Thompson

American Institute of Fishery Research Biologists

. . . BRIEFS . . .

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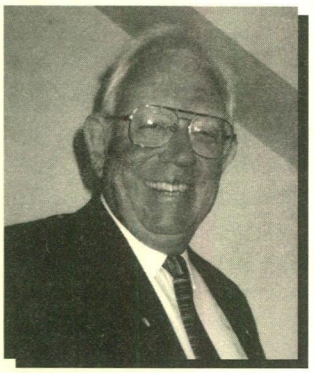


President's Notes

I had the distinct honor and pleasure to travel out to Michigan State University on March 6 to present AIFRB's Special Group Achievement Award to the Great Lakes Fishery Commission. Receiving the award on behalf of the Commission was Dr. Chris Goddard, the Commission's Executive Director. He indicated his deep appreciation for the recognition bestowed upon the Commission, especially since it was coming from the Institute composed of his peers. I also was afforded two separate photo-opportunities to make the presentation, i.e., once at a one-hour symposium sponsored by AIFRB which immediately preceded the annual meeting of the Michigan Chapter of the American Fisheries Society, and again at the Chapter meeting itself. On both occasions, in addition to making the ceremonial presentations of the award, I took the liberty to "talk up" the Institute and, hopefully, encourage additional membership, especially among students and younger colleagues. (I would remind and ask all District/Chapter Directors and other AIFRB officers to do the same at every opportunity you get to do so.) I want to especially thank Dr.Dora Passino-Reader and Dr. William Taylor for their hospitality and for making all of the necessary arrangements. The evening before the presentations, I was also able to share an enjoyable dinner with Carlos Fetterolf, and Drs. Tom and Carol Edsall, during which, among other things, we were able to discuss several issues of concern to the AIFRB and its membership.

I will be holding a teleconference with the Board of Control and a few other officers and committee chairs on Friday, March 28, to measure progress toward achieving the 2003 committee goals and objectives that were set at the 2002 BOC meeting in Baltimore last August; to discuss other items of concern that might need immediate attention; and to begin preparations for the next BOC meeting in Quebec City this coming August. If there is some item any of you would like included on our discussion agenda, please let me know asap by e-mailing me at dickschaef@aol.com. In the near future, I will also be seeking suggested discussion/action items from you for inclusion in the BOC meeting agenda.

Regarding the August meeting, please be reminded that I am still seeking a volunteer to help Dora prepare for our annual reception which will be held just prior to the AFS meeting. If any of you know that you will be going to the AFS meeting, it would probably only involve arriving a day or two early to help her make the necessary arrangements. If you are willing and able, please let either of us know asap, Thanks.

Important Nominations Needed!

Outstanding Achievement Awards
Our Most Prestigious Honor!

We are soliciting nominations for the Outstanding Achievement Awards. This is your opportunity to provide nominations so that the AIFRB can recognize those individuals and organizations that are making outstanding contributions to our science. Two awards are given for each year.

Individual Achievement Award for 2004: The Individual Achievement Award is given to an individual who has made significant contributions to the advancement of fishery science. This is the highest award for achievement. Candidates will be rated on the following criteria: 1) significant publications; 2) exceptional service to the profession; 3) outstanding teaching or training of students; 4) important discoveries or inventions; 5) significant contributions to the advancement of fishery science. It is important that you address each criterion thoroughly in your nomination. The nominating letter should include name, address, telephone number and email address of nominee, a short resume of the nominee and a letter fully describing how the nominee meets the criteria above. Please include your name, address, telephone number and email address so we can contact you if additional information is needed.

Group Achievement Award for 2003: The Group Achievement Award is given to an organization or group within an organization with an outstanding record of scientific contribution to fishery science or fishery resource policy. It is the Institute's highest award for achievement and recognition of organizations that nurture excellence in fishery science. The organization will be rated on the following criteria: 1) sustained contribution of significant publications; 2) exceptional service

The AIFRB is a 501(c)(3) tax-exempt nonprofit organization (EIN 61-6050711).

to the fishery profession; 3) outstanding teaching or training of students; 4) important discoveries or inventions; 5) significant contributions to the advancement of fishery science. It is important that you address each criterion thoroughly in your nomination. The nominating letter should include name, address, telephone number and email address of the group leader, a short resume of the nominee and a letter fully describing how the group or organization meets the criteria above. Please include your name, address, telephone number and email address so we can contact you if additional information is needed. Also, please include a list of all the group nominators along with a short paragraph addressing how each nominator contributed to the Group Achievement Award nomination.

Deadline for nominations for these two awards is close of business June 6, 2003. Fishery scientists whose names were submitted and selected as runner-ups last year will also be considered. Submit nominations to Dr. Linda Jones, Northwest Fisheries Science Center, Linda.Jones@noaa.gov. For your information and help in considering nominees, listed below are the lists of Individual Outstanding Achievement Awards 1979-2003 and Group Outstanding Achievement Awards 1982-2002. If you have any questions, please contact Linda Jones, or committee members Jack Helle at Jack.Helle@noaa.gov or Bill Taylor at Taylorw@msu.edu.

Previous recipients

Individual Outstanding Achievement Award: 1979, Elbert H. Ahlstrom; 1980, James E. Sykes; 1981, F. Heward Bell; 1982, Richard H. Stroud; 1983, Kenneth D. Carlander; 1984, David W. Schindler; 1985, Peter Larkin; 1986, William G. Gordon; 1987, William F. Royce; 1988, Reuben Lasker; 1991, Robert L. Burgner; 1992, William W. Fox; 1993, Arthur D. Hasler; 1994, William E. Ricker; 1995, Raymond J.H. Beverton; 1996, Reeve M. Bailey; 1997, William G. Pearcy; 1998, John H.S. Blaxter; 1999, Saul B. Saila; 2000, John R Hunter; 2001, Kenneth E. Wolf; 2002, Fred Utter; 2003, Howard Bern.

Outstanding Achievement Award: 1982, Canadian Journal of Fisheries and Aquatic Sciences; 1983, Great Lakes Sea Lamprey Control Program; 1984, Harvesting Technology Division, NMFS, Pascagoula, MS; 1985, Sport Fishing Institute; 1986, International Pacific Halibut Commission; 1988, Southwest Fisheries Center, NMFS, La Jolla, CA; 1992, Cooperative Fish & Wildlife Research Units Center & Related Coop Units; 1997, International North Pacific Fisheries Commission; 1998, The Illinois Natural History Survey; 1999, National Fish Health Research Laboratory, USGS, Kearneyville, WV; 2000, International Pacific Halibut Commission; 2002, The Great Lakes Fishery Commission.

The W.F. Thompson Award for Student Produced Papers – 2001

The W.F. Thompson Award is given to recognize the "best paper" published by a student. The nominations should include a brief resume (5 copies) and 5 copies of the paper, which this year must have been published in 2001. Any student, foreign or domestic, is eligible, as long as the paper is in English, was written while the student was a BS, MS, or PhD candidate when the research was done, and the student was the first author. Papers are evaluated based on the scientific content, excellence in authorship, graphics (i.e. quality and information), use of the literature, applicability to future science and "management", and general format. All papers (published in 2001) BUT SUBMITTED IN 2003 should be sent to: Jack Pearce (Chair, WFT Award Committee), 54 Upland Avenue, Falmouth MA 02540. Copies will then be sent to teams of referees for review and a final selection. ALL PAPERS MUST BE RECEIVED BY MAY 15, 2003. Winners will receive an appropriate certificate, be announced at the annual meetings of AIFRB and AFS, and be given a check for $500. If the author of the winning paper is in attendance he/she will participate in the award ceremonies. Students may be nominated by a mentor, professor, any associate or his/her self. For information call Jack Pearce at 508-540-4572 or buzbay@cape.com.

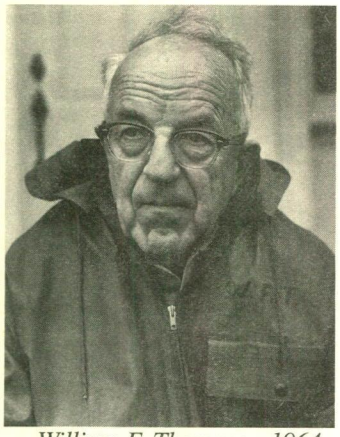
The Inspiration for the Thompson Award

William Francis Thompson (1888-1965): a Preeminent Fishery Biologist of the Early and Mid Twentieth Century

By J. Richard Dunn

William Francis Thompson was a major figure in fisheries research on the west coast of the United States in the early and mid 20th century. He came to prominence in an era of increased awareness in the United States of the need for conservation of wildlife, and for over 50 years he was a major contributor to fishery science and management as well as to fishery education. During this period Thompson was arguably the most widely known fishery scientist in North America.

Born in St. Cloud, Minnesota, in 1888, Will Thompson moved west with his family to Everett, Washington, in 1903. He demonstrated an early interest in the study of natural history and majored in zoology at the University of Washington, Seattle, from 1906 to 1909. David Starr Jordan (1851-1931), President of Leland Stanford Jr. University in Palo Alto, California, learned of Thompson's drive and dedication. Jordan offered Thompson a scholarship, and in 1909 Thompson transferred from the University of Washington to Stanford University where he became a research assistant to Jordan. Thompson graduated with a BA degree in zoology in 1922 and published ten papers on the taxonomy of marine fishes during 1910-14, mainly as junior author with Jordan.



William F. Thompson 1964

Pursuing graduate work at Stanford University in the fall of 1911, Thompson came under the influence of Charles Henry Gilbert (1859-1928), a zoology professor and eminent early fishery biologist. Gilbert thought highly of Thompson and arranged jobs for him during the summers between university semesters, first with the California Fish and Game Commission (1911) and then with the British Columbia Provincial Fisheries Department of Canada (1912-13). These assignments entailed surveys of shellfish resources.

Excelling in these studies, Thompson was then entrusted by the Provincial Fisheries Department to undertake a comprehensive, full-time investigation of the Pacific Halibut, *Hippoglossus stenolepis*, in British Columbia. Thompson conducted an intensive study of this species from 1914 to 1917 and published the results in seven landmark papers.

In 1917 research on the halibut began to wind down as concern intensified in Canada over the ravages of World War I. Thompson was then hired by the California Fish and Game Commission to investigate that state's marine fisheries. While there, he helped found, and direct, the Commission's first marine fisheries research laboratory. Thompson focused his investigations initially on the albacore tuna, *Thunnus alalunga*, and then on the Pacific sardine, *Sardinops sagax*, as the commercial harvest of this latter species began to increase.

The International Fisheries Commission (now the International Pacific Halibut Commission) was established in 1923 by treaty between the United States and Canada to investigate and regulate the fishery for Pacific halibut. Thompson, the logical choice, was appointed Director of Investigations for the newly formed Commission, left California, and began his work for the Commission in Seattle in 1925. Expanding his earlier Pacific halibut studies, he engaged a small staff of scientists that undertook the applied research necessary for the scientific management of the halibut fishery. Thompson remained as Director of Investigations for the Commission until 1939. During his tenure halibut abundance increased, as did the commercial harvest. The halibut fishery ultimately was considered a model of well-managed fishery.

