. They enjoy hearing from friends at: 115 Pine Cone Lane, Beaufort NC 28516, phone 252-728-4257.

By — Gene Huntsman

Tagged Stripers Like Old-Friend-Reunion Off Rhode Island Coast

By Captain Al Anderson
SAILA IS EVERYWHERE

About a year ago I had Gene Weber and his daughter Scotty, 11, from California aboard the *Prowler*. Gene was the winning IGFA auction bidder for my donated fly fishing trip for Block Island Striped bass off the coast of Rhode Island.

Scotty used my 9W outfit with a TEENY 250g fast-sink line to pull her Clouser deep in the ebbing tide over North Bar. Before the evening ended, nearly a dozen stripers were released bearing American Littoral Society tags.

Almost a year later to the day I had a party of Bill Krueger and Saul Saila, both retired University of Rhode Island professors, aboard the *Prowler* laying flies into the ebbing tide again over the North Bar.

Saul was using my 9W outfit with the fast-sink line. A fish he hooked and landed bore an ALS tag, our fifth ALS tag recapture. I received a note from Pam Carlson at the ALS confirming it was one of the fish that Scotty Weber brought up for tagging.

This was the 11th recapture of one of the "Prowler's" tagged stripers.

Would it amaze you to learn it was the 11th such recapture of one of our tagged stripers? And, that every one of those recaptures occurred at the site at which it was tagged and released – days, weeks, months and years later? That in the interim this fish grew over two inches and put on

1.5 pounds? That it was fooled twice by a Clouser on a TEENY fast-sink line?

I'm convinced these fish have memory, know exactly where they are, know how to come and go, and will return to favored sites for several or more years during a size phase in their life history. As they age and mature, they develop affinities for new spots and habitually return to them.

Have you ever wondered if a recently caught striper has been on your line before? Take it from me; if you catch lots of stripers, it's quite possible!

*From International Angler 62 (3)
— September-October 2000*

Bovine tracheal cartilage: Panacea or placebo?

By Patrick Quillin, Ph.D., R.D., C.N.S.

A reprieve for sharks? (Condensed by editor)

In the 1970s, I. William Lane, Ph.D., served as a consultant to the Shah of Iran on harvesting sharks from the Persian Gulf. In December 1991, Lane received a use patent on anti-angiogenesis therapy using shark cartilage. In 1993, the TV show "60 Minutes" popularized Lane's book, *Sharks Don't Get Cancer*, and made shark cartilage a leading contender among alternative cancer therapies. Through tireless and savvy marketing, Lane has helped to build a \$150 million per year worldwide cartilage business, which is currently 99 percent shark cartilage.

Lane's theory of shark cartilage for anti-angiogenesis has some foundation. In 1976, Dr. Robert Langer of MIT and Dr. Judah Folkman of Harvard, published work showing that something in cartilage, at least in a test tube, can shut down angiogenesis in tumors. Later studies by this same group showed that rabbits with corneal cancers had measurable benefits from cartilage topically applied in slowing the growth of tumors. In 1983, Langer and colleague Anne Lee found that something in shark cartilage could slow the growth of tumors through anti-angiogenesis with the tantalizing statement: "The abundance of this factor in shark cartilage, in contrast to cartilage from mammalian sources, may make sharks an ideal source of the inhibitor and may help to explain the rarity of neoplasms in these animals."

Lane stated that shark cartilage is 1000 times more potent than bovine cartilage, which is hard to grasp given

the fact that you need 8-12 times more shark cartilage than bovine to have a therapeutic effect in cancer patients. While Lane touts success for shark cartilage in clinical trials in Mexico and Cuba, there is no long-term follow-up on these few patients.

John Prudden pioneered the use of bovine tracheal cartilage (BTC) for the following purposes:

- Wound healing properties, which culminated in textbook acceptance;
- Anti-inflammatory agent in arthritis;
- Anti-cancer activity.

Prudden's peer-reviewed article showing a 90 percent response rate in 31 human cancer patients is a classic scientific breakthrough that has, unfortunately, met with a round of yawns from the conventional oncology community. Of the 31 total patients, 35 percent, or 11 of these terminal patients were cured using 9 grams daily of oral bovine tracheal cartilage, while 55 percent or 17 showed some benefit then relapsed, and 10 percent or three showed no improvement. Prudden has used BTC in over 1000 cancer patients, with good follow-up on 100 patients. His latest paper and results are in press right now.

Dr. Brian Durie has found equally impressive results using BTC in cancer cell lines. Prudden's other research shows that BTC probably works by turbo-charging the immune system.

*Excerpted from Health Counselor magazine.
Thanks to Stan Smith who correctly observed that this note*

is an apt follow-up to the article on shark cartilage in a previous *Briefs*.

Floodplain Rearing May Enhance Growth and Survival of Juvenile Chinook Salmon in the Sacramento River –

much abridged by Briefs editor

*Ted Sommer, Matt Nobriga, Bill Harrell, Wendy Batham and Ryan Kurth, DWR; Wim Kimmerer, SFSU
tsommer@water.ca.gov*

Here we provide evidence that floodplain provides better habitat than adjacent river channels for juvenile Chinook salmon (*Onchorhynchus tshawytscha*) in the Sacramento River. The system is particularly well-suited to a comparative study because young salmon migrating down the lower Sacramento River in high flow years have two alternative paths: they may continue down the heavily-channelized main river or they may pass through the Yolo Bypass, the primary floodplain of the estuary. The 24,000 ha floodplain seasonally floods in winter and spring in about 60 percent of water years, when it is designed to convey up to 14,000 m³/s. Under typical flood events, water spills into Yolo Bypass via Fremont Weir when Sacramento basin flow surpasses approximately 2,000 m³/s.

We had several reasons to believe that floodplain habitat might be important habitat for young salmon. First, high flow years are known to enhance populations of a variety of estuarine species (Jassby and others 1995) and survival of young Chinook salmon (Kjelson and others 1982; Brandes and McLain forthcoming). However, the exact mechanisms for high flow years to enhance populations of salmon and other species have not been established.

Chinook salmon that rear on the Yolo Bypass floodplain appear to have higher growth rates than those that remain in the adjacent Sacramento River channels. Mean

length increased faster in the Yolo Bypass during each study year and CWT fish released in the Yolo Bypass were larger when they emigrated the Delta than those released in the Sacramento River.

Apparent growth differences between the two areas are consistent with water temperature and stomach content results. The Yolo Bypass floodplain had higher water temperatures and young salmon ate significantly more prey than in the Sacramento River. Increased prey availability in Yolo Bypass was sufficient to offset increased metabolic requirements from higher water temperatures. Higher water temperatures in the Yolo Bypass are expected as a result of the shallow depths on the broad floodplain. Increased feeding success in the Yolo Bypass is consistent with trends in prey availability. Although Yolo Bypass and Sacramento River had similar levels of zooplankton, Yolo Bypass had dramatically more dipteran prey in the drift and in the fish stomachs (DWR, unpublished data). The dominance of zooplankton in the diets of Sacramento River salmon therefore probably reflects relatively low availability of other more energetically valuable prey item such as dipterans.

This study indicated that salmon which rear on the Yolo Bypass have better growth, feeding success and perhaps survival than those which migrate through the heavily channelized Sacramento River. These results provide new insight into the significance of floodplain habitat to salmon rearing, which have primarily been studied in estuarine and riverine habitat. We believe these results demonstrate that floodplain habitat represents one of the most important habitat types for young salmon in the San Francisco Estuary and its tributaries.

From IEP Newsletter 13(3) Summer 2000

Thanks to Andrew Jahn for this submission: I encourage other AIFRB members to pass on newsy works from agency and departmental newsletters.

Editor

BIRD OF DOOM...

or was it?

*By Ernie Niemi and Ed Whitelaw
with Elizabeth Grossman*

(condensed by Editor)

It was the early 1990s, and there was no issue hotter than the Northern Spotted Owl. "We'll be up to our neck in owls, and out of work for every American," said President George Bush. "That little furry-feathery guy," as Bush called the previously obscure bird, lives only in old-growth forests of Washington, Oregon, and northern California. The forests were being logged into oblivion, and environmentalists had seized on the owl as a way to save them. In lawsuit after lawsuit they argued that cutting in the national forests had to stop, or the owl would become extinct. And as lawsuit after lawsuit hit the media, the spotted owl became the scariest creature in the country, an industrial-grade economic villain.

The prospect of massive logging reductions set off a panic. Dire predictions fed on one another: the entire region would be plunged into a deep recession and might never recover. But a funny thing happened on the way to the future: the sky didn't fall. Not only were job losses due to the owl radically less than predicted – orders of magnitude less – but, economically, the Pacific Northwest had been one of the biggest success stories of a hugely successful decade.

U.S. District Judge William Dwyer of Seattle banned logging on some 24 million acres in seventeen national forests. When Judge Dwyer issued his ruling, most of the country was mired in a recession. Yet the Pacific Northwest was adding tens of thousands of jobs every year. Many of them were in high-paying sectors – services, high-tech. Between 1988 and 1997, employment in Oregon and Washington increased by a third. Per capita income grew 21 percent.

How could the economy do so well when the timber industry was doing so badly? One crucial reason is that the era when the big logs helped fuel the new states' growth was long gone. Long before most people had even heard of the spotted owl, the timber industry in the Pacific Northwest had been shrinking. In fact, the real era of job losses in timber, University of Wisconsin analysts have found, was the late 1940s through the early 1960s. By 1988, when the spotted owl lawsuits were just starting, timber jobs accounted for only 3.6 percent of total employment in Oregon and Washington. By 1994, even the number of jobs *added each year* in all sectors in the two states was more than total timber industry employment.

Just how many workers did lose their jobs because of the spotted owl? There are many holes in the record keeping, but what data are available for Oregon and Washington point to a figure between 6,200 and 9,300. The U.S. Department of Labor has found that most of those who lost their timberwork found new jobs within a year. The 9,300 timber-related jobs, at most, that might have been lost to the spotted owl represent only 0.3 percent of the total.

Disaster never arrived. Logging on 24 million acres of federal lands fell by nearly 90 percent, and the economy just kept getting better. The Pacific Northwest is experiencing its biggest boom in the service and high-technology sectors. The high-tech transformation is taking place in many sectors—electronics, computer hardware and service, dot-coms, and even junkyards, for instance. As early as 1993, the high-tech industry in Oregon and Washington had already overtaken the timber industry in payroll size: \$1.9 billion to timber's \$1.5 billion.

For employers in a booming, increasingly global economy with low unemployment, environment matters. "The quality of life in the Pacific Northwest is unequivocally a recruiting advantage Amazon.com has over our competitors," says Daniel Malarkey, director of business development at Amazon.com in Seattle. What this means is something that would have sounded radical back in 1991: the Pacific Northwest has prospered not in spite of but, in part, *because* of the logging restrictions. The lesson of the spotted owl could not be more clear: the long-term health of the economy is compatible with—and probably depends on—the long-term health of our ecology.

But there's little evidence yet that politicians, the media, or the public have learned this lesson. The most obvious, and arguably the most odious, example is the controversy over the lower Snake River in eastern Washington State. One of the options proposed for restoring its vanishing populations of wild salmon is the breaching of four dams to restore 140 miles of free-flowing river. A chorus of fisheries biologists has supported the idea. Yet the Clinton administration has tabled it for five or more years, in response, possibly, to an outcry of opposition that sounded like *Spotted Owl II*. Breaching the dams "would be an unmitigated disaster and an economic nightmare for the region," warned Washington senator Slade Gorton. Said George W. Bush, "breaching the dams would be a big mistake.... The economy and jobs of much of the Northwest depend on the dams." Al Gore spoke of possible "sweeping economic upheaval." *The Oregonian*, Portland's newspaper, compared breaching the dams to "taking a sledgehammer to the Northwest economy."

Upheaval? A sledgehammer? Hardly. Take a look at what the dams actually accomplish. They help just thirteen farming enterprises to irrigate 37,000 acres—less than half of 1 percent of the total irrigated land in Washington, Oregon and Idaho. They supply about 4 percent of the electric power in a region that has some of the cheapest electricity rates going. Or look at the analysis of the Army Corps of Engineers, which often takes a pro-development perspective. The Corps predicts a net loss of 1,081 long-term jobs if the dams are breached (4,200 jobs gained, 5,281 jobs lost). For Washington, Oregon and Idaho, this amounts to about one-fiftieth of 1 percent of all jobs this year.

When it comes to the environment, Americans don't seem willing even to listen to the facts. How else to explain the Clinton administration's decision to postpone its Snake River proposal for five years—by which time the salmon may be conveniently extinct? Until we learn to think clearly about our environment, we are going to lose out.

And what about the owl?

Government scientists have estimated that it will take forty years for the owl population to stop shrinking. In the past five years, says Forest Service biologist Eric Forsman, the rate of population decline has slowed, from 4.5 percent a year to 3.9 percent: female survival and reproductive rates are beginning to stabilize.