Thompson was appointed Director of the School of Fisheries (now the School of Aquatic and Fishery Sciences), University of Washington, in 1930. This appointment was initially a part-time position in addition to his duties at the International Fisheries Commission.

The International Pacific Salmon Fisheries Commission was established in 1937 to restore the sockeye salmon, *Oncorhynchus nerka*, runs of the Fraser River, British Columbia. Thompson, by then recognized as one of the premier fishery scientists of the era, was chosen to be the director of this newly formed organization. He initially retained his other positions as Director of the "Halibut Commission" and of the U.W. School of Fisheries, thus holding three jobs simultaneously! Thompson followed his previous approach to fisheries research by building a small but talented staff of scientists and broadly attacking a wide range of research projects pertinent to the current fisheries problems. He directed the research that resulted in the construction of fish ladders at Hell's Gate on the Fraser River. These ladders were built to enable salmon to bypass migration obstructions caused by certain high water-level conditions. Thompson and the Commission were generally credited with restoring the abundance of salmon in the Fraser River. He resigned from the "Salmon Commission" in 1942 and returned to the University of Washington as the full-time Director of the School of Fisheries.

Thompson was the Director of the School of Fisheries for over 17 years (1930-1947). During his tenure, the school developed into a preeminent facility to train fishery scientists, and it graduated many individuals who subsequently became prominent fishery scientists and leaders in fisheries research and administration.

After the close of World War II, the salmon packers of Bristol Bay, Alaska, became concerned about the declining abundance of salmon in Alaska. In 1945 they asked Thompson to undertake a preliminary study of the situation and to make recommendations for action. Thompson visited Bristol Bay, reviewed much of the available data on the salmon fisheries of the region, and wrote a report to the packers. He called for long-term studies of the runs to various watersheds of Bristol Bay and noted that such investigations were then lacking. The salmon packers funded an expanded investigation by Thompson in 1946 and 1947. The salmon canners of southeastern Alaska soon thereafter asked that Thompson also undertake scientific investigations in that region.

Realizing that a comprehensive investigation of salmon in Alaska would ultimately require a relatively large organization, Thompson organized the Fisheries Research Institute at the University of Washington. The university's Board of Regents approved the institute in 1947 and placed it administratively in the Graduate School and therefore distinct from the School of Fisheries. Thompson resigned the directorship of the School of Fisheries in 1947 and was named Research Professor and Director of the new institute.

Over the years The Fisheries Research Institute undertook detailed studies of Pacific salmon in various areas of southeastern, central, and western Alaska. In the early years, this research was funded mainly by the Alaska salmon industry. Later, the federal government provided major support for these studies. The Institute, well known for the high quality of its research, made major contributions over a 50-year period to knowledge of Pacific salmon biology. During the early part of this era, Thompson became the "expert" on salmon of Alaska and the Pacific Northwest, and he was involved in most aspects of salmon research. Thompson maintained close relations with the Alaska salmon industry that, in turn, respected and trusted him. He generally

received broad support from industry and government for his research.

Thompson retired from the directorship of the Fisheries Research Institute in 1958 at the age of 70. He remained as a consultant to various fishery agencies, including the Bureau of Commercial Fisheries (now the National Marine Fisheries Service), the International North Pacific Fisheries Commission, and the U.S. Army Corps of Engineers. Thompson also remained close to the salmon fishing industry as an advisor. Many scientists and administrators held him in high esteem and welcomed his honest and forthright comments and criticism.

Will Thompson died on November 7, 1965. He left a legacy as a preeminent fishery scientist of his era. He influenced a myriad of fishery scientists by studying the characteristics of the fisheries, rather than the environment, to develop management strategies. Thompson's work with the halibut and salmon of the Pacific Northwest and Alaska became classic, but at times controversial, studies of commercial fisheries. He published about 150 scientific papers and was well known for his original studies of population dynamics of commercial fishes.

Under Thompson's leadership, the School of Fisheries at the University of Washington became world-renowned. He was the doctoral advisor for many of the principal scientist who carried out fishery work on the Pacific coast after World War II. He was also the major fishery researcher on the West Coast during the interlude between the two World Wars. Thompson was known as a highly focused individual and an intense worker, who, at times, was possessed of a difficult personality.

Always possessing a high concern for ethics, Thompson helped found the American Institute of Fishery Research Biologists in 1956 to ensure high standards in the profession. Thompson's pioneering accomplishments remain in high esteem today.

Modified from: Marine Fisheries Review 63(2): 1-4
Thanks to Willis Hobart & Allen Shimada for this submission.

Carlander Scholarship Established

A scholarship in memory of Kenneth D. Carlander, who died November 21, 2002 (see *Briefs*, November-December 2002) has been established at Iowa State University. Donations may be sent to: Carlander Scholarship, ISU Foundation, 310 Curtiss Hall, Iowa State University, Ames IA 50011. For information contact Robert Summerfelt, Dept. of Animal Ecology, 124 Science II, Iowa State University, Ames IA 50011 or rsummerf@iastate.edu.

AIFRB vs. the AFS

A Giant Difference

By Michael Hinton

With respect to questions about the difference between AFS and AIFRB: a critical difference is that AFS is an advocacy group. You can pay your dollars and belong. You can pay your dollars and with what amounts to minimum participation in attendance at their seminars and symposia and annual meetings, retain their certification as a professional, and you can renew it as long as you continue to send in money and attend the necessary stuff. You cannot buy your way into AIFRB – we are a professional society. Your invitation to join, and your advancement in rank are based not on what you pay but on what you do in fisheries science. You are recognized by professionals for your professional performance. So, does AIFRB condone or support advocacy for fisheries? Of course. We support the development of fisheries professionals, we support scientific input into decision-making processes, and we encourage our members to participate in the advocacy groups of their choice, while at the same time they adhere to our "Principals of Professional Conduct for Fisheries Biologists." Does the AIFRB take advocacy positions? It may make a statement from its governing board that does not cross the line into lobbying on a political issue, thus it may present a white-paper based on scientific analysis or review, thereby maintaining its status as a professional society expressing the views of professionals. These are very significant differences in the construct and underlying philosophies of the two organizations.

As for what will draw old and new members to activities in your district: when these points of difference are drawn to the front, while acknowledging that AFS has a role to play in fisheries advocacy, I think it becomes easier for potential members to see the reasons for applying for membership in AIFRB. Too, you must point out that along with membership come actions that work to enhance their careers, including opportunities for assistance for junior professionals to attend conferences to present research, and the same for student researchers; letters of commendation to employers from District Directors and the President for excellent performance and advancement in rank – i.e. statements that note that the member has been recognized by his peers for his professional contributions to fisheries science. These are things that come not from paying your $100 to AFS to renew that plaque on the wall, but by peer recognition of a member's professional performance.

I think that for too long this message has not gotten out – I think the only hope for AIFRB in the long term is for those now in leadership positions – and I mean ALL the District Directors and the President – to get this message to the membership

through action and letters that influence the members lives and employment and magnifies their personal pride in being a member of AIFRB. Now, go out and get AFS to let the professionals of AIFRB judge the papers presented at their symposia and annual meetings, and the same for other scientific meetings and events where fisheries papers are presented: the precedent has been set by the Northern and Southern California Districts!

Friedland Appointed New England District Director Pearce still working hard for AIFRB

Kevin Friedland, Director of the University of Massachusetts/NOAA CMER Program, has been appointed by President Schaefer as Director of the New England District. Former Director Jack Pearce has resigned in order to better fulfill familial duties and to maintain his role as editor of two scientific journals. Long serving and long-suffering Pearce will continue in the vital role of Chair of the W.F. Thompson Award Committee.

Members at Work: Two New Books

Beverton Lectures, Ed. By E.D. Anderson

The Raymond J.H. Beverton Lectures at Woods Hole, Massachusetts. Three Lectures on Fisheries Science given May 2-3, 1994. (2002) Edited by AIFRB Fellow E.D. Anderson. Hard bound in dark blue imitation leather with gold-colored lettering (161pp).

In May 1994, Ray Beverton presented a series of lectures at facilities of NOAA's National Marine Fisheries Service (NMFS) in Woods Hole, Massachusetts; Seattle, Washington; Auke Bay and Juneau, Arkansas; La Jolla, California; Beaufort, North Carolina; and Silver Spring, Maryland. The three lectures he gave in Woods Hole were videotaped, and have been transcribed and edited in this volume. These lectures are are as follows: 1) Man or nature in fisheries dynamics: who calls the tune?, 2) Fish population biology and fisheries research, and 3) Reflections on 100 years of fisheries research.

On behalf of the American Fisheries Society's Marine Fisheries Section, copies are available for $35 postpaid (in US funds) from Douglas Vaughan, NOAA Center for Coastal Fisheries and Habitat Research, 101 Pivers Island Road, Beaufort, NC 28526-9722. Checks should be payable to: Marine Fisheries Section AFS. For orders from Hawaii, Alaska, and outside the US please include an additional $5 for shipping.

For an additional $10, copies of the softbound volume, "Notes on the Use of Theoretical Models in the Study of Exploited Fish Populations", by R.J.H. Beverton, will be provided with the above volume. This latter book developed from a series of lectures from a course taught by Professor Beverton in Beaufort, North Carolina, in 1951, and was published by the AFS Marine Fisheries Section in association with his tour of NMFS laboratories in May 1994.

Submitted by: Mary Fabrizio

Imperfect Symmetry: Thermodynamics in Evolution and Ecology

By Lionel Johnson, Emeritus Fellow

The ideas developed in this publication emerged out of many years work on the freshwaters of the Canadian Arctic. The critical feature being that there exist in this region freshwater ecosystems that are amongst the simplest in existence, yet contain all the main features of interest in ecological research. In addition they function as completely closed systems for nine months of the year and are untouched by human activity. In this they provide unique examples of ecosystems that have reached a stable state, expressed most clearly in the dominant fish population, the characteristics of which are: a great mean age and a high degree of uniformity in size among individuals, a high biomass relative to a very low level of primary productivity and the capacity of the population to return to its original configuration when disturbed. Such characteristics indicate a state of least specific energy dissipation attainable, given the species under consideration and the total environment in which it exists.

On exploration of the literature, these characteristics were discovered, in the appropriate circumstances of isolation and freedom from interference, in many populations worldwide, both aquatic and terrestrial, plant and animal.

Such configuration presupposed the existence of two opposing forces, which approach equilibrium at the climax, the most stable state for the assemblage of species concerned. These forces are identified as resulting from the universal *Principle of Least Action* (minimum time-delay in the passage of energy, as encountered in most energy transfer processes), and its anti-symmetric principle, that of *Most Action* (maximum time-delay in energy transfer), action being measured in terms of energy times time (joule-secs).

These basic properties of living things provide an explanation for many observed generalities in ecology and

evolution: from "r- and K-selection" to the overall direction of evolution toward greater complexity and greater diversity.

Paperbound, 221pp. Available from: Torguch Publishing, 1021 Wildflower Place, Sidney, British Columbia, V8L 3R3, Canada.

Editor's Note: I am seeking a reviewer for this work. A volunteer?

They Do It Right! (and often!)

California Districts are frenetically active!

The Winter Season Banquet of the Northern California District was held on Saturday, January 18, 2003, at The Mandarin Restaurant in Ghirardelli Square, San Francisco. A 6:30 pm social hour was followed by dinner at 7:30 and a spectacular view of San Francisco Bay from The Mandarin. To accommodate members who indicated that they would like more vegetarian fare, we had two purely vegetable dishes, in addition to a variety of shrimp, chicken and pork dishes. The full banquet fare is listed below. Per person cost was $36.50 including tax and gratuity. We recognized that this amount was a bit high for some of our members. Therefore, the District subsidized half of the dinner cost for students ($18.00), and for any other member that so requested.

Banquet Detail: Appetizer - Spring Rolls; Soup - Hot and Sour Soup; Entrée - Prawns a la Szechwan, String Beans a la Szechwan, Cashew Chicken, Mu Shu Pork, Oyster Sauce Broccoli with Shiitake Mushrooms, Steamed Rice, Jasmine Tea; Dessert - Mandarin Flamed Bananas, Fortune Cookies.

Editors Note: Reading this right before dinner is hell. Yummy stuff!

We had a good turnout, great meal, and lively conversation. The other district officers and I again want to thank Summer Morlock for doing the leg work that made this year's banquet such a success.

On the heels of the USFWS decision that although warranted, the listing of the mountain yellow legged frog is precluded at this time by higher priority actions, the California Department of Fish and Game still has to play tug of war with itself regarding co-management of fish and special-status amphibian species, especially in the Sierra, Nevada. Mr. Stafford Lehr, CDFG Associate Fishery Biologist, presented his extensive insight and knowledge of this subject on February 27, 2003, at Captain Blyther's Restaurant in Benicia in a talk entitled, "California Department of Fish and Game High Mountain Lake Fisheries/Amphibian Surveys and Management Strategies".

On March 27, we will be especially proud to have Dr. Gregor M. Cailliet, Professor at Moss Landing Marine Laboratories, speak on "Life Histories and Fishery Ecology of Sharks and Rays (or Elasmobranchs and other long-lived fishes) and the New Pacific Shark Research Center". This event will be held at Lou's Village in San Jose.

The American Institute of Fishery Research Biologists (AIFRB), Northern California District, will be judging the student papers and student posters for the 2003 Annual Meeting of the Western Division of the American Fisheries Society and the California/Nevada Chapter – AFS. This year, the Southern California District of the AIFRB also will be assisting in the judging. All senior authors who are bona fide students and are presenting a paper during a symposia from Tuesday, April 15 (1:00 pm) through Thursday, April 17 (4:50 pm) are eligible to win big bucks for Best Student Paper and for Runner-up Best Student Paper. Best Student Poster and Runner-up Best Student Poster will also be judged, but the senior author must be a student. In order to qualify, the senior author (or a junior author) must be present during the official poster judging session.

Submitted by: Tom Keegan, Northern California Director

Two Interesting Meetings

Propagated Fish in Resource Management Symposium (PFIRM)

The PFIRM Symposium program, plus other conference information has been placed on the website at: http://www.fishbiologycongress.org/PFIRM. This Symposium, being in Boise, ID, June 16-28, 2003, will be of interest to anyone involved in the use of cultured fish in fisheries management. If you have questions, please contact the Program Chair, John Nickum at: mailto: jgnickum@hotmail.com.

Organic Aquaculture & Sea Farming 2003 Global Technical and Trade Conference & Exhibition

June 15-17, 2003, Ho Chi Minh City, Vietnam
Jointly with Vietfish 2003 International Fisheries Exhibition
InfoFish – Organic Aquaculture & Shrimp Farming 2003
Postal address: PO Box 10899, 50728 Kuala Lumpur, Malaysia
Street address: 1st Floor, Wisma PKNS, Jalan Raja Laut, 50350 Kuala Lumpur, Malaysia
Telephone: (603) 2691 4466/26914614/26914794 and/or Fax: (603) 2691-6804
Email: infish@tm.net.my or infish@po.jaring.my and/or Website: http://www.infofish.org

NOAA Fisheries 2001 Report Available

A succinct and colorful review of the status of the nation's living marine resources was released in late 2002. Featuring abundant photographs, colorful graphs, but yet packed with useful, if slightly dated, facts the document is an interesting read for any fishery professional.

Copies available from: Office of the Assistant Administrator for Fisheries, NOAA National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910. Telephone: 301-723-2239. On-line version: http://www.nmfs.noaa.gov.

Marine Fisheries Fuel the U.S. Economy

More than one-fifth of the world's most productive marine waters lies within the U.S. Exclusive Economic Zone. The value of both commercial and recreational fishing is significant to the U.S. economy, to thousands of private firms, and to individuals, families, and communities.

- More than 170,000 people and 123,000 commercial fishing vessels are employed in the United States, the world's fifth largest seafood-producing country.
- In 2001, U.S. commercial fishermen landed 9.8 billion pounds of fish and shellfish, valued at $3.3 billion (ex-vessel).
- The industry contributed an estimated $28.6 billion (in value added) to the U.S. gross national product (GNP).
- Recreational fishing added another $25 billion to the GNP.

Regional Commercial Landings in 2001

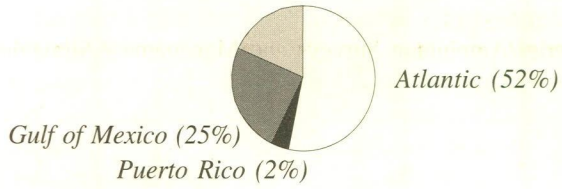
Region	Pounds *(thousands)*	Dollars *(thousands)*
New England	635,162	$646,447
Middle Atlantic	217,975	$172,503
Chesapeake	617,244	$174,968
South Atlantic	199,554	$176,488
Gulf of Mexico/Puerto Rico	1,609,038	$806,359
West Coast	1,137,333	$317,221
Alaska	5,036,338	$869,885
Great Lakes	18,818	$17,844
Western Pacific	32,647	$64,494

Top 10 Commercial Species Landed in 2001

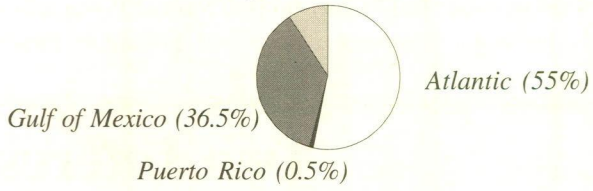
Rank	Top Ten by Quantity Species	Pounds *(thousands)*	Top Ten by Value Species	Dollars *(thousands)*
1	Pollock	3,188,460	Shrimp	$568,547
2	Menhaden	1,741,430	Crabs	$381,667
3	Salmon	722,832	Lobsters	$275,728
4	Cod	504,922	Pollock	$236,923
5	Hakes	497,152	Salmon	$208,926
6	Flounders	352,363	Tunas	$207,300
7	Shrimp	324,481	Scallops	$175,416
8	Tunas	331,100	Clams	$161,992
9	Herring	300,488	Cod	$150,157
10	Crabs	272,246	Halibut	$115,169

Recreational Fishing Statistics for 2001

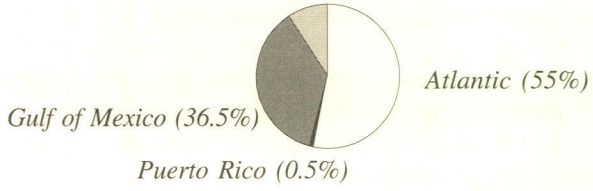
12.1 Million Anglers



86.8 Million Trips



444.2 Million Fish Caught



Note: Data for the Western Pacific were unavailable at the time of this report's publication
From: NOAA Fisheries 2001 Report

North Carolina Sea Grant Announces Fellowship Opportunity

North Carolina Sea Grant is accepting applications for a fellowship opportunity for students nearing completion of an advanced degree program in natural resources or marine sciences. The one-year Marine Fisheries Fellowship provides a $26,000 stipend. It is open to graduate or postgraduate students who are enrolled in master's, doctoral or professional degree programs at North Carolina universities and colleges.

The selected fellow will be placed, beginning July 1, 2003, with the N.C. Division of Marine Fisheries (DMF). The focus of the experience will be on an evaluation of DMF monitoring programs. The fellow will analyze historical data sets and perform gear efficiency studies. Recommendations from this research will guide DMF in determining if modifications in current fishery-independent surveys are required, as well as in interpreting historic monitoring data in future fishery management plans. "The complexity of future marine fisheries issues demands that the best and brightest students learn to apply their talents to resolve fishery concerns," says Ronald G. Hodson, North Carolina Sea Grant Director.

Applications must be submitted no later than April 18. Send a personal/academic resume; a statement – no longer than two pages – giving reasons for applying and educational/career goals; a copy of undergraduate and graduate transcripts; and two letters of recommendation from professors with knowledge of applicant's academic performance. Jeffrey Buckel, a North Carolina State University assistant professor of zoology, is coordinating the selection process. The selection will be announced May 19. Mail application package to Jeffrey Buckel, Sea Grant Marine Fisheries Fellowship Program, Center for Marine Sciences and Technology, 303 College Circle, Morehead City, North Carolina 28557. For additional information about the fellowship, contact Buckel at 252-222-6341, jeffrey_buckel@ncsu.edu or Louis Daniel, N.C. Division of Marine Fisheries, 252-726-7021, louis.daniel@ncmail.net.

Kind Notes Received

(Really! Not often but once in awhile.)
Thanks for the kind notes to the *Briefs*
Editor from Arthur Oakley and Henry Wendler who would enjoy hearing from friends.

New TED Rules Announced

The National Marine Fisheries Service (NMFS) on Friday announced new rules governing the design and implementation of Turtle Excluder Devices (TEDs) on shrimp trawlers in the waters of the United States.

The new TEDs will be required in U.S. waters of the Atlantic south of the North Carolina/Virginia border and in the Gulf of Mexico west of 81E W. longitude, and are intended to dramatically increase the numbers of mature and very large sea turtles that can get out of trawls. The rules will take effect in the Atlantic on April 15.

According to the December 2002 biological opinion that supports the new rules and analyzes the effect of Gulf and South Atlantic shrimp fisheries, the NMFS now estimates that tens of thousands more sea turtles are killed by the U.S. shrimp fleet than previously thought. NMFS estimates that increasing the size of the TEDs will reduce annual mortalities of leatherback sea turtles from 2,300 to 80. Mortalities of loggerheads will decrease from 62,000 to 4,000. As previously designed, the escape hatches in TEDs were too small to provide protection for the larger and more mature sea turtles.