*From The Amicus Journal —
Fall 2000*

THE GLOBAL FISH CATCH, 1984-1998

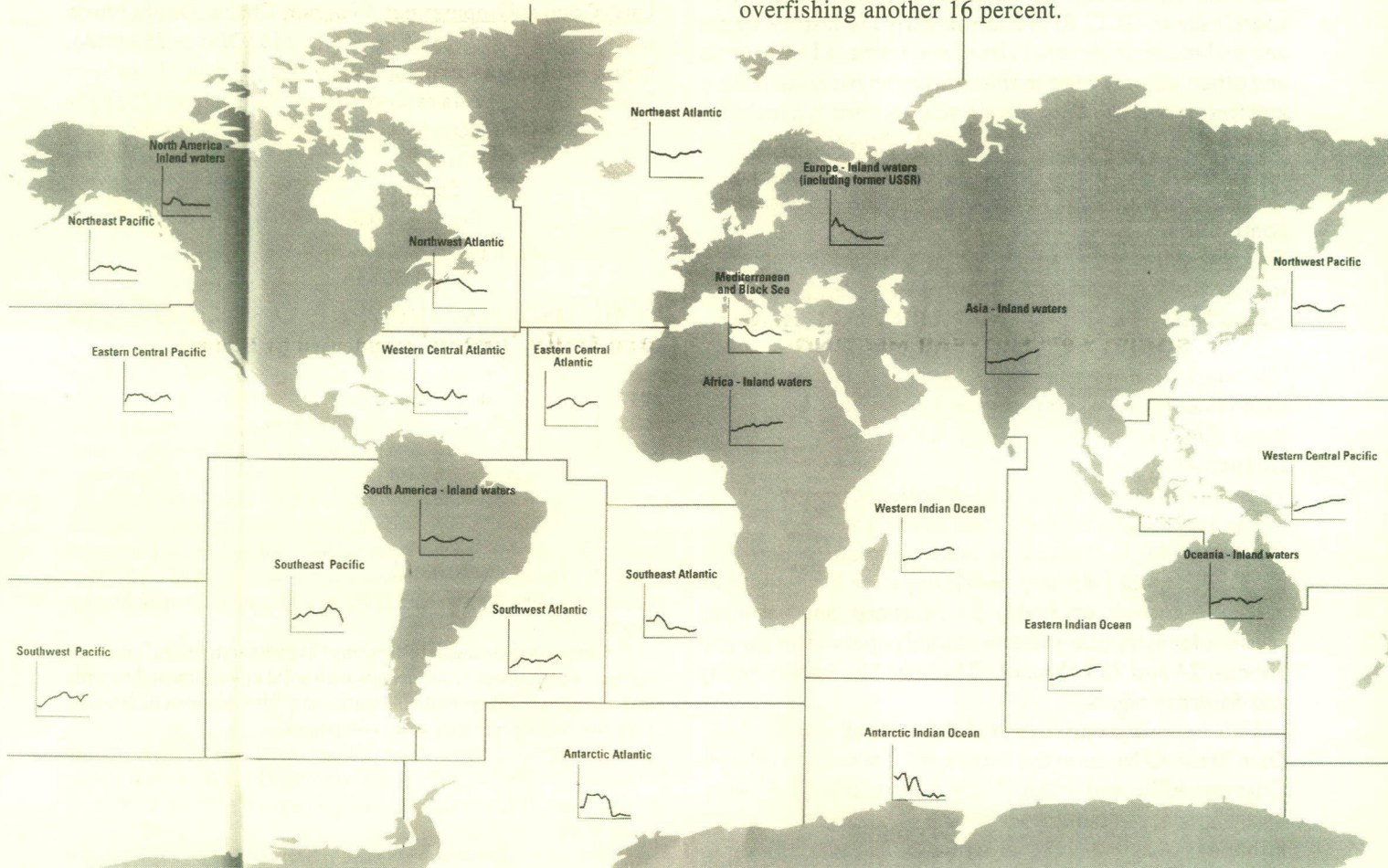
The thumbnail charts of recent trends in the world's major ocean and inland fisheries cover the years from 1984 to 1998 (left to right on the X axis). In order to make the trend lines easier to read, the tonnage scales of each year's catch (the Y axis) are not uniform and do not begin at zero. The charts are thus not comparable among each other but do accurately reflect year-to-year changes in each fisher's catch.

Based on the available data, it appears that production of fish overall continues to increase roughly in tandem with the growth of human population. These production increases come almost entirely from the rapid expansion of *aquaculture*.

Aquaculture now provides one fish out of every three the world consumes, but more than two-thirds of

the world's farm-raised fish are produced in a single country, China.

The annual global catch of wild fish from oceans, which once kept pace with increasing human demand, appears to be leveling off at just under 90 million metric tons. The composition of the wild catch continues to shift to smaller and less appetizing fish. Some species of fish - bluefin tuna, for example, which has at times commanded hundreds of dollars per kilogram - appear headed for commercial or even biological extinction. Today, 11 of the world's 15 major ocean fishing areas and more than two-thirds of ocean species are in decline and in urgent need of management. According to the UN Food and Agriculture Organization, the world's fishers are fully exploiting 44 percent of fish stocks and overfishing another 16 percent.



Full Reports Available (\$9.00 each)

- Nature's Place: Human Population and the Future of Biological Diversity (2000)
- Forest Futures: Population, Consumption and Wood Resources (1999)
- Why Population Growth Matters to Freshwater Sustainability (1998)
- Catching the Limit: Population and the Decline of Fisheries (1995)
- Profiles in Carbon: An Update on Population, Consumption and Carbon Dioxide Emissions (1998)
- Conserving Land: Population and Sustainable Food Production (1995)

From People in the Balance by Robert Engelman, Richard P. Cincotta, Bonnie Dye, Tom Gardner-Outlaw, Jennifer Wisniewski. Published by Population Action International 2000

MEETINGS OF NOTE

24TH ANNUAL LARVAL FISH CONFERENCE: GLOBAL CLIMATIC CHANGE, ESSENTIAL FISHERIES HABITAT AND EARLY LIFE HISTORY STAGES

The 24th Annual Larval Fish Conference will be held in Gulf Shores, AL on 5-10 November 2000. The conference program will begin with a 1 day theme session (organized by R.F. Shaw, Louisiana State University, 225-388-6734) designed to critically review, evaluate and focus the evolving hypotheses from previous Global Climatic Change (GCC) research as they pertain to impacts on coastal Essential Fisheries Habitat (EFH), followed by a 1-2 day "working group meeting" for those interested. A second 1-day theme session (organized by J.H. Cowan, Jr. 334-861-7535 and D. DeVries 334-844-9322, University of South Alabama and Auburn University, respectively) will be devoted specifically to GCC, EFH and fish early life history stages and will focus on habitat related recruitment bottlenecks and other issues related to the interaction between habitat and factors that limit population size. A third 1-day theme session (organized by J. Shardo, USA, 334-460-7523) will be devoted to fish embryology and larval development. The remainder of the conference will be comprised of contributed papers.

This note will arrive to AIFRB members a little late. It came too late for the previous Briefs. Sorry! Editor ~

SOUTHERN DIVISION - AMERICAN FISHERIES SOCIETY 9TH MIDYEAR MEETING

The Florida Chapter of the American Fisheries Society extends an invitation to join them in Jacksonville, Florida's River City, 22 to 25 February 2001 for the Southern Division American Fisheries Society's 9th Midyear Meeting. They are convening the Midyear Meeting at the downtown Hilton Jacksonville Riverfront on the St. John River. Meeting highlights include technical committee meetings on Thursday 22 February, workshops for both students and professionals on Friday 23 February, and technical sessions for symposia and contributed papers Saturday and Sunday, 24 and 25 February. There will be socials Friday and Saturday nights.

Symposia/Special Sessions

Dam Removal Issues in the Southeast: Pat Fricano (Florida Chapter AFS) and Mike Allen (University of Florida, msal@gnv.ifas.ufl.edu) are chairing this session.

Fisheries Management: Socioeconomic Considerations: Ray Rhodes (SCDNR, rhodes@mrd.dnr.state.sc.us) is organizing this symposium.

Fish Attracting Devices (FADS): Science and Management Issues: This symposium is being organized by Randy Edwards (USGS, redwards@usgs.gov), Ken Sulak (USGS, ken_sulak@usgs.gov) and Doug Weaver (USGS, doug_weaver@usgs.gov).

Setting the Limits: Bag and Size Regulations in Coastal Marine Fisheries: Contact Debra Murie (University of Florida, dmurie@ufl.edu) for more information on this symposium.

WORKSHOPS- FRIDAY 23 FEBRUARY

Development of Instream Flow Programs in Southeast States - Artificial Reef Evaluation: Criteria and Methods for Documenting Performance in Southern Seas - The Use of Histological Methods in Studies of Fish Reproduction: Study Design, Interpretation of Sections and Data Analysis
Conflict Resolution in Fishery Management - Urban Fishing Program Techniques

You can make hotel reservations by calling the Hilton Jacksonville Riverfront at (904) 398-8800 or (800) 445-8667 and request the group rate for the Southern Division of the American Fisheries Society. Conference rates are \$82/night single through quad. You should make reservations before 15 January 2001 to ensure the conference rate and availability.

Contact Information

General Information: Larry Connor (353) 742-6438, LarryConnor@mpinet.net; Program Chairs: Debra Murie and Mike Allen (352) 392-9617 ext. 245 (DM) or 252 (MA), dmurie@ufl.edu or msal@gnv.ifas.ufl.edu; Southern Division Student Affairs Committee: Bill Ensign (770) 499-3505, bensign@ksuemail.kennesaw.edu; Host Student Affairs: Tom Glancy (352) 392-9617 ext. 236, jcichla@ufl.edu; Southern Division AFS web page: www.sdafs.org; Florida Chapter AFS web page: <http://nersp.nerdc.ufl.edu/~fafs/>

With trillions to invest, funds tied to issues are truly 'green' (condensed by Editor)

Not so long ago, ecologically responsible investing foundered for one simple reason: It did not make money. But not anymore, today green funds make up a growing share of socially responsible mutual funds, which are becoming increasingly attractive for investors. Investors poured nearly \$3 trillion into socially screened portfolios last year, compared with \$63 billion in 1995, according to the Social Investment Forum. Seventy-nine percent of such portfolios focus on companies' environmental records, up from 33 percent in 1997. Socially responsible funds have regularly outperformed established benchmarks like the Standard & Poors 500 and the Morgan Stanley World Index.

Green-fund managers historically have adopted either a "positive" screen, which rewards companies with solid environmental records and encourages others to do the same, or a "sin" screen which warns investors to steer clear of some companies.

Today, most green funds choose a positive screen. Some managers, such as Jack Robinson, president of Boston-based Winslow Management, believe companies respond better to financial persuasion when there are incentives.

Early green funds died out because they automatically excluded every company in industries thought to have poor environmental records such as oil and automobiles. The resulting funds were philosophically pure but financially weak.

Others advocate a "best of the class" approach that ranks a company's financial and environmental record within its industry.

But is green investing simply an exercise to satisfy one's conscience, or can a company's environmental policy be linked to its profitability?

Green-fund advocates typically argue that a company's environmental liabilities can hurt its bottom line and market value — especially in an age of tougher pollution laws and federal regulations. If a corporation is liable for large environmental cleanups and penalties green-fund advocates say, profits will shrink and investors will flee.

"If you don't create a Superfund site, then you don't have to clean it up" Winslow Managements's Robinson said.

But others say eco-friendly products and policies can offer a company a strategic advantage. Eco-friendly companies attract not only customers, but also employees more familiar with environmental issues who can put that knowledge to work for the companies. Some of the hottest growth industries include organic food products and development of alternative energy sources, such as solar fuel cells.

Critics say green-funds are dominated by the high-tech and financial services sectors, two industries that do not carry the same environmental risks as, say, auto-parts manufacturing. It's no coincidence that technology stocks are the driving force behind the bull market, which has led to spectacular returns for all investment funds.

Green funds have yet to gain widespread acceptance among investment managers. Yet, one thing is clear, socially responsible investing is gaining popularity. Hohn Shields, president of Citizen Funds, said socially screened portfolios are finding converts in the pension industry, especially as the baby-boomer generation begins to retire.

Wade Fox, investment-product manager for New York Life Benefit Services, said companies pick screened portfolios for their 401(k) plans that reflect their corporate philosophy and community involvement.

*From Seattle Times via Houston Chronicle, — October 16, 2000
Many thanks to Charlie Caillouet for this response to my editorial in the previous Briefs. Thanks also to Bill Herke who agreed with my position on investment, and to Bill Bayliff and Ira Adelman who also commented on my editorials. Editor~*

After a Summer of Fire: Fire and Poison

Chemical retardant has long been an important weapon in the arsenal used to combat out-of-control forest fires. In 1996, approximately 32 million gallons of retardant were used in the United States.

Although the ammonia-based mixture is effective at damping down a blaze, it is also toxic to living things. That was made clear during the 1988 fires in Yellowstone National Park, when an accidental drop of fire retardant on the Little Firehole River almost wiped out a trout population. In 1995, another errant drop killed 23,000 fish along a five-mile stretch of the South Fork John Day River in eastern Oregon. Retardant may also bear the blame for other fish kills that have been observed during and immediately after firefighting efforts. Unfortunately, few of these episodes were scientifically studied. And until recently, except for scattered reports issued by chemical manufacturers, little research had been done on the environmental hazards posed by the retardant. That lack of knowledge allowed federal agencies charged with fighting wildfires, including the U.S. Forest Service, to claim that fire retardant had a minimal ecological impact.