From: Carteret County NC News Times, Feb. 23, 2003

Great Lakes Legacy Act Passes

President Bush signed the Great Lakes Legacy Act on November 27, authorizing $260 million over the next five years for the monitoring, remediation, and prevention of sediment contamination in the Great Lakes. Decades of industrial pollution and growing housing and commercial developments have taken their toll on the lakes, which hold 18 percent of the world's fresh surface water. "This successful vote marks more than three years of effort to develop and pass this legislation by the Sierra Club, the Lake Michigan Federation, and others," says Emily Green, the Club's Great Lakes Director.

From: The Planet, Jan-Feb 2003

Two Points of View

Victory for Channel Islands Marine Reserves

A multi-year Natural Resources Defense Council (NRDC) campaign has culminated in new and heightened protection for the imperiled Channel Islands off the coast of southern California. The California Fish and Game Commission has voted to turn 19 percent of the waters surrounding the islands into a network of strictly protected marine reserves: an underwater wilderness where all fishing, oil drilling, dredging, dumping and other exploitation is prohibited. Taken together, the reserves represent the largest marine protected area off the west coast.

The Channel Islands are home to an extraordinary array of marine mammals, sea birds, fish and giant kelp forests. They also give refuge to several threatened and endangered species, including gray and blue whales, bald eagles, and brown pelicans. Although the northern Channel Islands are designated a national park inside a marine sanctuary, they have continued to suffer from overfishing as well as oil development right on its borders.

In January 2001, the Channel Islands were named to NRDC's list of BioGems – the dozen most endangered wildlands in the Americas – and we intensified a grassroots campaign for marine reserves. Some fishing groups worked hard to kill the new protections, but thousands of NRDC Members kept the pressure on state government.

From: Nature's Voice, Jan-Feb 2003

California Limits Recreational Fishing

In what many anglers fear may be the first in a series of nationwide closures, California Governor Gray Davis has shut the door on some of the most popular recreational areas in southern California. At an October meeting of the California Fish and Game Commission in Santa Barbara, the decision was made to close some 175 square miles of coastal waters surrounding the Channel Islands. This translates to about 30 percent of southern California's best fishing areas. Not only will thousands of anglers in the region no longer be able to fish, but local charter boats, hotels, restaurants and other businesses that rely on angler dollars will suffer. Losses in retail sales may reach $50 million according to an analysis by a leading resource economic consulting firm.

California is second only to Florida in the number of anglers and the amount of money spent on fishing. More than 2.4 million people in California spend $2.38 billion on recreational fishing each year. In excess of 43,000 jobs and $60 million in state tax revenue is tied to recreational fishing, according to U.S. Fish and Wildlife Service data. "We all have an interest in seeing healthy fish," said Mike Nussman, president and CEO of the American Sportfishing Association. "The sportfishing community has supported focused closures as part of a larger management strategy, but this single minded philosophy of banning public access without scientific or economic merit is misguided."

Determined not to allow the California decision to set a precedent, anglers and conservation organizations, including IGFA, have united to launch the Freedom to Fish campaign. Tom Raftican, president of the United Anglers of Southern California, said, "the commission went blasting ahead with a ready, fire, aim approach. Other states need to take notice because they're next."

From: International Angler, 65(1) Jan-Feb 2003

U.S. Not Satisfied with ICCAT's Actions

The International Commission for the Conservation of Atlantic Tunas (ICCAT) has adopted measures to address the problem of illegal, unregulated and unreported fishing for tunas and swordfish in the Atlantic Ocean. ICCAT also extended Phase I of its rebuilding plan for white marlin and blue marlin through 2005. However, the management commission failed to reduce quotas for overfished eastern Atlantic bluefin tuna or to protect juvenile swordfish by limiting quota increases, two key issues pressed by the U.S. delegation. "On the whole, we were disappointed by the outcome of this ICCAT meeting," said Dr. William T. Hogarth, chief U.S. ICCAT commissioner and director of the U.S. National Marine Fisheries Service (NOAA Fisheries). "The total allowable catch for eastern bluefin tuna is way too high, and the total swordfish allowances for the north and south Atlantic Ocean will put significant pressure on the small swordfish that are a high proportion of the stock."

Hogarth conceded that there are some good items in the ICCAT package. "There is increased protection for small bluefin tuna in the Mediterranean. Members also committed to work on integrating bluefin tuna management in the eastern and western Atlantic Ocean, and consider the mixing status between east and west bluefin tuna populations. This action will lead to a re-examination of the arbitrarily set dividing line that separates the two fishery management areas. ICCAT ensured that virtually all of the countries fishing in the Atlantic are now under its management by applying the new allocation criteria," Hogarth said.

ICCAT adopted a plan to maintain a list of large-scale vessels authorized to fish for ICCAT species. This action should help eliminate fishing by vessels operating illegally and not reporting their catches. Vessels that are not on the authorized list will not be allowed to land their catches in ports of ICCAT countries or export catches to ICCAT countries.

From: International Angler, 65(1) Jan-Feb 2003

Last Voyage of the *Valdez*?

The *Exxon Valdez*, the notorious tanker that spilled 11 million gallons of oil into Alaska's Prince William Sound in 1989, has finally been pulled from service. After the spill, Exxon spent 11 months and $30 million patching up the damaged ship. Renamed the *SeaRiver Mediterranean*, the tanker has been hauling oil from the Middle East to Europe for the past decade. But all that steel and paint couldn't repair the injury to the ship's reputation. Protestors often met the *SeaRiver Mediterranean* as it slid into port, and Greenpeace tried to sneak close enough to repaint *Exxon Valdez* on its side.

Designed to carry oil south from the Trans-Alaska pipeline, the tanker proved too big and expensive to keep operating on its new route and was left anchored and idle in an undisclosed Far East port. The ship's owner, an Exxon subsidiary, had repeatedly tried to move the ship back to Alaskan waters. But in October, a federal appeals court upheld a law banning the Exxon Valdez, or any other ship that had spilled more than 1 million gallons of oil, from entering Prince William Sound. –K.T.

From: Sierra, January-February 2003

Ordering Up Exotic Species Information in the Great Lakes

Wish you could get educational material on exotic species as easily as ordering a hamburger at a drive-through window? Great Lakes coastal resource managers say a CD-ROM they produced on aquatic nuisance species is the information equivalent of fast food. In addition to the seven ready-to-serve presentations on harmful exotic species impacts and controls, the "Exotics To Go!" menu dishes up 22 publications in Portable Document Format, or PDF, and offers lists of national and regional experts to contact for more information on exotic species across the country.

The scripts, images, slides, and talking points on the CD, created by the Great Lakes Sea Grant Network, can easily be adapted for a variety of exotic species in other regions. To ensure consistency between the presentations, exotic species experts from around the region followed a single set of guidelines, or recipe. All the materials on the CD, which took about a year to develop, were peer reviewed to ensure quality.

The "Exotics to Go!" CD can be ordered from Minnesota Sea Grant for $2.50 plus tax by pointing your browser to www.seagrant.umn.edu/exoctics/exoticstogo.html, calling 218-726-6191, or emailing seagr@d.umn.edu. It may also be ordered from Illinois-Indiana Sea Grant by going to www.iisgcp.org/pubs/br/cd.htm or calling 847-872-8677. For more information on the creation of the CD, contact Pat Charlebois at 847-872-0140, or charlebo@uiuc.edu, or Doug Jensen at 218-726-8712, or djensen1@d.umn.edu.

From: Coastal Services, 6(2) March-April 2003

Swordfish Surge Back

Thanks to the gustatory restraint of chefs and gourmets alike, the once-vanishing North Atlantic swordfish has made a dramatic comeback. An October report shows that the population has recovered to 94 percent of healthy levels, two years after the conclusion of a successful campaign led by SeaWeb and the Natural Resources Defense Council. After stocks dipped below 60 percent, restaurants across the country agreed in 1998 to take swordfish off their menus until international quotas were reduced and fishing was limited in U.S. nursery areas. Both goals were achieved by August 2000, and as long as these safeguards remain, eating swordfish need not be a guilty pleasure.

From: Sierra, Jan-Feb 2003

Swordfish Soup

4 pounds swordfish bones and scraps
2 large onions, peeled and cut in half
2 large carrots, peeled and cut in half
1 large bay leaf
2 pounds swordfish steaks
1 teaspoon peppercorns
2 cups white wine
Salt
1 large lemon
½ teaspoon saffron threads

Put the bones, onions, carrots, bay leaf and peppercorns in a large stockpot with water to cover. Add the wine. Bring to a boil. Add salt to taste. Reduce heat, cover, and simmer 1 hour.
Strain the stock, reserving the carrots. Return the stock to the pot. Cut the lemon in half and squeeze about half the juice from each half into the stock. Slice the lemon halves about ¼ inch thick and add the slices to the stock. Add the saffron. Bring to a boil. Cut the carrot and the swordfish steaks into ½-inch pieces. Add them to the soup and simmer about 5 minutes.
Ladle into bowls and float one of the lemon slices in each bowl.
Serves 8.

From: Lobscouse & Spotted Dog
By Anne Chotzinoff Grossman and Lisa Grossman Thomas, 1997.
W.W. Norton and Company, New York. 304 pp.
A delightful culinary adjunct to the seafaring tales of Capt. James Aubrey and Dr. Stephen Maturin by Patrick O'Brian.

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Great Lakes Fishery Commission Honored

Recipient of Group Outstanding Achievement Award – 2002

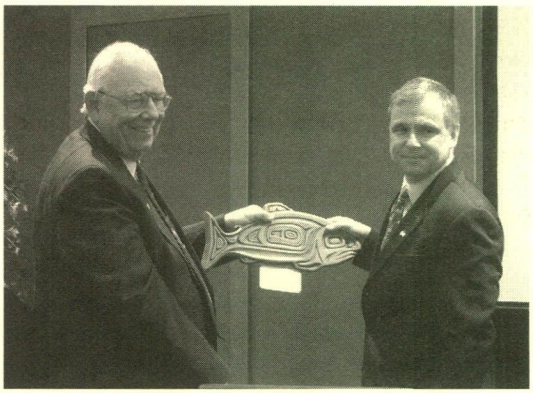
President Schaefer presented the plaque symbolizing the AIFRB Group Outstanding Achievement Award to Dr. Chris Goddard, Executive Secretary of the Great Lakes Fishery Commission, at a ceremony in East Lansing, MI on March 2, 2003.

Nominators provided the following documentation supporting the award to the Commission.

Awardees must excel in meeting the following five criteria:

1. Sustained contribution of significant publications.

The Great Lakes Fishery Commission: has a highly cited technical report series dating back to 1961. Technical reports are peer-reviewed. The Commission also has a highly respected special publication series, which started in 1979, that provides an outlet for management plans, workshop reports, and data repositories; has members and staff who regularly contribute to peer-reviewed scientific journals and book series. Commission contributions to books and journals are highly valued contributions to the literature. The Commission has been able to regularly increase its support for fishery research in the Great Lakes basin. This support has resulted in the publication of over 700 papers. It has convened and supported a series of well-received international scientific symposia beginning in 1971. Peer-reviewed papers from the symposia are edited and published as special editions of leading journals including the *Canadian Journal of Fisheries and Aquatic Science* and the *Journal of Great Lakes Research.*



AIRFB President Dick Schaefer (left) presents a plaque symbolizing the AIFRB Outstanding Achievement Award for a Group-2002 to Dr. Chris Goddard, Executive Secretary of the Great Lakes Fishery Commission, in a ceremony at Michigan State University in East Lansing, Michigan March 6, 2003

2. Exceptional Service of the fishery profession

The Great Lakes Fishery Commission: has members and staff who are highly regarded in the fishery profession. They regularly contribute to meetings, workshops, symposia, and other professional functions of the scientific community; regularly convenes research symposia, workshops, meetings, and other events cooperative management of the Great Lakes fishery. The Commission has the responsibility to coordinate fisheries management on the Great Lakes. To do so, the Commission has pledged its support for the *Joint Strategic Plan for Management of Great Lakes Fisheries*, a state, tribal, and provincial management plan for the Great Lakes fishery. This plan is generally viewed as the world's best example of cooperative fishery management and would not be successful without the staff and resources that the Commission has committed to ensure its implementation. In supporting the plan, the Commission provides the entire Great Lakes community with an exceptional service; Commissioners and staff have served in a variety of positions in the American Fisheries Society, including President.

3. Outstanding teaching or training

The Great Lakes Fishery Commission has developed formal partnerships with Michigan State University and the University of Guelph wherein the commission fully funds tenure-track faculty positions and has, since 1999, maintained a fellowship program to help train the next generation of fisheries managers and policy professionals. Recent alumni of the Commission's fellowship program have moved on to positions in the field including positions with the U.S. Fish and Wildlife Service and the National Wildlife Federation as well as graduate programs. Other fellows have used their experience at the Commission to enhance their undergraduate and graduate studies. The Commission has members and staff who routinely serve on PhD committees that has made it a priority to support the education and training of its staff and has several members and staff who serve as professor or adjunct professor at leading research institutions including Michigan State University, Ohio State University, Cornell University, the University of Guelph, University of Waterloo, the University of Toronto, and the University of British Columbia.

The AIFRB is a 501(c)(3) tax-exempt nonprofit organization (EIN 61-6050711).

4. Important discoveries or inventions

The Great Lakes Fishery Commission has a long track record of important discoveries in Great Lakes fisheries science. The Commission has pioneered sea lamprey control through its refinement of the lampricide TFM. It has discovered new lampricides to get to hard-to-reach sea lamprey populations, and it has ushered in a new era of sea lamprey control through the discovery and implementation of the sterile-male-release-technique, a technique used to trick female lampreys into wasting their spawning potential; has contributed significantly to the invention of new sea lamprey barrier technologies that maintain sea lamprey control on a stream while greatly improving the passage of desirable fish species. These new and innovative barrier designs include electrical barriers that repel and pass fish while trapping lampreys, and inflatable barriers that only obstruct rivers during the lamprey spawning runs; is committed to the reduction of the lampricide used to control sea lampreys. To achieve this goal, the Commission has supported a significant amount of research into sea lamprey pheromones, attractants that could disrupt a sea lamprey's mating pattern. Recent Commission-supported research-published in leading scientific journals such as *Science*-has demonstrated encouraging results of this innovative approach to sea lamprey control. The discovery and use of sea lamprey pheromones has the potential to revolutionize sea lamprey control in the Great Lakes.

5. Significant contributions to the advancement of fishery science

The Great Lakes Fishery Commission has a thirty-year history of hosting and supporting research symposia. Commission-supported symposia have contributed significantly to the advancement of fisheries science, focusing systematically on such issues as lake trout restoration, sea lamprey control, percid management, community perspectives, the stock concept, analytical tools, and socioeconomic approaches. These symposia have been noteworthy in the understanding of fisheries science and would not have taken place without the Commission's leadership. The Commission maintains a fisheries research program that provides a basin-wide focus for fisheries research and supports researchers throughout the basin. The Commission's research program is organized around theme areas that delineate lines of inquiry. These research themes are guided by research questions and are designed to provide a systematic approach to fisheries research in the Great Lakes.

2002 Outstanding Achievement Award (Individual) to Dr. Howard A. Bern

Dr. Howard A. Bern of Berkeley, CA is the recipient of the AIFRB Outstanding Achievement Award for individual effort for 2002.

For the past 52 years Howard Bern has been Professor of Zoology in the University of California at Berkley, and has been an Emeritus Professor since 1990, when he retired at the age of 70. He was elected to membership of the National Academy of Science of the USA in 1973. He has honorary doctorates from the Universities of Rouen, Hokkaido and Yokohama. During an astonishingly productive career he has held 36 fellowships in 8 countries, has given invited lectures on 51 occasions in 12 countries, and three international symposia have been held in his honor. In 2001 he was awarded the Beverton Medal of the Fisheries Society of the British Isles.

He has published more than 600 scientific papers (over 120 since retirement!) in his principal fields of interest, namely: the caudal neurosecretory systems of fishes; teleocast osmoregulation; developmental endocrinology and hormonal control of growth and salinity adaptation in salmonids, striped bass and tilapia; insulin-like growth factor (IGF) physiology in fishes; the effects of ecoestrogens on fish growth; and the comparative endocrinology of prolactin and control of its secretion.

But his contribution to fisheries science extends far beyond this amazing personal research output. He has trained 46 PhDs, and has hosted more than 90 visiting researchers and post-docs from 20 countries. The great majority of fish endocrinologists working in N. America, and a large number elsewhere in the world (particularly in Japan), owe their training to Howard Bern. His influence extends internationally through membership of the editorial boards of 13 international journals.

Our present understanding of the developmental physiology of salmonid fishes has been shaped very considerably by his experimental work with Pacific salmon, carried out with a large number of collaborators under his direction. On the west coast of the USA in the 1970s, he started a series of informal workshops on salmonid endocrinology, and some of these were opened up to wider international participation with the first Salmonid Smolting Workshop in La Jolla in 1981. This key meeting brought together salmonid biologists from both the Pacific and the Atlantic areas, and while emphasizing the regulatory role of the endocrine system on salmonid development, helped to start a wider dialogue on a more integrated approach to salmon biology generally. This has brought together physiologists, behaviorists, ecologists, aquaculturists and modelers, and with Howard Bern's inspiration the dialogue has continued. Five further international workshops on smolting have been held (in Scotland, Norway, Canada, Finland and Ireland) and together with several on salmonid reproductive biology these have fostered international research collaboration. This work has been paralleled with endocrinological studies on tilapias and on striped bass.

His interest in reproducing endocrinology of fishes was shown particularly publicly in the 1980s, when he was a key figure in alerting the world to the disruptive biological consequences of oestrogens as serious pollutants in freshwater, especially their adverse effects of fishes in the American Great Lakes.

Dr. Bern will receive a plaque symbolizing his award at a ceremony later this year. *Briefs* will provide a photo and description of the event.

President's Notes

Not a great deal to report for this issue, other than that a BOC teleconference was held on Friday, March 28, to receive updates on progress being made by both standing and special committees toward meeting their 2002-2003 objectives, and to begin planning the agenda for our annual BOC business meeting in Quebec City in August. Regarding the latter, if any of you have concerns of issues that you would like to have brought to the attention of the BOC for discussion/resolution at the annual meeting, please do not hesitate to let me know (dickschaef@aol.com) so that I can include them on the agenda. Also, Jack Pearce and Linda Jones are still actively seeking nominations for the W.F. Thompson and Outstanding Achievement (both individual and group) Awards, respectively. Please take the time to recommend worthy candidates as soon as possible. Thanks, Dick Schaefer.

Recent Passings

Gene Nye, Olympia, Washington
Herb Jaenicke, Juneau, Arkansas

Research Assistance Awards Available. Apply Now!

The Research Assistance (RA) Award established in 1986 is offered annually to AIFRB graduate students and other Associate members to support travel expenses associated with professional development. The RA provides a maximum award of $350 towards the opportunity to present results of an original paper or to carryout research at distant study sites. All AIFRB Associate Members in good standing are eligible. An individual may receive one award in a lifetime. Application packages must contain a research abstract, letter of support from the student's sponsor, and a 2-page curriculum vitae.

Send AIFRB RA applications to: Dr. Jerald S. Ault, University of Miami RSMAS, 4600 Rickenbacker Causeway, Miami, FL, 33149, phone: (305) 361-4884; fax (305) 361-4791; ault@shark.rsmas.miami.edu. Deadline is 1700 EST on June 15, 2003.

Dave Hoopes Recalls Ken Carlander and Iowa Days

My copy of the *Briefs* arrived in the mail today and as I walked down our lane from the mailbox I began ideally flipping the pages when the notice of Ken Carlander's passage struck me between the eyes and, I might add, deep in my heart. For you (Huntsman) were right when you said Dr. Carlander was deeply loved by his students.

I was privileged to have Ken Carlander as my major professor for both my Masters and PhD degrees, spending a full five years under his quiet, insightful tutelage. When towns along the Mississippi River sought to control the enormous hatches of caddis flies and mayflies that practically halted river traffic for a period of time each year, Ken noted that poisoning the river could wreak havoc on the riverine ecosystem, and he convinced the local governments to support a study to determine the role played by these insects and to investigate possible alternative means of control. My office mate, Cal Fremling, was a PhD candidate and elected to study the life history of several species in the hope of determining such alternatives. For my Masters thesis, Dr. Carlander suggested that I identify the role played by the immature forms in the aquatic food chain. The results of our studies unequivocally demonstrated the vital role these insects played as food for a wide range of commercial and sport fish species. Cal was drawn to the fact that the mature adults were attracted to blue fluorescent lights and he devised a series of light traps that were located along the river bluff at Keokuk, Iowa. These traps were quite successful in diverting mature insects, especially caddis flies, from impacting human health and activities. As a result of our work, the towns dismissed their plan to poison the river and adopted the much more benign approach of luring the adult insects away from points of conflict with riverside residents. Under Dr. Carlander's guidance Cal and I were able to acquire a foundation of basic knowledge and apply that knowledge toward solving a practical problem in an environmentally positive application.

I recount our experience because it illustrates a side of Ken Carlander not normally evident. Despite all the trappings of academe, the scientific treatises, the professional acclaim and honors, Ken never forgot that guiding his students toward careers as professional biologists required preparing them for the practical, as well as the theoretical, side of life. At 70 I am still involved in the fisheries field as a Lead Entity Coordinator in a statewide salmon recovery program here in Washington. I will always be grateful to Ken Carlander for showing me the way to a rewarding and satisfying career in fisheries science.

Jergen Says Hi!

Jergen Westrheim wanted me to pass on his email address (westr@island.net) to last issue's correspondents, Arthur Oakley and Henry Wendler, and other old friends. Ed.