Now we know better. A string of studies done in recent years by scientists with the U.S. Geological Survey confirmed that fire retardant is highly toxic to fish, frogs, aquatic insects and algae. A USGC study released earlier this year found that a corrosion inhibitor in some retardant formulations produces trace amounts of cyanide and becomes toxic as it decomposes (though apparently not toxic enough to pose a threat to people).

That study prompted the Forest Service to abruptly suspend use of the product in late March. Then, barely three weeks

later, the agency turned around and lifted the suspension. Why the flip-flop? The explanation given to agency employees in an April 20 message was that use of the retardant would not put the agency in violation of the Clean Water Act, as had originally been feared. Perhaps a more important reason is that top agency firefighting officials were up in arms over the prospect of losing one of their most important tools just as the 2000 fire season was heating up.

When ferocious wildfires break out as they did in the Southwest this spring, enormous public pressure builds to fight the flames by any means necessary – including the use of chemicals. Forest Service officials have pledged to find a formulation that's less toxic than the current brew and to toughen existing guidelines against dropping chemical in or near waterways.

From Forest Magazine — July-August 2000

Another Opinion:

Letter to President Clinton

'Sanctuaries Take Away Fishing Opportunities From Nation's Recreational Angles'

They are referred to as no take zones, sanctuaries, marine protected areas, or preserves. In some cases they will take away your right to fish, even catch and release. Many of the proposed no take zones have not been proved to need drastic restrictions such as a total moratorium on all types of fishing. Recently, the International Game Fishing Association was a co-signer on a letter to President Clinton asking him to reconsider his proposal to close areas to fishing. A total of 35 organizations signed on to the following letter:

"Dear Mr. President:

"Across the country, half a million Americans are currently celebrating the 21st annual National Fishing Week. While these thousands of families are outside taking advantage of this opportunity to have a fun time together while learning about aquatic conservation, they have little idea that this right is quietly being taken from them under the guise of marine protection.

"The undersigned members of the sport fishing community would like to express our concern over your Executive Order on Marine Protected Areas issued May 26, 2000. While we share your desire to protect marine resources, we believe that the total no-take mechanism for achieving this goal would have serious unintended effects on the sport fishing public, industry and coastal communities that rely on these anglers and their business. Speakers on behalf of the more than 45 million recreational anglers and members of the sport fishing industry, we respectfully ask you to reconsider your proposal prohibiting the public from accessing significant areas of our nation's oceans and coasts.

"Should your executive order be fully implemented the single most important element to sport fishing, the public's access to the water, would be significantly restricted. As it related to recreational fishing, this open access principle is broadly accepted on federal land and waters including wildlife refuges, national parks, wilderness areas, and the exclusive economic zone. Our shared goal of marine abundance in a

sustainable basis may be achieved by allowing recreational fishing by the general public on equal terms for all citizens, using whatever limits are necessary to realize this goal. This policy already is extremely effective in many areas such as the Everglades National Park and Yellowstone.

“Without places to fish, this industry withers and along with it, substantial economic and fisheries conservation benefits. Recreational fishing makes a significant contribution to the local, state and national economies. According to recent economic figures, sport fishing infuses \$108 billion annually into the national economy. Many local coastal communities rely heavily on the nearly 10 million saltwater anglers and the considerable amount of money that they spend on their sport.

“By denying the public’s access to recreational fishing, a vital stream of funding for conservation projects evaporates. Through the payment of federal excise taxes on fishing equipment, motorboat fuel, as well as license fees, sport anglers contribute well over \$750 million annually to state fisheries conservation management programs and projects.

“As you may be aware, it’s not easy catching fish with a hook and line. The ‘experience’ is what our sport and the industry that it supports depend on. This nation’s anglers and industry leaders realize just how important abundant populations of fish and healthy habitat are, for without those, the enjoyment of our sport suffers. While we agree with your goals, we have serious reservations for your method of attaining healthy fisheries.

“We maintain that there are other measures that can effectively be used to manage marine recreational fisheries. These include catch limits, minimum size requirements, and closed seasons. It makes no sense to prohibit the general public from angling when proper management can achieve abundance goals and still allow the large socioeconomic benefits or recreational fishing.

“South Carolina, Florida and Louisiana are among states where fish populations actually are growing at this time because of progressive management techniques such as the elimination of large-scale netting and implementation of strict size and bag limits. As a consequence, recreational anglers are the strongest advocates for the resource. Certainly there is no good reason to block them out for ill-advised no take zones.

“While we believe that the public’s access to our nation’s waters should be preserved, there may be some rare cases when universally restricting the public to a small, well defined area may be necessary. Such an effort should be considered as a last resort only, not the silver bullet solution some propose. Further, to help protect the public, any such effort should include the following common-sense principles:

- ❖ Ensure that recreational anglers are actively involved in any procedures that contemplate restrictions on their access to places to fish.
- ❖ Establish closed areas that are no larger in size than that which is supported by the best available science.
- ❖ Set criteria to measure the conservation benefit on the affected stocks and periodically review such progress towards its goal.

- ❖ Provide assurance that the area is reopened to the public when conditions improve to a pre-established level.

“Our goal to ensure healthy marine fish populations for the American public seems to be in accordance with the intent of your executive order. However, we believe the public’s access does not need to be sacrificed for this aim. Your proposal cuts right to the heart of what recreational fishing is all about and our community is united in the concern over the consequences of blanket closures. It is our sincere hope that the sport fish community can reach agreement with the Department of Commerce and Department of Interior on the best way to protect marine fisheries while ensuring the public’s right to fish for sport.”

From International Angler — July-August 2000

Center for Marine Conservation (CMC) Wins Lawsuit to Protect Summer Flounder

On April 26, the U.S. Court of Appeals decided in favor of a lawsuit filed by CMC, Environmental Defense, National Audubon Society, and the Natural Resources Defense Council against the National Marine Fisheries Service’s management of summer flounder.

Summer flounder, also called fluke, are caught all along the East Coast of the United States and have been overfished for years. CMC and the other groups filed their lawsuit in January 1999, charging that the National Marine Fisheries Service (NMFS) violated the Magnuson-Stevens Fishery Conservation and Management Act by setting a 1999 summer flounder quota that had less than a one in five chance of preventing overfishing of the stock

The Court of Appeals unanimously agreed, noting that “Only in Superman Comics’ Bizarro world, where reality is turned upside down, could the Service reasonably conclude that a measure that is at least four times as likely to fail as to succeed” complies with the law. The court also ordered NMFS to develop quotas that have at least a 50 percent chance of achieving conservation goals of preventing overfishing and rebuilding the fish population.

“The court’s ruling sends the clear signal that conservation of our public ocean resources should be more than just a fluke,” said CMC’s Sonja Fordham. “This type of shift in the burden of proof is exactly what is needed to turn the tide and restore the health of fish populations nationwide.”

From Marine Conservation News — Summer 2000

Shad to get free run of Susquehanna

The York Haven fish ladder was the fourth, and final, fish passage completed in the past decade at four huge Susquehanna dams. When it went into operation this year, it was the first time in nearly a century that shad could freely return to most of the Susquehanna basin, historically their largest spawning ground on the East Coast. The York Haven fish passage culminates efforts – dating back to at least 1866 – to reopen the Chesapeake's largest tributary to migratory fish.

Stories abound of the huge numbers of fish once caught near the mouth of the Susquehanna and throughout its basin during the 1700s and early 1800s. In 1827, 15 million shad were captured in a single seine net strung across the mouth of the river for four days, according to Susan Q. Stranahan's book, *"Susquehanna: River of Dreams."*

Shad were an important species to settlers because they were among the first migratory fish to swim upstream in the spring, often alleviating starvation. By the 1700s, though, mill dams were blocking some of the river's tributaries. Migrations to most of the basin came to a halt in 1840 when a dam was built at Columbia – about 40 miles upstream from the Bay – so canal boats could cross the river.

Immediately after the Civil War, in 1866, the Pennsylvania legislature dedicated a full time position aimed at restoring shad to the Susquehanna – a job later inherited by the Pennsylvania Fish Commission, which was created in 1873. Those efforts had some short-lived successes: Fish passages built at the Columbia dam allowed shad to get upstream. Encouraged, the restoration effort was soon boosted by a fish hatchery on the Juniata River, a Susquehanna tributary. By the end of the century, hundreds of thousands of pounds of shad were being caught in Pennsylvania.

But not for long. In 1904, the York Haven Water and Power Company completed a 26-foot-high dam 55 miles upstream from the river's mouth, slamming shut most of the 444-mile-long Susquehanna. At the time, York Haven was the third largest hydroelectric dam in the world. Soon, though, it was dwarfed by three larger dams downstream. Ground was broken on the largest – the 95-foot high Conowingo Dam, just 10 miles upstream of the river's mouth – in 1926.

Little changed until the 1950s and 1960s when, stimulated by a successful shad passage at Bonneville Dam on the Columbia River in Washington, a new phase of fish restoration activity began on the Susquehanna. A series of new studies concluded that successful fish passages could be developed for the Susquehanna dams, and that upstream water quality was adequate to support spawning shad in much of the river.

In the 1970s, a new hatchery program began. Eggs from shad caught in other rivers were reared at a state-of-the-art hatchery on the Juniata. Millions of shad were released each year in an effort to "imprint" the Susquehanna on the fish so they would someday return and spawn.

As the number of shad coming back to the river grew during the 1980s, pressure increased for fish passages at the dams. While York Haven needed only a fish ladder, the larger downstream dams needed "fish lifts" – mechanical elevators – to carry the shad over them. The Conowingo lift was completed in 1991, followed by Holtwood and Safe Harbor in 1997.

Still, there is a lot of work ahead. This year, 153,546 shad were lifted past the Conowingo – the most since restoration efforts began – 4,673 swam past York Haven. But the goal is to have 3 million pass Conowingo and to get 2 million past York Haven by 2025. "What we're seeing over the last 20 years or so is a tripling of the population about every four years," said Richard St. Pierre, Susquehanna River Coordinator for the U.S. Fish and Wildlife Service. "If we go at that rate, we'll certainly get to the goal in time." Numbers aren't the only problem. While water quality has improved, it still has a way to go. "If you look today, in many cases you can barely see the fish for all the sediment in the water," said Brad Campbell, Region III EPA administrator, at the fish passage dedication. "We need clean water as well as clear passage."

The effort has not been cheap. The York Haven fish ladder cost \$9 million. Altogether, the utilities that own the four dams have spent about \$70 million on the Susquehanna river fish restoration program. By comparison, the original price of just the Conowingo Dam was \$59 million.

From Bay Journal — September 2000

ALEWIFE, HERRING COULD COME STREAMING BACK WITH PASSAGES

Shad may be the star when officials talk about restoring migratory fish to the Bay's tributaries. But the real beneficiaries could someday be smaller fish that few people are familiar with: alewife and blueback herring. Almost indistinguishable from one another, they are collectively referred to as river herring.

Like shad, they spend most of their lives swimming along the coast, but return to their natural rivers and streams and ponds to spawn. Unlike shad, which stay mainly in larger rivers, the river herring will move until smaller headwater streams and ponds to spawn. Historically, they packed streams in such large numbers that settlers gave them another name: "glut" fish. "In the spring of the year, herrings come up in such abundance into their brooks and fords that it is almost impossible to ride through without treading on them," wrote early Chesapeake historian Robert Beverly in 1705. Herring were so thick, he wrote, that "even the freshest of rivers...stink of fish."

In sheer numbers, river herring greatly outnumbered shad. In the 1830s, as many as 750 million herring were taken during an eight week spawning season on the Potomac River, compared with 22.5 million for shad. And the number of herring was considered to be "not more than one-fourth of the total number in the river during the season," according to Spencer Baird, of the U.S. Commission of Fish and Fisheries, in an 1886 report.

While shad are rebounding – helped in large part by major hatchery-based stocking efforts in all of the Bay states – river herring abundances remain low. "As much as we've been encouraged by statistically significant increased abundances for American shad and hickory shad in the James, the bottom has just dropped out for the blueback herring and the alewife," said Greg Garman, head of Virginia Commonwealth University's Center for Environmental Studies.

In fact, a 1991 Bay Program report stated, "Of all the anadromous fish species harvested in the Chesapeake Bay, the river herrings experienced the most drastic decline in commercial landings." As recently as 1931, more than 25 million pounds of river herring were harvested in the Bay, making them second in quantity and fifth in value of all Chesapeake finfish. By the 1990s, the commercial catch was almost nonexistent. In 1996, only 1.4 million pounds were caught along the entire East Coast.

Much of the population collapse was blamed on foreign fishing fleets. During the 1960s and early 1970s — before the United States restricted fishing within 200 miles of its coast — the fleets were often seen harvesting fish within sight of the beach.

In 1969 alone, the foreign fishery is estimated to have taken 74 million pounds of river herring — on top of the U.S. harvest. The heavy fishing pressure took many fish before they had a chance to spawn, sending the population into a downward spiral from which it has yet to recover.