Two Important Meetings

Coastal Zone Management Through Time

July 13-17, 2003

Baltimore, Maryland

Co-chairs: Gwynne Schultz, Director, Maryland Coastal Zone Management Division; Sarah W. Cooksey, Administrator, Delaware Coastal Programs; Jamison Hawkins, Acting Assistant Administrator, NOAA Ocean Service; Roger Rufe, President, The Ocean Conservancy.

Four issue-based themes will guide discussions during plenary, concurrent, poster, and roundtable sessions. These themes include port and harbor management; regional land management; management response to coastal hazards; and management of aquatic resources. Pre-conference and after-hours entertainment and events include workshops, field trips, a 5K fun run and walk, and receptions at Camden Yards and the National Aquarium in Baltimore.

Information: Gale Peek, (843) 740-1231 or Gale.Peek@noaa.gov and Lynn Sellers, (843) 740-1284 or Lynn.Sellers@noaa.gov

Fourth World Fisheries Congress, May 2004

First Call for Abstracts

This is the first announcement of a call for abstracts for the 4th World Fisheries Congress, to be held in Vancouver, British Columbia, Canada, on 2-6 May, 2004. The deadline for submission is 1 July, 2003. The call for abstracts has opened, with over 40 topics related to the Congress theme. Online submissions are encouraged with instructions at the event website: www.worldfisheries2004.org/abstract/abstract.htm.

Posters will be the main communication medium of the Congress and will be given prominence. Oral presentations will be selected from the oral/poster submissions. These papers will be presented in concurrent sessions conducted over the four days of the Congress. Oral and poster presentations will be given equal status for subsequent publication in the proceedings. All submissions must address the Congress theme, Reconciling Fisheries with Conservation: The Challenge of Managing Aquatic Ecosystems. Education and training workshops will be provided by highly-qualified instructors, and will be available for participants to attend immediately before and after the Congress. More information about the workshops is available at the event web site: www.worldfisheries2004.org/education/education.htm

Opportunities for tradeshow exhibitors are detailed in a package available for downloading from the web site: www.worldfisheries2004.org/exhibition/tradeshow_info.htm. The package includes a Tradeshow Fact Sheet, Tradeshow Schedule, and an Exhibitor Application form. We believe the 4th World Fisheries Congress will be an outstanding forum to advance fisheries science and management. We welcome your participation, and look forward to seeing you in Vancouver.

If you have not already done so, please visit our web site and fill out an Expression of Interest Form that will allow us to keep you updated about the Congress: www.stargate.ca/worldfisheries2004.

Bruce Ward, Dana Schmidt, and Bern Megrey – Executive Committee Members

Members At Work: *Two Newish Books*

Fishery Science

The unique contributions of early life stages

Edited by Lee A. Fuiman and Robert G. Werner (AIFRB Fellow)

There has been explosive growth in research on the early life history of fishes during recent years and it is widely recognized that a full understanding of this aspect of fish life history is vital to the study of fish biology, fisheries and aquaculture. This important new book brings together a vast wealth of information in this subject providing a text that will be of great use to upper level students of fisheries science and aquaculture.

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Barry A. Costa-Pierce (AIFRB Fellow)

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Both available from: Iowa State Press, 2121 State Avenue, Ames, Iowa, 50014-8300; 1-800-862-6657, Email: orders@iowastatepress.com, Website: www.iowastatepress.com

Bottlenose dolphins, spiny dogfish, striped mullet, recreational fishing piers!! Who said fishery management was complicated?

Dolphin plan would help some fisheries: Cities higher numbers off N.C. coast

By Brad Rich, News-Times

Beaufort – The latest version of a proposed federal plan to protect bottlenose dolphins along the East Coast would have less impact on North Carolina commercial fishermen than originally feared, thanks to new and larger estimates of the size of dolphin population. However, the plan submitted earlier this month to the National Marine Fisheries Service (NMFS) would still have significant impact on a number of fisheries, including the traditional fall and early winter stop-net mullet fishery along Bogue Banks.

Dr. Aleta Hohn, head of the cetacean and marine mammal team at the National Oceanographic and Atmospheric Administration-NMFS lab on Piver's Island and the scientific adviser to the bottlenose dolphin take reduction team (TRT), said Thursday that the plan, developed over the past three years by more than 30 scientists, conservationists, fishermen and others, is a "consensus" document that includes details that won't satisfy everyone on both sides of the issue. But, she added, most of the people involved in the long process have indicated they can generally live with most of the provisions, which were finalized for NMFS and NOAA review during a TRT meeting April 1-3 in Virginia Beach, Va.

Although NMFS and NOAA officials must still give their OK to the plan, Dr. Hohn said she is convinced those federal officials will adhere as closely as possible to the recommendations given to them by the TRT. The TRT first submitted its recommendation plan in May 2000, but implementation was delayed by Dr. Bill Hogarth, the former N.C. Division of Marine Fisheries director who now heads NMFS. Dr. Hogarth tabled the plan mainly to give NMFS scientists more time to allow for new abundance estimates to be finalized. The new numbers, included in a table in the latest report from the TRT, do indeed show far more dolphins in the various regional and seasonal stocks than before.

For example, the bottlenose population thought to be in the ocean off North Carolina and in the state's estuarine waters in the summer months is now estimated at 10,866 (7,079 north of Hatteras and 3,787 south of Hatteras), up from 5,600 in the previous abundance estimate. At any rate, the new abundance estimates have significantly increased the PBR (potential biological removal) numbers listed in the plan. PBR, in general terms, is the total number of animals officials believe can be taken from a stock through human interactions without adversely affecting the stock. Although the goal is to stop any and all dolphin mortality, the PBR numbers are the keys to the plan, and an increase in those numbers is good for the commercial fishermen. The new abundance estimates, Dr. Hohn said Thursday, are based on data from aerial and boat-based surveys during the winter and summer seasons. With these new estimates, last year's recommendations by the team would reduce the incidental mortality of dolphins in nets below the acceptable limit in all but one management unit, the Summer Northern North Carolina unit. For this unit, the team decided during the Virginia Beach meeting to use gear modifications (as opposed to time/area closures) to reduce the bycatch estimate from 26 to below 20 animals per year, thereby meeting the requirements of reducing mortality to below PBR.

In addition, Dr. Hohn said, the team discussed the impending increase in quota for striped bass and spiny dogfish as outlined recently by the Atlantic States Marine Fisheries Commission (ASMFC), a panel that has authority over many marine species along the East Coast. "The increase in striped bass is state-specific and is a concern because of the observed takes of dolphins in beach seines targeting striped bass along the Outer Banks," Dr. Hohn said Thursday. "In December 2002, there were at least two, and potentially as many as four, dolphins taken in this year's short 3-day (striped bass harvest) season. "There is a history of 'coincidence' of strandings of dolphins with line and nets marks and the (activity in) this fishery," Dr. Hohn said. The team had reached consensus on gear modifications in 2002 and refined these modifications at the Virginia Beach meeting to decrease the likelihood of significant entanglements of dolphins.

The spiny dogfish fishery also got a lot of team attention in Virginia Beach, in part because the ASMFC has outlined an increase in quota for spiny dogfish in state waters along the Atlantic. Currently, there is a bycatch quota for spiny dogfish; however, the quota is usually reached before the fish are available off the North Carolina coast. Because of the number of dolphins that have been observed as bycatch in spiny dogfish nets in the past, the team needed to incorporate mitigation measures into the plan that would reduce take if a directed fishery resumed off the state's coast in the future because of increased quotas. Dr. Hohn and the team members concede that it's not clear if any of the increased quota will be available to North Carolina watermen. However, she noted that during its March 27-28 meeting, the N.C. Marine Fisheries Commission, policy-making arm of the state Division of Marine Fisheries, adopted a motion directing the division staff to actively seek a solution from the Mid-Atlantic Fishery Management Council (MAFMC) and ASMFC to allow North Carolina fishermen to harvest part of the dogfish quota.

But the stop-net mullet fishery on Bogue Banks will probably feel the impact of the plan more, if only because the state has basically been out of the dogfish fishery for a number of years. According to Dr. Hohn, three dolphins have been observed entangled in a stop-net gear since 1993, when the mullet fishermen and then state fisheries director Hogarth reached a compromise designed to mollify fishing pier owners who claimed the stop nets were stopping fish from getting near their piers. The compromise, which has remained in effect since then, increased the minimum mesh size in the stop nets from 4 or 4-1/2 inches to 6 inches, limited stop nets to six specific locations along Bogue Banks – each at least a mile from any pier – and limited the season to the period between Oct. 1 and Dec. 1. Now, in order to reduce the likelihood of dolphins getting entangled in the nets, the plan calls for the mullet crews to go back to the old mesh sizes. TRT member Doug Guthrie, a Salter Path resident and longtime representative of the mullet crews, was not able to attend the Virginia Beach session, but said fisheries division director Pres Pate and other state officials kept him apprised of developments there.

The smaller mesh, he said Friday, obviously wouldn't hurt the crew's mullet landings. But, it would cost each of the six crews $5,000 to switch to the new nets with the smaller meshes. The real problem, though, is that a return to small-mesh nets will almost surely trigger a reprise of the sometimes-bitter disagreements and confrontations between pier owners, pier fishermen and the mullet fishermen. Mr. Guthrie said he and other mullet fishermen don't think the larger-mesh nets have caused any real problems for the dolphin population. "Vicky Thayer (a NMFS marine mammal expert) released one (live bottlenose) dolphin from a net and retrieved one dead one five or six years ago, but that's it," Mr. Guthrie said. "Since then, we've had no interactions, and we've been observed all the time by NOAA observers." The fishermen, Mr. Guthrie said, will be very reluctant to go back to the troublesome smaller-mesh nets unless NOAA and NMFS researchers can show that the nets for the past decade or so do cause problems for the dolphins. If the plan does mandate the smaller mesh, though, fishermen caught with the large-mesh nets could be fined. And, even though studies more than a decade ago by researchers at the Duke University Marine Laboratory and The University of North Carolina Institute of Marine Sciences showed that the small-mesh stop nets did not affect the number or kind of fish that swam past the Bogue Banks fishing piers, no one wants to re-create even the perception of the old net-pier user conflict. "If they (NMFS) say we have to go back to the old mesh just because they say so, well that's just (ridiculous)," Mr. Guthrie concluded. "If they want us to change, they're going to have to prove to us we're wrong (about the lack of interactions between dolphins and the large-mesh nets)."

For more information about the TRT team and its work, visit: www.nmfs.noaa.gov/prot_res/PR2/Health_and_Stranding_Response_Program/bdtrp.html

From: Carteret County (NC) News Times, April 20, 2003

Ed. Note: I am sure other newspapers carry articles on fisheries that Briefs readers would find interesting. Please send them!