Any comeback is hindered by plenty of other problems: the loss of essential spawning and nursery habitat because of water pollution and the construction of dams and other fish blockages. While little fishing effort is targeted at river herring today, concerns remain that large numbers may be taken as bycatch in other commercial fisheries.

River herring also suffer from neglect. Historically, people have always favored shad, their larger cousin. While early settlers greeted spring herring runs as a fresh source of food — one that often delivered them from starvation — the fish were often harvested for less glamorous purposes, such as fertilizer. Even today, most commercially caught herring are ground up for fish meal or pet food, or used as bait. In contrast, shad remain highly prized for their meat, their eggs or roe, and their fighting ability at the end of a fishing line.

As a result, justifying the large-scale hatchery operations for herring, like those that are rebuilding the shad stock, is difficult. "We have to downplay river herring because we can't attach those hatchery recreational fishing benefits to them like we do with shad," said Richard St. Pierre, Susquehanna River Coordinator for the U.S. Fish and Wildlife Service.

So, while shad are stocked by the millions, the most that has happened for herring in recent years is that biologists trucked a few thousand upstream of dams of the Susquehanna and James rivers in the hope that they will produce young that will "imprint" on those upstream areas and someday return to spawn. Some small upstream dams have also been removed in the hope that herring will someday return.

The stocking effort was stepped up this year when, in the Anacostia River, 2.6 million hatchery-reared herring larvae were released as part of a larger multimillion dollar fish passage and restoration project funded with mitigation money from the construction of the new Woodrow Wilson Bridge over the Potomac. Officials focused on river herring, because, unlike the larger shad, which confine themselves to bigger waterways, river herring will swim into headwater streams.

But rearing herring in hatcheries is more difficult than it is for shad. So rather than releasing small fish, or "fry," as is done with shad, the Anacostia operation released much smaller, almost microscopic larvae, which are more vulnerable to predation.

In fact, efforts to rebuild river herring stocks may be compounded by the fact that almost everything likes to eat them, from other fish to reptiles, amphibians, mammals — even birds. A study at one Connecticut lake estimated that only one out of every 80,000 spawned alewife eggs produced a juvenile fish that escaped alive. (An adult female can produce between 100,000 and 467,000 eggs.) When millions of river herring packed spawning streams, such predation wasn't a problem. But a recent Chesapeake Bay report raised concerns that high levels of predation on today's reduced stock could slow the natural recovery of the stocks.

That problem could be compounded, Garman suggested, by the introduction of nonnative predators, such as the blue catfish, the flathead catfish and others. When there were big spawning runs in the rivers, he said, predators were few. "Now, they've got to run this gauntlet of large, very efficient predators," Garman said. "I think we've just seen the beginning of a significant new source of mortality."

A restored herring population would bring a number of other benefits, although they are harder to quantify. More herring would mean more forage for predators in the rivers and the Bay. Research has shown that the large numbers of river herring that once glutted headwater streams were an important source of nutrients in those areas. This provided other ecological benefits as well. One study, for instance, found that the deaths of migrating alewife reduced sedimentation rates in lakes by furnishing nitrogen and phosphorus, which stimulated the growth of organisms that devoured leaf litter.

There is also economic potential for the fish. They are popular, especially in New England, both pickled and salted. As recently as the early 1960s, dip netting for herring during spawning runs was so popular at some locations on the banks of the upper Chesapeake Bay and lower Susquehanna River that it was sometimes difficult to find a space to dip on March and April nights during spawning runs.

While river herring are not targeted for restoration as aggressively as shad, efforts that help shad — such as cleaning the water, building fish passages and removing tributary dams — will also help alewife and blueback herring. In fact, biologists expect river herring to someday dwarf shad abundance in the Susquehanna basin, where targets are set. Above the southernmost Conowingo Dam, the goal is to eventually get 3 million shad — but 20 million river herring.

Big numbers remain a long way off. But, blueback herring and alewife have occasionally shown promising signs in various Bay tributaries. And many as 300,000 bluebacks have been seen at Conowingo Dam in recent years, although other years have seen only a few hundred.

That offers a glimmer of hope that, with the right mix of environmental conditions, and a bit of help, that number could eventually mushroom.

From Bay Journal — September 2000

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BRIEFS, the newsletter of the American Institute of Fishery Research Biologists, is published six times a year. It is intended to communicate the professional activities and accomplishments of the Institute, its District, and Members; the results of research: the effects of management; unusual biological events; matters affecting the profession; political problems; and other matters of importance to the fishery community. Comments and contributions should be sent to the Editor, Dr. Gene R. Huntsman, 205 Blades Road, Havelock NC 28532, susan.huntsman@noaa.gov. Subscription \$30 a year to Institutions and Non-Members. Officers-Gary Sakagawa, P.O. Box 271, La Jolla, CA 92038-0271, gary.sakagawa@noaa.gov -President; Barbara Warkentine, SUNY-Maritime College, Science Dept., 6 Pennyfield Ave., Fort Schuyler, Bronx, NY 10465-4198, synodus@aol.com; Allen Shimada, NMFS, Office of Science and Technology, 1315 East West Highway, Silver Spring, MD 20910, allen.shimada@noaa.gov -Treasurer. I S S N - 8755-0075

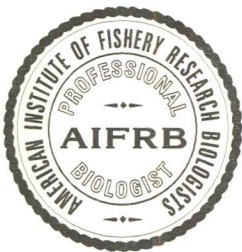
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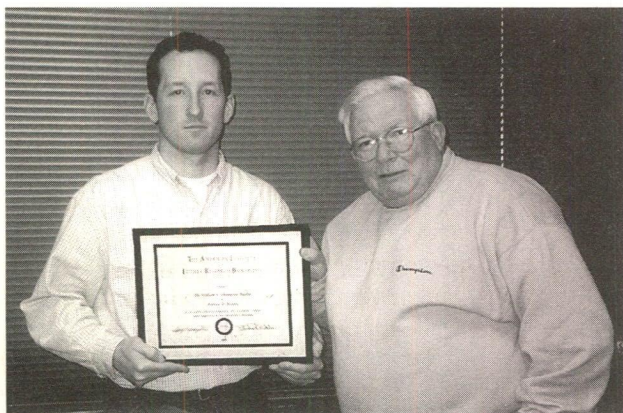
NOVEMBER, DECEMBER 2000

THE W.F. THOMPSON AWARD FOR 1998

The W.F. Thompson Award is given annually for the best student paper in Fishery biology published in a year by the AIFRB. The paper "Incubation temperature, developmental biology, and the divergence of sockeye salmon within Lake Washington", Andrew Hendry, now a postdoctoral fellow at the University of Massachusetts (UMASS), Amherst, MA, was selected as the best student publication of 1998.

The award was presented by Dr. Jack Pearce acting for AIFRB President - Sakagawa to Dr. Hendry at a student chapter meeting of the American Fisheries Society on December 8, 2000. Almost 50 persons were in attendance at the meeting held at the UMASS Forestry and Wildlife Building where Dr. Hendry also presented a seminar "The evolutionary ecology of introduced salmon".

Pizza and beverages were served.



Dr. Andrew Hendry (left) accepts the certificate and cash signifying the W.F. Thompson Award (for papers published in 1998) from Jack Pearce in a ceremony at Amherst MA, December 8, 2000.

The W.F. Thompson Award for papers published in 1999

Call for Nominations

The American Institute of Fishery Research Biologists is announcing that nominations for the 2001 W.F. Thompson Award are now being accepted. A nominated paper must have been published in 1999 based upon research conducted by an undergraduate or graduate student who is the principal author, and concerned with the biology, ecology, or management of a finfish or shellfish, or the community of which they are a part. The paper can be nominated for consideration by the student's professor or teacher, a colleague, or her/himself. A nomination must include a covering letter indicating the importance of the paper as well as six copies each of the paper and the professional vitae of the author. Papers nominated are reviewed and evaluated by teams of three to four readers. The winning paper will qualify for an award of US \$1,000, and a well-executed framed certificate of award. Nominations for papers published in 1999 should be sent to the chairman of the W.F. Thompson Award Committee, Dr. Jack B. Pearce, c/o The Buzzards Bay Marine Lab, 54 Upland Road, Falmouth MA 02540, USA. Students resident outside the USA, as well as foreign students, are eligible. Papers must have been published in English. Questions or comments should be forwarded to Dr. Pearce at the above address or at (508) 540-4572 or buzbay@cape.com. All nominations must be received by 15 May 2001.

Commerce Department Honors AIFRB Members

The U.S. Department of Commerce in a ceremony at the University of Maryland, College Park, MD on October 19, 2000, conveyed one of its highest honors upon, among others, five AIFRB members. Receiving the Commerce Department Bronze Medal for outstanding achievement were: James Bohnsack, Maxwell B. Eldridge, James Meehan, Rolland Schmitten and Michael Tillman.

From — NOAA Report IX:11. November 2000

WORTH THE TRIP TO SEATTLE!

It is my pleasure to announce that this year's famous Ken Chew solicited AIFRB Multi-Course Chinese Dinner, will be held on Feb 20 (Tuesday), again at the China Harbor, "...featuring 5 star imperial Chinese cuisine with garden fresh northwest ingredients."

Everyone is invited, whether you belong to AIFRB ("American Institute of Fishery Research Biologists") or not, and spouses, friends, etc. are all MOST welcome. After the dinner, during fortune cookie and tea time, there will be a special presentation slide show by Ken Chew reminiscing about his time at the UW since he was a graduate student (and yes, I've told Ken there is a one hour limit before the hook/gaff comes out.)

Cost is about the same as last year (\$18 per person which covers tips), except students are at \$10 per person - a big thanks go to the SAFS for helping out with student cost. Location of the China Harbor is 2040 Westlake Ave. N., Seattle. From 6-7 pm will be "Happy Hour", and dinner is to be served at 7 pm.

Please RSVP to Bruce Miller (preferably by e-mail, or call 206-543-2135), or wait for the second announcement of this event to follow in a few weeks when costs will be verified (but unlikely to be much of a change, if any.)

Please relay or post this announcement to any others you think might enjoy attending this very pleasurable event.

Submitted by — Bruce S. Miller

New marine fisheries lab opens at edge of sanctuary: Fellow Grimes is Director

By Robin Musitelli

SENTINEL STAFF WRITER

SANTA CRUZ - Marine scientists in Santa Cruz have a brand new \$19.4 million habitat - a seaside building that is the nation's first National Science Center for one of President Clinton's new Marine Protected Areas. The new digs for the National Marine Fisheries Service, a division of National Oceanic and Atmospheric Administration, were dedicated Tuesday October 17, 2000 with University of California Santa Cruz and White House dignitaries in attendance. With the Monterey Bay National Marine Sanctuary as a frontyard view, the laboratory was lauded as a world-class facility that will foster collaboration among the nation's leading scientists on how to conserve and manage marine fishery resources.

"We aspire to be nothing less than the very best," said Churchill Grimes, the director of the new laboratory. UCSC Chancellor M.R.C. Greenwood; Congressman Sam Farr, D-Carmel; U.S. Secretary of Commerce Norm Mineta; and Elgie Holstein, senior advisor to Mineta, all spoke of the synergy between government and academic scientists that would be one of the defining features of the new laboratory.

The 52,890 square foot building, next to UCSC's Long Marine Laboratory has office space for 45 scientists and administrators, a dive locker and a fully controlled and monitored seawater aquarium system that serves both outdoor and indoor tanks and wet labs. Seawater will be pumped straight from the ocean for research use. It replaces NOAA's obsolete lab facilities in Tiburon, built 50 years ago as a Navy depot.

Laboratory research will focus on Pacific Coast groundfish, sensitive coastal and estuarine fishes and protected species, such as Pacific salmon. The environmental research done will focus on the near shore waters along the central California coast and San Francisco Bay. The research done will support management of these fish stocks by providing the scientific basis for decisions, Grimes said.

Among the most critical populations to be studied at the new facility are salmon and rock fish, both of whose numbers have declined. Recovery of those fisheries isn't likely without a "platform of sound science" provided by facilities like the new Santa Cruz laboratory, said Holstein.

The facility is the newest of 21 marine science institutions based in the Monterey Bay region. Together they support nearly 1,850 scientists and support staff with an annual collective budget of nearly \$150 million, Farr said. The Monterey Bay area is becoming a national Mecca for marine science research, said Farr, who spearheaded efforts to obtain federal funds for the building. Farr compared the accumulation of facilities in the Monterey Bay to the marine equivalent to the Kennedy Space Center. "We have no idea how far it's going to go. In essence, we're just launching it," Farr said. "It's not just about science. It's about economics and the economics of ocean are the most vital of the planet."

Long Marine Lab includes a Marine Wildlife Veterinary Care and Research Center funded by the state Department of Fish and Game and the Seymour Marine Discovery Center. UCSC's Center for Ocean Health and a seabird/raptor facility are under construction.

A design team toured fisheries and marine research facilities along the Pacific Coast before settling on features in the new building, which is organized along a spine with three extending wings. To withstand the marine

environment, Ripley Architects of San Francisco used corrosion resistant materials such as fiber cement board and poured-in-place concrete. Clerestories pour light in the building. All storm water on the 2.5 acres is directed through biofilters into a natural wetland area. The facility was designed to take advantage of natural solar heating and ventilation. Work areas and courtyards are placed to provide protection from prevailing winds.

Contact Robin Musitelli at: rmusitelli@santa-cruz.com

From — Santa Cruz Sentinel October 18, 2000

MEMBERS AT WORK: New Book by Livingston

**Eutrophication Processes in Coastal Systems
Origin and Succession of Plankton Blooms and Effects
on Secondary Production in Gulf Coast Estuaries**

*Robert J. Livingston
Florida State University, Tallahassee*

AN INTEGRATED ECOSYSTEMS ANALYSIS OF THE EUTROPHICATION PROCESS

Derived from an unprecedented research effort covering over 31 years in a series of studies of seven major river-estuaries, **Eutrophication Processes in Coastal Systems** presents a comprehensive and current review of the nature of the eutrophication process and how short-and long-term nutrient loading affects marine systems. This unique book is the culmination of the most advanced research to date on how coastal systems work.

Focused on an 11 year interdisciplinary study of the Perdido Bay System, Dr. Robert J. Livingston's groundbreaking work offers evidence for significant findings such as:

- ▷ Nutrient concentration gradients in fresh water as it entered the bay were stimulatory to phytoplankton blooms
- ▷ Species that showed distinctive seasonal and inter-annual successions dominated plankton blooms

- ▷ High relative dominance of bloom species was associated with significant reduction of phytoplankton species richness and diversity
- ▷ The blooms were associated with major reductions of infaunal and epibenthic macroinvertebrates, forcing a serious disruption of the food webs and losses of secondary production

Eutrophication Processes in Coastal Ecosystems goes beyond its innovative analyses of how estuarine and coastal systems have responded to fundamental alteration of the eutrophication process. Dr. Livingston's book presents the case that bloom impacts must be reviewed against the background conditions that include periodic changes brought on by drought and anthropogenous dredging. It points to the critical need for further study of phytoplankton communities and the connection between plankton blooms, sediment deterioration, and low secondary production.

FEATURES

- ▷ Serves as a model for researchers for what phenomena to observe in aquatic ecology
- ▷ Summarizes the progression of naturally eutrophic systems to hypereutrophic ones
- ▷ Presents new findings on the impact of nutrient loading and phytoplankton blooms – both seasonal and interannual effects on community structure and secondary producers
- ▷ Provides a review of the nature of nutrient loading on the eutrophication process
- ▷ Compares – for the first time – quantitative, species-specific phytoplankton community changes over an 11 year period relative to various nutrient loading regimes

Catalog no. 9062, November 2000, c. 700 pp.

ISBN: 0-8493-9062-1, \$99.95/£66.99

CRC PRESS

First, Do No Harm

by Clarence Hickey

A few years ago, I attended a seminar that dealt with the ethical aspects of the work of health care professionals and about how they personally felt about the ethical aspects of their work with their human patients. One physician reflected on the Hippocratic Oath and its mandate for physicians to "first do no harm" to those under their care. I got to thinking about "do no harm" myself as an environmental professional and about my own work as a field biologist and environmental scientist. I reflected on whether I have "done no harm", personally, to the environment and natural resources I profess to champion and be concerned about, as I have gone about my work.

Some Personal Examples from My Fisheries Studies.

My first scientific experience studying live animals was when I collected specimens for my research on the hematology of wild and captive fish, the "cunner" (*Tautoglabrus adspersus*). I devised a method of capturing them, quickly anesthetizing them, drawing a small amount of blood and then placing them into a recovery tank. Once I had refined the procedures, I was able to gain a 95% survival rate, and then release the fish back into the environment. Had I done no harm? I had sacrificed several cunners during the initial phases of the experimental testing, but I had endeavored to do better. I was pleased to have made a successful effort at personally doing minimal harm and then providing advice to others in the paper I ultimately published on how to do the same. I had stuck with my personal ethics.

As a marine fishery biologist during the 1970s, I participated in the capture and sampling of hundreds-of-thousands, maybe even millions of fishes. I could not even begin to estimate how many fish I removed for study. At times, a good portion of the fish taken in those field samples were not needed for later study and often were returned to the water dead. I felt badly about catching and killing so many fishes for study, so I tried to do a better job of keeping the netted fish in the water while they were being sorted, counted and sampled, so that they could be returned alive. I also tried to be more efficient at figuring out what portion of a netted catch was needed for later study, so as not to take back to the Lab more than were actually needed for analysis. I consulted a statistician for help in sample design.

The Environmental Responsibilities of Scientists.

Thinking about those experiences, as a result of the seminar in which I heard about physicians "first doing no harm", made me think that it seems reasonable for we scientists studying the natural order and the natural environment, to be sure that our actions "first do no harm". We need to be sure that we help the understanding by people about the natural order and that we set the example by not harming or degrading the environment we are working to understand, protect, or

manage. I am talking about the personal actions and ethics of the individual scientist at work (i.e., you and me) and the potential for harm from the work each and every one of us does every day. We need to take special care so that our work does not contribute to environmental degradation. Because we are scientists studying the natural order, we cannot assume that our work, or the outcome of our work in the knowledge gained, is all positive in and of itself, and without risk. Our work can have adverse effects on the natural order we are attempting to understand.

Who we are and what we do means, I believe, that we have a special obligation and responsibility to assure, to the best of our abilities, that we do our work safely and in an environmentally conscientious way. It is our responsibility to ourselves and our institutions, to the natural order with which we work, and to the people whom we wish to educate about the natural order, through the knowledge we earn and the information we gather and disseminate. To some degree we must set the example for others to follow.

As scientists, we also can affect the environment positively by valuing people. We can do this by not being arrogant toward those who may not have our level of scientific understanding, by teaching at all opportunities, by being honest and trustworthy in scientific matters with the public, by communicating often, and by advocating science and environment as being mutually co-dependent. By being good personal stewards of our science and of our environment, we will set a positive and professional example for the public.

A Charge and Challenge for American Junior Academy of Science Students. As you move into undergraduate training, maybe graduate school, into teaching, to a company or industry, into research, or to a position in government at some level, you will have the opportunity to consider ethics and professionalism in your work, through your employer, through your school, or by way of scientific associations that represent your profession, such as the AAAS. Many professional societies and organizations have adopted standards or codes of professional conduct, as guidance for their members in their professional work. These are useful vehicles for communicating what is important in terms of expectations of professional behavior. I would affirm these codes of conduct, plus I would add a statement of guidance that it is each scientist's personal and individual responsibility to be sure that the work they do poses no unacceptable risk to people and the environment.

First Do No Harm. This would be on a basic and personal level, to encourage forethought by each and every scientist whose work can have potential consequences to the environment. This is about each and every one of us thinking about what we do as scientists, as teachers, as workers, as people, all the time.

There is a voluntary environmental pledge for graduating college students that reads simply: *"I pledge to investigate thoroughly and take into account the social and environmental consequences of any job opportunity I consider."* This is a student's right, and some would say a student's responsibility. This pledge asks job seekers to consider how a job may affect both people and the environment. Valuing the environment and people through your scientific work will help to protect your work from outside influences that might want to challenge the safety of what you do. More importantly, it will take your work to a higher ethical plane and will make you more effective and your work both more rewarding and more useful to society.

Dr. Hickey is a scientist at the U.S. Department of Energy.

You may email him at:

clarence.hickey@science.doe.gov

From — NAAS Newsletter Fall 2000

Submitted by — Clarence Hickey

Editor's Note: Hickey's ideas suggest interesting additions to the AIFRB Principles of Professional conduct. Any comments?

LOSSES

✽ ✽

Roy Jackson

Douglas B. Jester, Sr.

George Klonz

William Sheridan

Gerald Talbot

✽ ✽

Gerald B. Talbot

Gerry Talbot, one of the 26 honorary incorporators of AIFRB in 1956 and member emeritus since 1975, succumbed to Parkinson's disease December 16 in Redmond, Washington, at age 88.

Gerry was born in Wetaskiwin, Alberta, on the numerically distinctive date of 12-12-12. When he was 5 years old his family moved to Tacoma, Washington, where

he graduated from high school in 1930. After working in the service department of a car dealership for seven years (the last year as service manager), Gerry enrolled in the University of Washington where he earned a BS degree in fisheries in 1944, garnering academic honors along the way. He received his MS in fisheries from the UW in 1947 and took additional graduate level courses at Duke University in the summers of 1950-52.

Gerry began his career in fishery research as a biological assistant with the International Pacific Salmon Fisheries Commission in 1941. For the next eight years he was a fishery biologist with IPSFC and worked on an array of Fraser River sockeye salmon projects – racial studies, enumerations of spawning populations, etc., but, the Salmon Commission research for which he became best known was his study of the biological effectiveness of the Hell's Gate fishways.

Gerry left IPSFC in early 1950 to become project leader of an investigation of American shad runs on the Atlantic coast that was getting under way at the Beaufort, NC, Fishery Laboratory of the US Fish & Wildlife Service (FWS). He took an active part in field research on the Hudson River shad and wrote a paper on their fluctuations in abundance which received honorable mention by the Wildlife Society for the best fishery research paper published in 1956.

Gerry was named director of the Beaufort lab in 1952, with responsibility for all fisheries investigations carried out by FWS/Bureau of Commercial Fisheries in the mid-Atlantic states (New York to North Carolina). He held that position until 1962, taking a one-year leave of absence in 1958 to accept a position with FAO to assist the government of Pakistan in research on the Indus River hilsa fishery.

From 1962 to 1970 Gerry was director of the Tiburon, CA, Marine Lab for the U.S. Bureau of Sport Fisheries and Wildlife (BSFW). That job was followed by a special study of the sardine and anchovy fisheries of California that he carried out for BSFW before he became director of its Southeast Reservoir investigations in Clemson, SC. He retired from federal service in 1974, having published nearly thirty papers during his career as a fishery biologist. Gerry is remembered by his co-workers as a man of great integrity and with a keen sense of humor.

After retirement Gerry managed a condo for ten years in Bellevue, WA, before retiring from that work in 1989. Elizabeth and Gerry enjoyed traveling (visiting numerous foreign countries), backpacking, and other outdoor activities, including those centered around frequent visits to their cabin on Middle River in northern British Columbia.

Gerry is survived by his wife Elizabeth (married 1946), son Craig, daughter Lynn, and families (4 grandchildren). Memorial contributions may be made to:

Church of the Holy Cross

Redmond, WA • The Nature Conservancy

or charity of choice.

By Mike Fredin and submitted by — Bob Burgner

MEETINGS OF NOTE

**TILAPIA 2001
KUALA LUMPUR
INTERNATIONAL TECHNICAL AND TRADE
CONFERENCE ON TILAPIA
28-30 MAY, 2001
KUALA LUMPUR, MALAYSIA**

A global forum for industry leaders, policy makers and planners, aquaculturists and producers, export processors and importers, investors and suppliers of inputs and services.

Organized by:

INFOFISH, ICLARM, FAO, MINISTRY OF
AGRICULTURE, MALAYSIA

In collaboration with:

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INFOFISH, INFOPESCA, INFOPECHE, INFOSAMAK, EASTFISH, INFOYU
TILAPIA 2001 is the first comprehensive, business-oriented, international technical and trade conference on tilapia. The conference will take an incisive look at the current status and future prospects of world tilapia production and trade. As an added attraction, TILAPIA 2001 is being organized just ahead of AQUARAMA 2001, the International Aquarium Fish Exhibition, which will be held in Singapore from 31 May to 2 June 2001, thus giving participants an opportunity to attend two international events in one trip!

TILAPIA 2001 will be held at the prestigious Shangri-La Hotel, located in the heart of the capital city of Kuala Lumpur, Malaysia and hub of commerce.

US\$450 per delegate for registrations received before 15 March 2001 or US\$550 if received after that date. The fee covers coffee breaks, lunches, a reception, conference kit and documentation. An additional US\$150 entitles accompanying spouse to lunches and reception only.

Payment should preferably be by US Dollar cheque or bank draft drawn on a US bank payable to INFOFISH. Payment can also be made by credit card (AMERICAN EXPRESS, VISA, MASTERCARD) or by telegraphic transfer to INFOFISH Account No 0-111659-028, Citibank Berhad, Menara Citibank, 165 Jalan Ampang, Kuala Lumpur, Malaysia.

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**FISHERIES SOCIETY OF THE BRITISH ISLES
(FSBI) MEETING: FISH BIODIVERSITY AND
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LEICESTER, UK
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The summer FSBI Meeting will focus on four themes that influence the conservation of fish biodiversity: rarity and extinction of fishes, exploitation and fish biodiversity, taxonomic diversity, and managing fish biodiversity. Submission of abstracts for contributed poster and oral presentations are welcome. For further information, please go to our website:

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or contact Paul Hart at:

pbh@leicester.ac.uk or John Reynolds at

Reynolds@uea.ac.uk

**MANAGING RIVER FLOWS FOR BIODIVERSITY:
A CONFERENCE ON SCIENCE, POLICY, AND
CONSERVATION ACTION
30 JULY – 2 AUGUST 2001
COLORADO STATE UNIVERSITY
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A diverse partnership of government agencies, nonprofit organizations, and the electric power industry are convening a conference to address the issues of ecologically sustainable water management. The goals of this conference are: (1) to provide attendees with a better understanding of the nature of the conflict between meeting ecosystem needs and human demands for water,

both in terms of quantity and quality; (2) to explain the state of ecological science concerning the flows required to protect biodiversity; and (3) to discuss case studies that address inherent conflicts and potential solutions as a means of engaging in interdisciplinary dialogue.