Shrimpers turn to jellyfish to make ends meet

Darien, Ga. (AP) – The 225-pound bucket emerges from the belly of Greg Boone's shrimp boat and tips onto the dock – SPLAT-SPLAT-SPLAT – raining a ripe-smelling pile of pulpy blobs that resemble rubber mushrooms. This catch isn't for Boone's local customers. They wouldn't eat this stuff anyhow. Boone has never dared taste it himself. But the 40,000 pounds of cannonball jellyfish being scooped from the hold of his shrimp boat will be food for somebody's table, most likely in China, Japan or Thailand.

Above, Greg Boone holds a jellyfish on the docks of Boone Seafood in Darien, Ga. At left, hundreds of jellyfish fall from a hopper into a bin on the docks of before being shipped for processing. With the shrimp market suffering, a small number of Georgia shrimpers have acquired a taste for catching jellyfish after realizing what's worthless sea trash to them is a delicacy in certain Asian markets.

With Georgia's shrimp industry falling on hard times, a few shrimpers have turned to the lowly jellyfish to make ends meet. The "jellyballs" they once discarded from their nets as trash are now valued for export to Asian countries that consider jellyfish a delicacy. "It's almost like a joke – you don't think it's real when people buy these darn jellyballs," says Boone, whose family has been in the seafood business for three generations. "I can't believe people would want to eat these things." This is Boone's first season harvesting jellyfish for an exporter in South Carolina. He's paid 6 cents-per-pound – roughly $2,400 for this catch. With shrimp prices as low as $3 per pound, jellyfish now make up about a third of Boone's business.

American jellyfish exporters sprung up in the Southern states in the 1990s, but never gained a large foothold. Sales are such a tiny niche that they aren't tracked by either the National Fisheries Institute or government regulators. In Georgia, only six fishermen are licensed to trawl for jellyfish. To George Marra, director of the Georgia Shrimp Association, catching jellyfish is nothing less than a sign of desperation. Shrimpers would turn up their noses at jellyfish if it wasn't for a flood of cheap, imported shrimp and a five-year drought that took a bite out of the overall catch, he says. "Most guys don't want to touch it, and the price is 7 cents a pound. Imagine how desperate," Marra says. "If the shrimp prices were still at a level where

we could make a living, there's no way we would do jellyballs."

The jelly-as-junk mentality has made Yao-Wen Huang, a professor of food science at the University of Georgia, the butt of jokes. But he knew from growing up in Taiwan that jellyfish were considered a powerful health food because of their collagen-rich tissues – believed to help alleviate arthritis, gout and high blood pressure. The American cannon-balls' helmet-like, 7-inch caps were meatier than most Asian species, and they lack stinger-laced tentacles to frighten fishermen. The trick was speeding the traditional 45-day process of salting and drying jellyfish to make production profitable. Texture is crucial to Asian jellyfish aficionados, Huang says, because the sea creatures haven't got much taste. Usually shredded and served cold on a salad, jellyfish should be crisp like a carrot. Huang found a ways to process cannonball jellyfish in a week, fast enough to make harvesting profitable for American fishermen, and by 1993 started winning converts in Florida. "At the beginning, people were laughing. They were always teasing me – 'You're the Cannonball King!'" he says. "But once they knew there was a market there, they came back and said, 'How do we make some money?'" But jellyfish didn't turn out to be the gelatinous gold rush some expected. Like Huang on the Atlantic Coast, Jack Rudloe set out in the mid 1990s to teach fishermen along Florida's Gulf Coast to harvest the cannonballs. Now, Rudloe, a writer and operator of the Gulf Specimen Marine Laboratory in Panacea, Fla., describes his jellyfish years as "a sad tale of bitterness with some triumphs in there as well." Rudloe quit after about six years because he found processing hundreds of thousands of pounds too labor intensive. "Had jellyfish been a gold market and people made all kinds of money, it would have taken off," Rudloe says. "The bottom line is, it's not cost effective. And I just got to feeling personally bad about killing large numbers of jellyfish."

In 1969, Sinkey Boone and his fellow shrimpers were also tired of catching jellyfish – too many tangled in his nets meant less shrimp. They began rigging a steel grill inside their nets to block cannonballs from fouling the catch. After hitting the grill, larger animals would pass through a trap door in the bottom of the net. Net fishermen worldwide now use that invention. They're called turtle excluder devices, designed to keep endangered sea turtles from becoming snared and killed. Georgia shrimpers initially just called them "jellyball shooters." They just kept the nets free of jellyfish and other junk. Now, Boone, 66, watches his 44-year-old son, Greg Boone, shovel ice onto another 1,600-pound tub of jellyballs. The elder Boone shakes his head. Yesterday's trash, it seems, is today's truffle. "That's quite a thing. It don't look like it'd be edible," he muses. "But I guess you can just about eat anything nowadays."

From: New Bern (NC) Sun Journal, March 9, 2003

Program to restore estuary habitat gets funding from Congress

By Scott Faber

Tucked inside a $397 billion spending bill passed by Congress in February was $1 million for a new estuary habitat restoration program. Like spat on an oyster bar, the funds are seed money that estuary restoration advocates call a "down payment" on the $275 million Congress vowed to spend when it passed the National Estuary Restoration Act in 2000. While the $1 million will be divided among a handful of estuary restoration projects, advocates are thrilled that the program finally got any funding, given the nation's growing deficits and other growing demands for federal spending. "It's a breakthrough, but it's only a down payment," said Suzanne Giles, National policy and science director for Restore America's Estuaries, a national estuary restoration group.

The program authorizes the U.S. Army Corps of Engineers to match $275 million with state and local funds over five years to restore estuary habitats such as tidal marshes, oyster reefs and underwater grass beds. The 2000 law also directed the Corps and other federal agencies, such as the National Marine Fisheries Service, to create a national estuary restoration strategy and establish a national council to develop criteria to fund projects. The interagency Estuary Habitat Restoration Council this winter completed work on the national strategy, which is aimed at fulfilling the act's goal of restoring 1 million acres of estuary habitat by 2010. The strategy includes criteria for restoration projects and monitoring as well as incentives for innovative partnerships and technologies. The program has had powerful champions in both the House and the Senate, including Senators Lincoln Chafee (R-RI) and John Warner (R-VA) and Rep. Wayne Gilchrest (R-MD). Still, funding for the new program did not clear the thicket of legislative and administrative hurdles until Rep. Sonny Callahan, who represented Mobile Bay in Alabama, took an interest in the program. Callahan is a Republican who chaired the committee that provides funds to the Corps until he retired last year.

Although better known for promoting dams and dredging, Callahan included $1 million in the House version of the Corps' annual appropriations bill last summer. But, the bill, like many other appropriations bills, was not completed until after the 2002 election. By then, Callahan was lobbying for Dawson & Associates, a Washington firm that lobbies for large water projects. Nevertheless, the 1,507-page "omnibus" appropriations bill funding dozens of federal agencies included a single line providing money for the new estuary habitat restoration program. Unfortunately, the battle for funding is not over, advocates say.

The Bush administration did not request funding for the program when it released its 2004 budget request in February. And, agencies like the Corps will be expected to tighten their belts to help pay for tax cuts and to reduce the growing federal deficit. But, the fact that the program received some funding will eliminate a long-standing bias against "new starts" enforced by budget examiners. Estuaries have received national attention in recent years because most commercially harvested fish and shellfish depend on their brackish waters for survival. Estuary experts also estimate that 75 percent of the nation's rare species and migratory waterfowl also use estuaries. Dredging, dams, development and population have taken their toll on estuary habitat, and new projects to deepen ports and channels are being proposed. But efforts to restore lost habitat have also been launched in estuaries from coast to coast, including the Chesapeake. To help make the case for funding, Giles and other advocates quickly compiled a list of more than 50 estuary restoration projects that could be built immediately if the money were available. Actual funding for restoration has not always followed Congressional promises, called "authorizations," to provide such funds, according to a recent study. "What we have found is that the potential [for funding] is far greater than the reality," said mark Wolf-Armstrong, president of Restore America's Estuaries.

Restore America's Estuaries found that Congress had authorized $7.2 billion through 74 different federal programs that could be used to restore estuary habitat, but that appropriators had provided only a tiny fraction of those promised funds in final spending bills. Therefore, advocates see this year's funding for the estuary habitat restoration program as a small but important step in the right direction. Sen. Lincoln Chafee's father, former Sen. John Chafee, was an early champion of the program and a long-time advocate of the efforts to restore Rhode Island's Narragansett Bay until he died in 2000. In addition to defending the nation's clean water and wetland laws, the former senator from Rhode Island pushed for eelgrass restoration in Narragansett Bay at a time when some resource managers doubted Narragansett Bay was clean enough to support such projects. Chaffee was also a founder of the National Estuary Program run by the National Marine Fisheries Service, and he recognized in the mid-1990s that the NEP was an important planning program that needed a restoration counterpart. "We'd reached a point where we'd lost most of the eelgrass beds, but had developed the technology, and had improved water enough, to permit restoration efforts," said Janet Coit, a former Chafee staffer who now works for the Nature Conservancy in Rhode Island. Coit credited Save the Bay, a Rhode Island group dedicated to saving Narragansett Bay, with keeping the issue in front of Chafee. But, it also helped that Chafee had a life-long love affair with the outdoors, including Narragansett Bay. "He just reveled in going out and experiencing nature," she said. "He thought Yogi Berra got it right when he said, 'You can see a lot by looking'".

From: Bay Journal, April 2003

Deep Trouble

In the Gulf of Mexico, It's Best to Let the Big Ones Get Away

On July 22, 2001, Alabama's Mobile Register (circulation 100,000) published its first article on methylmercury contamination in Gulf seafood. The investigative series that ensued, with more than forty articles to date, has shown not only that methylmercury has entered the human population by way of Gulf fish, but also that federal agencies charged with protecting people from such contamination have failed to do so. For the series, Ben Raines was awarded the 2002 John B. Oakes Award for Distinguished Environmental Journalism.