This four day conference will be open to 350 attendees from diverse professional and academic backgrounds. The object is to assist conference participants to become better informed decision makers or to become better able to influence decisions. For more information or to register for the conference, visit www.freshwaters.org/conference

**55TH ANNUAL SOUTHEASTERN ASSOCIATION OF
FISH AND WILDLIFE AGENCIES CONFERENCE
A CALL FOR FISHERIES PAPERS
13-17 OCTOBER 2001
GALT HOUSE IN LOUISVILLE, KENTUCKY**

The Kentucky Department for Fish and Wildlife Resources invites you to participate in the 55th Annual Southeastern Association of Fish and Wildlife Agencies (SEAFWA) Conference.

Participation at the Conference will include both poster and oral presentations of peer-reviewed manuscripts on any fisheries related topics including, by not limited to, culture, management, and research from both freshwater and marine environments. **Case history studies are highly encouraged.** Poster presentations will be limited to a provided 4 x 8-foot styrofoam backboard. A one page written abstract of the poster presentation must be submitted.

The deadline for submitting abstracts for posters and manuscripts is **May 1, 2001**. Manuscripts must follow SEAFWA Fisheries Management Guidelines which can be obtained at the Kentucky AFS web site (www.kfwis.state.ky.us/afs/kyafs.htm) or by contacting the Fisheries Program Chair. Please submit four hard copies of your manuscript or one copy of your poster presentation abstract to the **Fisheries Associate Editor**. Please include the title, author(s) names, and work address, telephone number, and email address of the contact author.

Fisheries Associate Editor : John I. Galvez, Ph.D., Assistant Leader – Fishery Biologist, U.S. Fish and Wildlife Service, 6669 Short Lane, Gloucester, VA 23061, email John_Galvez@fws.gov, Phone 804-693-7118.

**6TH ASIAN FISHERIES FORUM
THE TRIENNIAL MEETING OF
THE ASIAN FISHERIES SOCIETY**

**FIRST ANNOUNCEMENT
ASIAN FISHERIES: DIVERSIFICATION AND
INTEGRATION
NOVEMBER 25-30, 2001
FORUM VENUE: NATIONAL SUN YAT-SEN
UNIVERSITY
KAOHSIUNG, TAIWAN**

**ORGANIZED BY: ASIAN FISHERIES SOCIETY
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For more information contact:

*Mr. John Cooksey

Tel: +1-760-432-4270 • Fax: +1-760-432-4275

The Conference Manager

Email: meetingmanager@aol.com

2423 Fallbrook Place • Escondido, CA 92027 USA

Website: www.afs.tfrin.gov.tw

Call for Abstracts - Deadline April 30, 2001

Submission by fax or e-mail **will not** be accepted.

*Send abstract submittal form to Mr. John Cooksey at above address.

Something Fishy during the Presidential Campaign

3 November 2000

Editor:

This past week an ichthyological moment passed nearly unnoticed on the presidential campaign trail. At home playing the couch potato, I saw a brief television image, with no comment on the scene itself, of Governor Bush at a Seattle-area fish processor, holding a 15-pound salmon close to his face. No, he did not kiss the fish, as some of us might have appreciated. This was a dignified man in a business suit, trying to look presidential to all the people, even to those disadvantaged souls whose stunted development might prevent their seeing the profundity of kissing a dead salmon. He just smiled for the camera and handed the fish back to a burly man in tee shirt and rain bibs, who in turn slung it smoothly to another burly, sure-handed man 30 feet away. As the first man started his back-swing, it was momentarily clear that the Texas governor did not know what to do next with his salmon-slimed hands. Going straight for his hanky might appear to the locals as unforgivable disdain for this great symbol of Northwest sustenance. It is also impossible, with a full coating of oncorhynchal mucus, to slip one's fingers into a suit pocket without depositing an olfactory memory for the remainder of the day. But as the salmon arched softly and amazingly into the second man's waiting hands, Mr. Bush used his right hand to pat the first man on the back. There followed smiles and apparent words of congratulations. Was the pat on the back genuine? Probably. Was it also a clever, even sneaky, (though impressively spontaneous) effort to blot enough mucus to allow the candidate to go for his hanky without sliming his suit? However we answer this, indeed, whatever our hopes for next Tuesday's election, if George Bush becomes president there is at least one fact to give us comfort: the man held the fish.

— Andy Jahm

Assessment Of The Impacts Of Development And Operation Of The Columbia River Hydroelectric System On Mainstem Riverine Processes And Salmon Habitats

By Battelle's Pacific Northwest Division, Richland, Washington and U.S. Geological Survey, Biological Resources Division, Cook, Washington.

The objectives of this study, initiated in early October, 1998, were to (1) assess the extent of riverine habitat lost to development and operation of the Columbia River Basin hydroelectric system; (2) identify the types of modifications that have occurred as a result of this lost

habitat; and (3) suggest areas or actions with particular potential for restoration of mainstem riverine habitat and processes. The geographical extent of the study ranged from Bonneville Dam to Kettle Falls on the Columbia River (~900 km) and the Snake River from its mouth to Shoshone Falls, Idaho (~1000 km).

We defined three development periods in the Columbia River Basin to assess changes: prior to construction of any mainstem dams, hydro development (1910-1984), and post-hydro development. Changes in systems operations, structural operations, and upstream storage capacity occurred during each of these periods. The focus of our analysis was on fall chinook salmon because they carry out their entire freshwater life cycle within mainstem habitats of the Columbia and Snake rivers. All other species of anadromous salmonids use the mainstem primarily as a migration corridor.

Only about 13% and 58% of the historic mainstem Columbia and Snake rivers, respectively, are still considered riverine. Most of the remaining areas are impounded or have modified flow regimes regulated by upstream storage practices. About 3% of historic riverine habitat exists downstream of the Columbia-Snake confluence, mostly in the tailraces of hydroelectric projects. Nearly 70% of historic mainstem riverine habitat remains in the upper Snake River, but it is upstream of Hells Canyon Dam and no longer accessible to anadromous salmonids.

We determined that about 660 and 800 km of the Columbia and Snake rivers, respectively, were once used for spawning by fall chinook salmon. Fall chinook salmon currently use only 85 km of the Columbia River and 163 km of the mainstem Snake River for spawning. Rearing habitat, based on a channel complexity index, has also declined throughout the basin. Our study showed that historic spawning and rearing areas for fall chinook salmon occurred primarily within wide alluvial floodplains. These areas tend to possess more gravel-cobble substrate, more channel bars/islands, and have a lower gradient than areas not extensively used.

Three river reaches, downstream of present migration barriers, were identified as having high potential for restoration of riverine processes: Columbia River upstream of John Day Dam, the Columbia-Snake-Yakima River confluences, and the lower Snake River upstream of Little Goose Dam. A key finding is that restoration of riverine processes is likely only with dam breaching or reservoir drawdown, in combination with establishing a more normative hydrograph. Both the geomorphologic and hydrologic conditions of the Columbia and Snake rivers will ultimately "control" the time required to restore mainstem riverine habitat and processes.

Submitted by —

Dennis D. Dauble, Pacific NW National Laboratory

Maine worries as US declares salmon endangered

By Beth Daley
Globe Staff

Setting the stage for a political war with the state of Maine, the federal government yesterday declared the beleaguered wild Atlantic salmon an endangered species, raising fears in the state that a crackdown on industries near rivers where the fish spawn may soon follow.

The magnificent sport fish that travel from Maine to Greenland and back again to spawn have all but disappeared in eight Downeast rivers in the last decade, victims of dams, pollution, and overfishing. Most of the rivers are at an all-time low for returning fish – less than 10 a year in most cases – despite \$100 million and decades of recovery efforts.

In deciding to go for the strictest protection under the Endangered Species Act, federal officials said Maine's effort to bring the fish back on its own was not working. And they did not rule out expanding the area of protection from the initial eight rivers to others, including the heavily used Penobscot – a move that state officials say could harm the paper mills located upstream.

"We really need to focus on backing this critter away from the edge of extinction," said Paul Nickerson, endangered species specialist for the US Fish and Wildlife Office in New England. "The Maine plan ... left some big ticket items out. We are the last safety net."

Environmentalists applauded the decision, but added it alone will not save the fish that once were so plentiful. Fishermen told stories of thousands leaping in rivers. They said a continued effort by the state of Maine, the federal government and residents is the only chance the salmon have to re-cover.

"I think the federal government has come down on the right side scientifically and legally," said Charles Gauvin, president of Trout Unlimited, which has worked to save the fish. "It could be too late but these are amazingly resilient creatures, and we should give them every benefit of doubt ... We only have one shot to make this work."

What to do about the dwindling number of salmon has been one of New England's most prickly environmental issues, with Maine Governor Angus King predicting the rivers' protection would decimate the state's aquaculture industry, which is located near the rivers, and the blueberry industry, which draws water from them for irrigation.

King and other Maine officials argue that the salmon, while worthy of help, are not really a distinct species at all. Instead, they are the product of decades of rearing and releasing salmon at a federal hatchery, rather than a truly wild population. The real wild salmon, they say, are already gone.

Officials from the US Fish and Wildlife Service and National Marine Fisheries Service, which made the decision, say they have identified historic genes in the salmon from the Maine rivers that makes them distinct. But King scoffed at that idea.

"The eight Maine rivers included in the listing have been massively stocked with tens of millions of salmon from external sources for more than a century," King said yesterday.

"To claim now that the fish in these rivers have retained their original genetic pattern under these circumstances is hard to justify," he said.

Last week, King asked for the decision to be delayed for six months until the National Academy of Sciences finishes a study on the issue, but the federal government declined to wait. The study funded by Maine's Congressional delegation, will still be conducted.

The listing will take effect in 30 days and the federal government will have about 30 months to develop a final plan to bring back the fish. The listing covers the wild population of Atlantic salmon found in rivers and streams in Maine from the lower Kennebec River north to the US-Canada border. These include the Dennys, East Machias, Machias, Pleasant, Narraguagus, Ducktrap, and Sheepscot rivers and Cove Brook, a tributary of the Penobscot. It can take decades or longer to bring back a species, if it is brought back at all.

While the economic ramifications are unclear, Nickerson made it clear the listing would change business as usual for the aquaculture and blueberry industries. Since escapees from the aquaculture pens could taint the genetic makeup of the wild salmon, federal officials said they would be looking for tighter containment of the fish and a phaseout of a European strain that grows faster than American salmon.

But those in the state's burgeoning \$65 million aquaculture industry say the changes could wreck any competitive edge they have over the huge fish farming operations in Norway and other countries.

"Part of the reason this is so troubling is that it is awfully hard to be in a business when you don't know what is going to happen," said Des FitzGerald, CEO of Atlantic Salmon of Maine.

Hoping to stave off the listing, his company raised wild salmon that were released into four Maine rivers last month as part of the country's first-ever adult Atlantic salmon stocking program. It will not be clear for as many as five years if the efforts work, although FitzGerald said he had reports the fish were beginning to spawn this week.

In many ways putting the salmon on the endangered list is more complicated than listing a plant or animal that stays in one place. Because the salmon range over such a large area, protecting them may call for far-ranging regulations.

"Sometime in the Atlantic salmon life cycle they are using the entire river system," said John Moring, professor of zoology at the University of Maine. "With bald eagles, you find the nest and draw a circle around it. You can't do that here. There is a lot of uncertainty over this. If this is applied stringently, does this mean you shouldn't be logging in the watershed?"

From — Boston Globe, November 14, 2000 • Pages A1, B14

Submitted by — John Moring

Pro-Nox Biologists Too? Parkinson's-Pesticide Connection Reinforced

New studies lend credence to the concept that chronic exposure to pesticides could contribute to Parkinson's disease, scientists reported at last week's meeting of the Society for Neuroscience. But observers caution against drawing too sweeping a conclusion from the experiments with rotenone in rats.

The experiment was "really intended to test scientific concepts," says J. Timothy Greenamyre, a professor of neurology at Emory University, Atlanta.

Greenamyre and colleagues set out to determine whether they could produce a better animal model for Parkinson's disease. Such animals would have a generalized "defect" in Complex 1, a dehydrogenase in the mitochondrial electron transport chain. And their brains would contain protein aggregates called Lewy bodies that are characteristic of Parkinson's. In current models, animals are injected with a compound found as a contaminant of a synthetic heroin that was recognized in the 1980s as causing symptoms like those of Parkinson's.

The Emory group infused rotenone, a natural product used as a pesticide, into the jugular vein in rats. Rotenone was chosen primarily "because it's the biochemical standard for inhibiting Complex 1, and it's very lipophilic, so it crosses [cell] membranes," Greenamyre explains. "But it was also of interest that rotenone was a known pesticide, and epidemiological studies have implicated pesticide exposure as a risk factor for Parkinson's.

Over time, the low doses of Rotenone did produce parkinsonian symptoms, accompanied by Lewy bodies and a generalized deficiency of Complex 1 in the rats.

Rotenone is generally considered a safe pesticide, because it breaks down rapidly in the environment. It has been used for 50 years in fishery management to eradicate undesirable fish and to restore appropriate or endangered species. The pesticide enters fish through their gills and disrupts the respiratory chain, says Brian J. Finlayson, chief of the Pesticide Investigation Unit for the California Department of Fish & Game. Birds and mammals, on the other hand, ingest the pesticide and metabolize it in their gut, he says.

Finlayson was among several pesticide experts who told C&EN that the Emory study doesn't reflect human exposure to rotenone. The intravenous approach used at Emory is "the best way to get a quick dose of anything," notes Richard Miller, president of Prentiss Ins., Floral Park, N.Y., a supplier of the product. But the dose overwhelms the pathways that would normally detoxify the material, he contends.

Indeed, Greenamyre acknowledges that the study doesn't provide "enough evidence that rotenone or any other specific pesticide is a culprit in Parkinson's disease." Moreover, he adds, "whatever people may ingest that may cause Parkinson's over a number of years, their risk is going to be modulated by their [genetic] ability to detoxify" the compounds. But he insists that the findings warrant more epidemiological studies on the effects of pesticides.

Others agree. "The new study will revitalize the search for environmental toxins ... that may contribute to the etiology of [Parkinson's]," claim University of Pennsylvania neuroscientists Benoit I. Giasson and Virginia M.-Y. Lee, in a commentary that will appear in the December issue of *Nature Neuroscience*, where the Emory work will be published.

Mairin Brennan

From — Chemical Engineering News: 78(46)

Submitted by — Dora Passino-Reader

SCHUCK RECALLS BEGINNING OF U.S. BLUEFIN TUNA RESEARCH

By Howard Schuck

It is not common to still be alive after 50 years retired – and able to recall important events of a career.

I retired from Fisheries Research September 30, 1952.

The recent (March 27, 2000) death of Frank J. Mather III at age 89 has generated memories of the improbable manner in which United States research on the Atlantic bluefin tuna was originated (by Frank and me). And the incredible manner by which we “tagged” the first giants – AND then, against all odds, obtained the very first RETURN!! Perhaps some younger researcher may find something of interest, or amusement at what we “put-up-with” to get a major investigation started. And perhaps I should record this piece of fisheries history before I too “go to fish from the other side”.

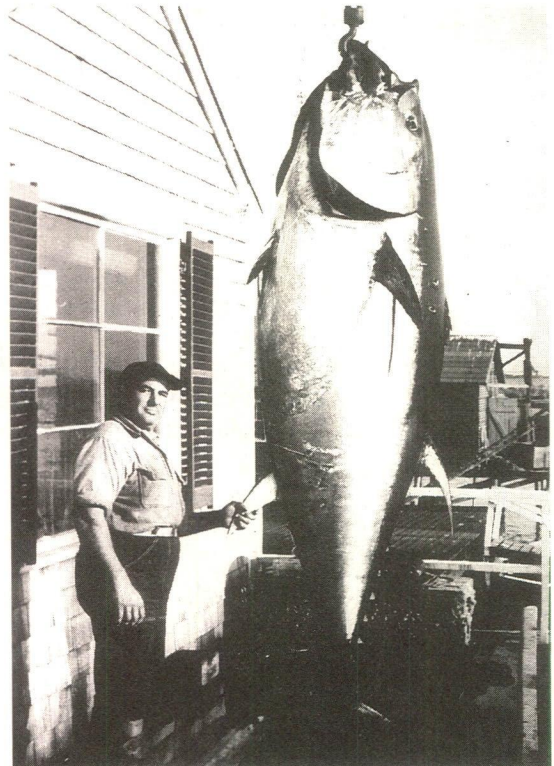
At the end of the War (II), as head of the USFWS Haddock Investigation (replacing W.M.C. Herrington), I transfer (along with the entire Laboratory) from Cambridge – to re-open the historic Woods Hole Fisheries Station. One day, while trying to fish in the tumultuous “Hole” from a rowboat, I am hailed from a sports fishing craft trolling for “stripers”. He is alone, fishing one rod and steering with the other hand. He calls: “You’re not having much luck, with this current; but you seem determined. Would you like to fish with me, on a more seaworthy boat?” Thus begins a partnership with Frank Mather. He – expert salt water fisherman, with the resources and equipment for the biggest game fish; I expert trout angler. He – a marine architect, schooled in Europe, on staff of Woods Hole Oceanographic Institution; I a biologist, (population biologist), educated at an inland-fish-oriented university, dedicated to determining life history, population sizes and migrations of – first the brown trout and now the haddock, employed by Fish and Wildlife Service of U.S. Department of Interior.

Soon Frank tells me that tuna exist – Offshore. And we go for them – off Gay Head, Martha’s Vineyard and Block Island. These are what the sports fishing community call “school tuna”. They seem of only two distinct sizes – either 6 to 8 lbs. or 14 to 16 lbs. We begin to wonder: If two age groups are indicated here – is the smaller “young of the year” or does an even smaller – sized tuna exist somewhere? We also become curious as to what must be a fabulous growth rate to produce giants of 1500 lbs.

Frank is aware of the giants, as they come into Cape Cod Bay on occasion. The elite sports fishermen know about them too. Michael Lerner, Kip Farrington, etc. fish them off New Jersey in June, Block Island later, then Gloucester, Nova Scotia and even Newfoundland. They also fish the giants at Bimini, across the Gulf Stream from Florida in May of each year. We begin to wonder, as they have, if the Bimini giants heading north are the ones that “strike-in” at those northern locations. We ponder if a way could be found to “tag” the giants at Bimini to see where they migrate to. We are now totally infatuated with this magnificent, mysterious species, and committed to developing new knowledge in any way we can.

Frank receives a letter from Italian scientist Sella reporting that Norwegian commercial fishermen occasionally find a hook in their trap – caught tuna – that clearly is not used in Norwegian waters. European researchers took these strange hooks to the Mediterranean and ascertained they are a

special type used only by Sicilian fishermen! This indirect evidence impresses us. We begin to think: “What type of hook is used at Bimini”? We decided to go to Bimini. Even though, at this shoe-string, feeble stage of our tuna investigation, we will have to travel on our own (vacation) time and pay all our expenses, including airfare to Miami. We take the train from Woods Hole, via Providence to New York City. There we spend a day conferring with Francesca Lamonte, Ichthyologist Curator of the American Museum of Natural History. She is “Expert Advisor” to the International Game Fish Association, which is becoming interested in our efforts to research the Atlantic bluefin tuna. To save our meager supply of dollars, I had earlier responded to an



Thousand pound bluefin tuna trapped ca 1948 by John Vettori.

Photo by Howard Schuck

advertisement for a cheaper air fare to Miami – on an “unchartered” flight with a company called “Flying Irishman”. But when we get to La Guardia we learn plans changed and the flight left earlier than scheduled. It took half a day to get our money refunded. We finally get onto a genuine airline (National) at midnight. (Diary says: “\$54.03 plus tax, one-way”).

We arrive 6 am May 22, 1950 at Miami and find Frank’s boat “Black Prince” at friend Dick Bertram’s Boatyard. (Diary says: “Loaded the boat, bought grub, tackle, bait”). Frank is “fit to be tied” that the airplane fiasco has prevented him from getting to Bimini ASAP. He insists that we leave now (5 pm) with gale warnings, rather than wait till morning. This decision results in another (literally a shocking) delay – of 5 days.

With “gale warnings” up, a northeast storm raging, rain coming down in sheets, and getting dark – we start down Miami “Gut” at (I thought) excessive speed, abetted by a strong outgoing tide. Frank is at the wheel; I am still trying to lash down the barrel of formaldehyde we had agreed to transport to Lerner Laboratory. We come to the swells, and begin to roll. At the same time we are hitting, and head-on, big waves coming into the Inlet from the NE storm. I am having trouble standing up on the slippery deck; and not securing the barrels (now rolling around) as promptly as Frank thinks possible. He turns around, takes his eyes off the course ahead, and begins to instruct how it can be done better. Midway through his lecture there comes a violent shock to the boat, and a loud “boom”.

A huge dark buoy races past me along the starboard rail – and suddenly conclude that we have just hit that buoy – head on, and at near maximum speed. I am stunned and for a moment speechless. Frank says nothing. Then

I look down into the cabin. Aghast, I bellow: “Frank, the floor boards are floating”. Frank replies, “Of course they are, we are sinking.”

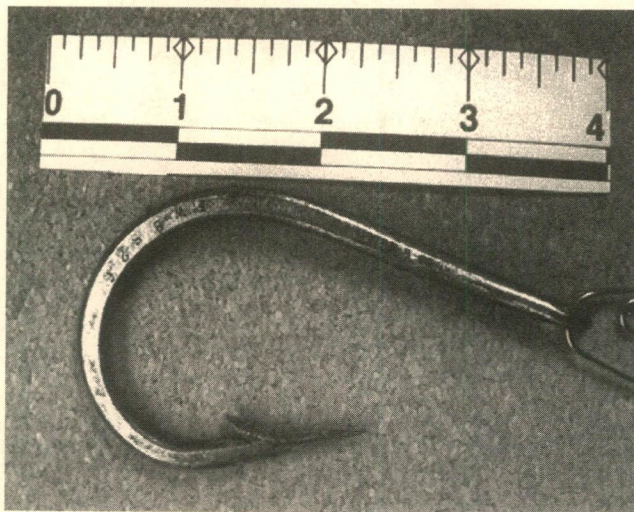
To make a long and discouraging story short, we are delayed 5 more days while the boat is being raised and towed; then repaired in a boat yard. This delay further depletes my finances; and Frank begins borrowing from his friend Bertram. But to hold down expenses we sleep nights on the “Black Prince” – up in the air, “on the ways” in the ship yard. We leave our bunks every morning when workmen arrive to continue repairs.

Eventually (May 27) the boat is back in the water and declared seaworthy. And we have drained the salt water out of cameras, binoculars, and reels; completed insurance forms; and procured fresh photo film. So we embark again. Leaving in the morning, with clear skies and gentle southerly

our depleted finances and allowing us to stay long enough to learn what we are after.

We discuss with sportsmen and charter boat skippers and tell them what we are thinking. Diary of May 28 mentions a suggestive fact, long forgotten: “No SW wind, so no tuna showing (so no one bothering to fish”. May 30, “SW wind, tuna beginning to show. Four landed”. We try fishing ourselves. On the first day I am in the chair when a giant hits. The line (54 thread) [approx. 3 lb. test/thread; Ed.] breaks almost immediately. The next day I boat one (744 lb. but skinny – seemingly just spawned – out?) Then Frank loses another from a broken line. We start to think – two-thirds of our tuna headed north with our hooks. And, we ascertain, the experts are also losing fish from broken leader or line. But there is no Sicily-like special hook being used that might be identified, if caught later, as from Bimini. The same models and makes are used by American tuna fishermen whether at Bimini or to the north.

So back at Woods Hole we get the idea of, in some way, putting a mark on hooks that might, if ever caught later, identify them as “lost” in this Spring run. With no resources, organization or research vessels, we decide our only hope (faint) for proof of the suspected migration route north is a marked hook of some sort. We spend the winter experimenting with methods to put a mark on a tuna hook. The first is to write an agency symbol (FWS) on the shaft and cover it with a plastic sleeve. After water tests we conclude the sleeve will wear away in the months or years it might have to be carried by the fish. Eventually we evolve a method more capable of resisting the elements of salt water and a voraciously feeding giant tuna. It is to stamp into the metal of the hook shaft the agency symbol (and also a serial number).



Numbered hook as employed by Schuck and Mather to a giant bluefin tuna.

Photo by John Commissars

wind, the crossing to Bimini Mecca is uneventful, pleasant and quick (3½ hours). But finally we arrive at Bimini Island, and our luck begins to turn. Michael Lerner (of Lerner Shops), an officer in the IGFA, is allowing us to stay at the Lerner Biological Laboratory. This includes room and board, docking for Frank’s boat, plus two native employees as crew. This development is crucial – in extending

Armed with an anvil and metal-numbering dies we return to Bimini the next spring (1952). Instead of fishing we spend our time (night too) marking the total supply of hooks owned by all fishermen who agree to cooperate in this long-shot venture. With each numbered hook we give a post-card on which we record the serial number of its accompanying hook. It is a U.S. official business franked card, addressed to me at USFWS, Woods Hole. On the back we had printed a form – to be filled out if its accompanying hook is lost in a tuna: name of cooperating fisherman, date hook lost, locality lost.

Back at Woods Hole we begin to receive post cards. And enough to preserve our faint faith that a RETURN (Recapture) might some day occur. One day in early fall I am busy with the haddock investigation and planning research vessel *Albatross III* operations. The fisheries station receptionist transfers a telephone call to me from Canada. This Lunenburg, Nova Scotia trap – operator says “One of the tuna we are butchering this morning has a hook in its jaw. This is not too unusual, but this hook has markings on it. It looks like FWS and a number. Is this of any interest to you?”

ZOUNDS!!! Of any interest? What an understatement. Frank and I “go through the roof”. We have done it. We have succeeded in not only “tagging” the giants in the most improbable manner; but in obtaining the “first-ever” RETURN – and from thousands of miles away, months later. The tiniest probability of success has actually paid off.

This success leads to a formalized WHOI/USFWS agreement to cooperatively study the Atlantic bluefin tuna. It also leads to Frank Mather designing better ways to “tag”, including his invention of the “Dart Tag” still used. It also leads to formation of the Cooperative Game Fish Tagging Program, now active in all Oceans of the World.

And this is how “it all began”.

I leave Fisheries Research in 1952, but Frank Mather continues, for an entire lifetime, his devotion to learning the secrets of this magnificent species. Over many decades of dedication he is properly recognized as the World Authority on Atlantic bluefin tuna.

— Howard Schuck

Editor's Thanks

Many, many thanks to the AIFRB membership for the excellent contributions to this issue of Briefs. For the first time in five years I was able to fill (almost) an issue with member contributed material, special thanks to Hickey, Grimes, Moring, Passino-Reader, Pearce, Schuck, Jahn, Burgner, Fredin, Sakagawa, and Dauble.

The Pallid Sturgeon's Last Gasp?

American Rivers is highly concerned about the issues surrounding the Missouri River, including those affecting the pallid sturgeon. The U.S. Army Corps of Engineers' recent Missouri River proposal ignores American Rivers' concerns of river wildlife and recreation by continuing to violate the Endangered Species Act (ESA) and to manage the Missouri's dams primarily to benefit barge traffic. The Corps had been reviewing dam operations since 1991 but has not yet proposed reforms that would meet the needs of federally protected species, according to a recent letter from the U.S. Fish and Wildlife Service. The Corps' Missouri River Master Manual is a guide that the federal agency uses to set the releases for six dams in eastern Montana and the Dakotas. This proposal ignores the needs of the recreationist even though recreation produces ten times the economic benefits of barges. The proposal also continues to put three species at the brink of extinction by failing to increase spring dam releases or lower summer dam releases. In the last decade, the Corps has met reproductive goals for terns and plovers only once, and there has been only one reported case of sturgeon spawning. The adjustment to more natural flows would aid endangered fish and birds such as the interior least tern, piping plover, and the pallid sturgeon. These species are threatened by dam releases for barge traffic, which have eliminated the Missouri's natural flow characteristics. Higher spring flows are necessary to create sandbars used by the terns and plovers for nesting, and to serve as a reproductive trigger for the pallid sturgeon. Lower summer flows are needed to expose sandbars and provide areas of shallow water. The pallid sturgeon is a prehistoric species that is now facing extinction. This species has survived more than 150 million years, but in the last 50 years of the “age of dams” the “industrial period,” we have managed to nearly erase its existence.

American Rivers is issuing a call to reform Missouri River dam operations with a “split season” alternative. Under the alternative, the Corps would increase dam releases from Gavins Point Dam in South Dakota from 35,000 cfs to 50,000 cfs between May 1 and June 15, and then reduce dam releases to 18,000 cfs during the summer, temporarily suspending barge traffic between July 1 and August 20. The Corps' own studies show that more than 80 percent of farm-related barge cargo is shipped during the spring and fall and that higher spring flows would not interfere with floodplain farming. Under American Rivers' “split season” alternative, normal barge traffic would continue in the spring and fall. The split navigation season would aid recreation by keeping reservoirs higher during the summer. And, lower summer flows from Gavins Point Dam would provide shallow water, attracting anglers, canoeists, and others to the lower Missouri River. In early December, Senators Tom Daschle (D-SD), Max Baucus (D-MT), Byron Dorgan (D-ND), Kent Conrad (D-ND), and Tim Johnson (D-SD) also urged the Corps to adopt a spring rise and split navigation season. Missouri River biologists also support the “split season” alternative. According to attorneys for the Congressional Research Service (CRS), the Corps “has discretion as to its management of the Missouri flows and navigation seasons.” They also concluded that there is “no statutory mandate for any particular flows, levels of navigation

depths, or for length of season of operations, etc., in the principle legislative authorizations.” They also concluded that there is “no statutory mandate for any particular flows, levels of navigation depths, or for length of season of operations, etc., in the principal legislative authorizations.” The CRS also determined that the Corps “must follow the Section 7 consultation process and implement whatever measures it determines are necessary to avoid jeopardizing the continued existence of species listed” as endangered or threatened. Other findings in the CRS report include:

- ◆ The Corps’ position that it will only comply with the ESA to the extent “consistent with other duties” does not reflect the mandates of current law;
- ◆ The Flood Control Act of 1944 indicates that navigation is not to be carried out in a manner that conflicts with other uses; and
- ◆ The Fish and Wildlife Coordination Act of 1958 directs that fish and wildlife conservation receive equal consideration with other project purposes.

Facing drastic declines and the loss of species forever is a matter of urgency for all mankind. The unknown effects of such losses can only be hypothesized or projected at best. The Federal Government established the ESA for the good of all creation in hopes of sustaining life for generations to follow, not just for our enjoyment. From the wild salmon of the Snake River to the sturgeon of the Missouri River, measures must be taken immediately to ensure that we not only meet the regulations put forth by our government, but we maintain the existence of species that are at the brink of extinction.

For more information visit: www.americanrivers.org or www.edf.org. To learn more about the CRS report and American Rivers’ Missouri River Campaign, visit www.americanrivers.org.

From — American Rivers, Summer 2000

LOUISIANA PROGRAM WORKS TO KEEP OIL RIGS AS REEFS

One of the unexpected benefits of Louisiana’s offshore oil and gas industry has been the creation of one of the world’s most extensive de facto artificial reef systems. When federal regulations began requiring the removal of obsolete platforms, the resulting loss of fish habitat inspired the state to establish a program turning those oil rigs into reefs.

“People would go out fishing, only to find that their favorite fishing spot was gone,” says Dr. Chuck Wilson, professor and chair of the Department of Oceanography and Coastal Studies at Louisiana State University and AIFRB member. “It was clear we needed to stop this loss of habitat.”

The resulting plan, which was developed in the early 80s with the consensus of government agencies, the oil and gas industry, commercial and recreational fishermen, and academia, saves the oil and gas industry money, puts cash in the state’s coffers, and preserves fish habitat and fishing opportunities.

“It’s your classic win/win situation,” says Rick Kasprzak, Louisiana’s Artificial Reef Program coordinator.

The state’s offshore oil and gas industry began in 1947, and since then, more than 4,500 platforms have been installed along Louisiana’s shoreline. Wilson says that over 70 percent of recreational and commercial fishing trips end up at one of these structures. He noted 10,000 to 30,000 fish typically can be found around a single platform in water depths between 100 and 600 feet. “We’re finding 50 to 60 times more fish around a platform than in adjacent open waters.

Federal regulations, however, require that these structures be removed within one year after the lease is terminated. From 1973 to 1993, more than 1,115 platforms were removed from the Gulf of Mexico.

In 1986, the Louisiana Fishing Enhancement Act was signed into law, creating the Louisiana Artificial Reef Program. Since the program’s inception, Kasprzak says 30 different petroleum companies have participated, donating 97 structures that have been placed in waters 100 to 300 feet deep. The participating companies also contributed 50 percent of what they would have spent to remove the platforms, which means more than \$16.2 million has been deposited in the state’s Artificial Reef Trust Fund. The monies in the trust are used to fund the program.

“Once the platforms have been taken out, they’re gone. An oil company isn’t going to pay to put it back, so you have to take advantage of the material while it’s out there,” Kasprzak says.

Wilson notes, “This is the ultimate example of coastal management because we got everybody with an interest together... and determined the best way to have this work. This has been a great marriage between government, industry, and academia.”

For more information on the Louisiana Artificial Reef Program, point your browser to www.wlf.state.la.us. You may also contact Rick Kasprzak at (225) 765-2375 or kasprzak_ra@wlf.state.la.us, or Dr. Chuck Wilson at (225) 578-6283 or cwilson@lsu.edu

From — Coastal Services: 4(1) Jan. - Feb. 2001

Act Seeks To Restore 1 Million Acres Of Estuarine Habitat

\$275 million authorized for underwater grass bed, wetland projects

The pace of habitat restoration in the Chesapeake Bay could be dramatically increased under legislation approved by Congress in October which seeks to restore 1 million acres of estuary habitat around the nation during the next decade.

The Estuaries and Clean Waters Act of 2000 would establish a national restoration strategy for estuarine habitat and authorizes Congress to spend \$275 million over the next five years on habitat projects such as wetland and underwater grass bed restoration to help achieve the million-acre goal.

The authorized level of \$275 million was a slight reduction from the \$315 million originally proposed for the first five years of the program.

"So much has already been lost that it's time we start the process of restoring our estuaries to what they once were," said Rep. Wayne Gilcrest, R-MD. "Fish catches are at their lowest, shellfish beds have been closed, and the livelihoods of watermen and others are threatened. We have to do everything we can."

Although the bill authorizes spending money in the future, Congress still must approve any actual spending in specific appropriations bills each year. The bill was not passed in time for any money to be appropriated for the current fiscal year, which began Oct. 1.

The legislation is aimed at supporting on-the-ground projects undertaken by local organizations and communities. Specific projects would be selected by a national council with representatives from the EPA, National Oceanic and Atmospheric Administration, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service and the Department of Agriculture.

Although there is no formula for dividing the money among different areas. The Chesapeake Bay is expected to benefit as it is the nation's largest estuary. The final version of the bill also allows for the funding of projects in the Great Lakes. Under the legislation, local groups would be required to pay 35 percent of the total project cost, with the federal share covering no more than 65 percent. All projects would need to include long-term monitoring to assess its success.

From — Bay Journal, Nov. 2000

U.S. VOTES YES, JAPAN NO ON TUNA LIMITS

Meeting in Honolulu, Hawaii, in September, 19 of 24 nations formally approved the creation of a new commission to regulate the catch of four tuna species (albacore, bigeye, skipjack, and yellowfin) in the western and central Pacific Ocean. The voting countries were attending the Multilateral High-Level Conference on Highly Migratory Fish Stocks in the Pacific.

While the United States supported this agreement, Japan and South Korea opposed the convention. China, France and Tonga abstained, and China opposed giving membership status to Taiwan. The agreement seeks to protect developing Pacific countries with large tuna stocks from distant nations that fish in these waters.

From — International Angler: 62(6) Nov.-Dec. 2001

CONSERVATIONISTS OPPOSE FOREIGN FISHING PROPOSED

In a statement on certification of Japan for whaling, President Clinton indicated that late in 2000 and for the first time in more than a decade (since 1988), allocations for foreign fishing in U.S. waters are likely to be approved. Species involved are Atlantic herring and mackerel as recommended by the New England and Mid-Atlantic Fishery Management Councils.

In response, the Recreational Fishing Alliance (RFA) has lodged a formal complaint with James Baker, the Secretary of Commerce, and Penelope Dalton, the Assistant Administrator for NMFS, requesting they disallow the allocations for TALFF (total allowable level of foreign fishing).

These allocations set the stage for a resumption of foreign fishing in U.S. waters, a practice not allowed for over 20 years, according to the RFA. Concerned recreational fishermen should express their opinions to their congressmen or to NMFS, the RFA advised.

From — International Angler: 62 (6) Nov. -Dec. 2001

Lake Sturgeon Returned to Tennessee Water

In July, World Wildlife Fund (WWF) and its local partners released hundreds of lake sturgeon into Tennessee's French Broad River, about 50 miles upstream from Knoxville.

Described by nineteenth-century poet Henry Wadsworth Longfellow as the "king of fishes," lake sturgeon can grow up to 8 feet in length, weigh over 300 pounds, and live to be 100 years old. The mighty fish once thrived throughout Tennessee but disappeared from that range due to water pollution and habitat alteration. Cleanup of the river has been an environmental success story and bodes well for the success of the sturgeon reintroduction project.

The project is the result of a unique partnership among the Tennessee Valley Authority, U.S. Fish and Wildlife Service, Tennessee Aquarium, Tennessee Wildlife Resources Agency, Southeast Aquatic Research Institute, and World Wildlife Fund, which has targeted this region of the United States as a Global 200 priority in its Living Planet Campaign.

"WWF recognizes the Tennessee River Basin as the most diverse aquatic place in the world," said WWF project leader Wendy Smith. "Successfully reintroducing lake sturgeon into the Tennessee River system is an exciting good news story for everyone in the region."

The project partners have agreed to work together over the next 25 years to reestablish the rich aquatic life that once existed in the region, including the annual release of 1,000 sturgeon for at least a decade.

Visit our Web site at www.world-wildlife.org/focuslinks to learn more about WWF's conservation efforts in the Southeast Rivers and Streams ecoregion and other Global 200 areas.

From — Focus: 22(6) Nov.-Dec. 2000

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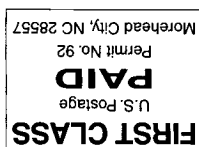
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