Backed by the Mobile Register, *Raines bought more than a thousand dollars' worth of fish from local anglers and seafood shops and sent samples out for testing. The results came back a week later. "We were stunned," recalls Raines. After one more batch of tests, again funded by the paper, Raines turned in his report.*

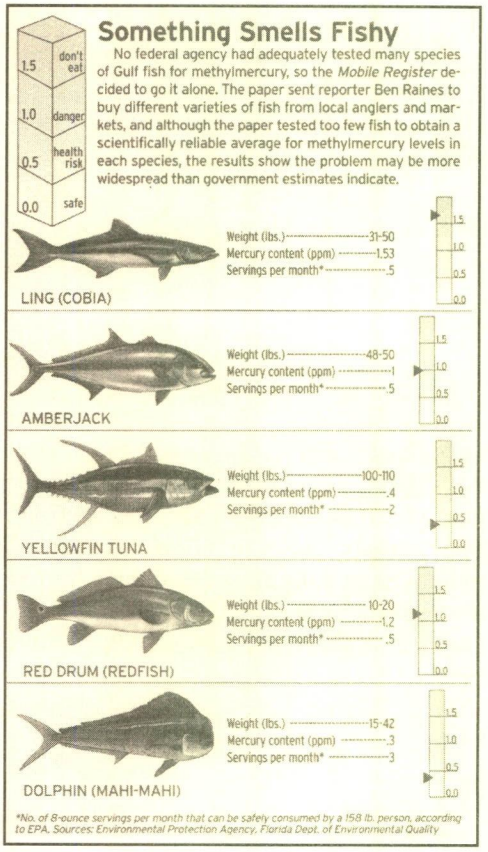
July 22, 2001. Several popular commercial and recreational fish species caught in the Gulf of Mexico – including the restaurant delicacies amberjack, ling, and redfish – may contain so much methylmercury that they should not be sold to the public, according to standards set by FDA. Samples of these and other commonly eaten fish collected by the *Mobile Register* and sent to the Mississippi Department of Environmental Quality for testing were found to have mercury levels significantly higher than 0.5 parts per million (ppm), the threshold for government consumption advisories. The tests commissioned by the *Register* indicated that a 4-ounce serving of a 10- to 20-pound redfish caught at the mouth of Mobile Bay would contain all the mercury a 158-pound adult male could safely handle in a month, under standards set by the Environmental Protection Agency. Gulf-caught amberjack purchased at local markets were equally high in the toxic metal, which can cause severe neurological problems and birth defects. At present, no consumption warnings exist for any of the species tested by the *Register*. In March, FDA advised women of childbearing age and children under age twelve to avoid king mackerel, swordfish, shark, and tilefish.

December 30, 2001. Oil and gas rigs, which use mercury-laden materials when drilling, appear to be an unusually dangerous source of mercury pollution in the Gulf of Mexico – and one largely overlooked by regulators. The *Mobile Register* has found evidence of mercury contamination in a series of studies of pollution around Gulf oil and gas platforms. The studies were commissioned over the past two decades by the U.S. Minerals Management Service, the federal agency that oversees oil and gas production activities. Data from those studies strongly suggest that oil and gas rigs in the Gulf amount to islands of intense mercury contamination that could readily spread to fish and marine creatures. A study of one rig off the Texas coast indicated that mercury levels in the sediments beneath the platform were twelve times higher than the safe level for mercury in marine environments as set by EPA.

In recent years, the rigs – about 4,000 of them are now operating in the Gulf – have become widely favored by commercial and recreational fishermen. For that reason, consumption of fish associated with the rigs may present a unique and potent pathway for mercury contamination in humans. Scientists and marine biologists said they were stunned by the findings. Bob Shipp, a marine biologist at the University of South Alabama, said the contamination could well have an impact on some of the Gulf's best-known game and commercial fish. He said, for example, that red snapper feed primarily on invertebrates that live in the sand. "and they feed in a halo around the rigs. They may stay around one rig most of their lives," Shipp said. "If the mercury is in the sediments and the invertebrates around the rigs, I'm sure it has worked its way up the food chain."

The mercury is present in artificial drilling compounds – called "muds" because of their appearance – that cool and lubricate drill bits as they bore thousands of feet under the ocean floor. Once used the muds are pumped back to the rig platform and in most of the Gulf oil fields are simply dumped over the side. These muds are made up almost entirely of a heavy metal called barite. Unfortunately, barite deposits are often high in mercury, a fact acknowledged by EPA and the oil industry. Oil industry records and calculations indicate that more than a billion pounds of these muds end up in the Gulf every year. Recent federal guidelines mandate that all barite used in drilling muds in U.S. waters must contain less than 1 ppm of mercury.

But even under the new barite guidelines, more than 1,000 pounds of mercury could still be legally dumped from the 1,200 new wells drilled each year, according to *Register* calculations. Regulators initially considered "zero discharge" regulations for some of the drilling fluids before encountering stiff resistance and a lawsuit from the oil industry, which argued that it could not afford to haul all used muds to shore, and that extra miles put on their tending boats would result in increased air pollution. In the end, EPA didn't enact the zero discharge policy; instead, it reduced the allowable mercury content in the drilling muds and ruled that no dumping be allowed on the fraction of oil and gas wells within 3 miles of shore.



Condensed From: On Earth, Spring 2003

Red Porgy stock Assessment Review

SEDAR – A new approach begins for stock assessment process

Dr. Jim Berkson, Vice-Chairman of the South Atlantic Fishery Management Council's Scientific & Statistical Committee presented an overview of the Stock Assessment Review Committee (SARC) consensus summary of the 2002 red porgy stock assessment during the joint meeting of the Snapper Grouper Committee and Advisory Panel in December, 2002.

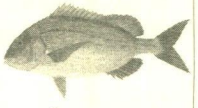
The SARC considered four scenarios for rebuilding: 1.) F equals zero; 2.) F equals a moratorium with bycatch mortality only; 3.) F as in Amendment 12 (current regulations); and 4.) F as in Amendment 9.

The SARC concluded: 1.) that the data used in the assessment were adequate and appropriate and that the assessment was based on the best available data; 2.) the models used were adequate and appropriate; and 3.) although the SARC felt that the age-structured model was not adequate for predicting the probability of achieving rebuilding by 2016, the model provided sufficient information for the SARC to recommend that fishing *mortality should not be increased over 2001 levels.*

The review process also resulted in specific research recommendations and data needs. "The research recommendations we make are as important as the stock assessment that we do. It is essential that we say what work still needs to be done, what work is critical and what new information is needed to do this better," said Berkson. Recommendations included: 1.) the need to address discrepancies between methods used to age fish; 2.) sampling for sex ratio at length should be instituted in each fishery; 3.) a sampling program should be initiated to quantify discard rates, especially in the commercial fishery; and 4.) MARMAP, a fishery independent research sampling survey, should expand both its area coverage and its sampling intensity.

Referencing the recommendations, Dr. Berkson emphasized the need to have data on discard rates. These rates measure the amount of fish being thrown back due to current regulations including recreational bag limits, commercial trip limits, size limits and seasonal closures. He also expressed concerns that MARMAP was not sampling in water deeper than 30 fathoms, thus missing sampling data for red porgy found in deeper water. Commercial fishermen fish out to depths averaging 60 to 90 fathoms and have reported increased numbers and larger fish at these depths.

Red porgy *(Pagrus pagrus)*
(AKA – pinkies, pink porgy, strawberry porgy)



- reef-associated species, widely distributed in Eastern and Western Atlantic
- protogynous hermaphrodite (fish change sexes as they age – from female to male
- females mature at age 2-3, life expectancy up to 18 years.
- Caught in a multi-species commercial and recreational fishery
- Current regulations: 14" size limit, 1 fish/trip recreational, 50 lb. trip limit commercial and spawning season closure January through April
- Status – listed as overfished; overfishing not occurring

From: The South Atlantic Update, Winter 2003

Menzel in Washington, D.C.

Dr. Bruce Menzel is on leave from Iowa State University in 2003, serving on an Intergovernmental Personnel Act assignment with the USDA Cooperative State Research, Education and Extension Service in Washington, D.C. CSREES is the principal federal agency that provides funding and coordination with the land grant universities and state extension systems. Bruce is serving as the interim National Program Leader for Wildlife and Fisheries Science. In this role, he represents CSREES to its state and federal partners and to the nongovernmental wildlife community. He is involved in review and approval of research and extension project and grant proposals, and in university departmental program evaluations. He is also contributing to long-range planning for the Renewable Resources Extension Act program and for the Natural Resources and Environmental Unit of CSREES.

He can be contacted at USDA CSREES, The Waterfront Centre, 800 9th Street, SW, Washington, D.C. 20024. Phone: 202-401-5016, email: bmenzel@reeusda.gov.

Fishing Regulations Relaxed in Northeast

Federal regulators will delay tough new restrictions intended to allow some struggling fish populations to replenish, a move that gives New England commercial fishermen a reprieve of up to five extra years. The National Marine Fisheries Service announced that rules for rebuilding stocks of cod and other groundfish species will take effect by 2014 rather than 2009. Environmental groups that have pushed for stricter catch limits accused the agency of bending to political pressure from the fishermen. "This is a major problem. They're flying in the face of the law and breaking their own promises," said Eric Bilsky, a lawyer with the conservation group Oceana. A coalition of environmental groups sued the federal government to win the tough new restrictions two years ago. The rules have since been relaxed twice.

From: International Angler: 65(2), March-April 2003

Marine Species Win Trade Protections

WWF Hails Conservation Successes at International Convention

Effective pressure by World Wildlife Fund (WWF) and its wildlife trade monitoring network, TRAFFIC, helped generate major conservation gains for mahogany, marine wildlife, Asian big cats, and other key species at the November 2002 meeting of the world body regulating wildlife trade. Over the course of two weeks in Santiago, Chile, the Convention on International Trade in Endangered Species (CITES) voted to extend new protections to dozens of wild plants and animals regularly traded in the international marketplace.

The conference's most important achievements came on the last day, when CITES members agreed to regulate international trade in a record number of marine fish species. Among the beneficiaries of that decision are whale sharks and basking sharks – two species highly coveted for their fins, meat, and oils. "This decision constitutes a major breakthrough for the conservation of marine fish species threatened by overfishing or poorly managed fisheries," said Simon Habel, director of TRAFFIC North America. "It also paves the way for more sustainable uses of ocean wildlife that will produce greater long-tem economic benefits for local communities."

In other important developments, CITES conferees agreed to:

- Regulate trade in all 32 species of seahorses. An estimated 24 million seahorses are harvested around the world each year and sold live for aquariums or dried for use in traditional Chinese medicine.
- Agreed to work with other world bodies to eliminate illegal trade in Patagonian toothfish. Marketed as the Chilean sea bass, this species has been seriously overfished in recent years and is facing commercial extinction.
- Continue protections and trade prohibitions for minke and Bryde's whales. Japan was unsuccessful in its effort to downgrade the CITES status of minke whales, which it would have used to help make the case for reopening commercial trade of whale meat. WWF and its members have fought hard to maintain the global moratorium on commercial whaling since 1986.

With 160 countries currently signed on to the treaty, CITES is the largest wildlife pact in force today. Since the treaty's inception in 1975, WWF and TRAFFIC have played highly influential roles in shaping the outcomes of CITES conferences. The November meeting was no exception, as WWF experts used a combination of in-depth research and targeted advocacy to maintain pressure on member countries.

From: Focus: 25(2), March-April 2003

Shop for Fish the Ocean-Friendly Way

Much of the world's seafood stocks are being fished from the ocean at alarming rates. Some fish and shellfish have been overfished until their populations are so low that they are no longer commercially viable. But with seafood more popular than ever, consumer demand drives the fishing industry. The Marine Stewardship Council was created in response to this crisis. Established through a unique partnership between WWF and Unilever – one of the largest commercial buyers of fish – the MSC is an independent, non-profit organization working to promote responsible fishing practices around the world. To date, more than 100 major seafood processors, traders, and retailers have pledged their support for the MSC program. The MSC label on seafood products tells consumers that the product comes from a fishery that uses ocean-friendly methods.

What Can You Do?

Be an informed seafood consumer. Encourage your local supermarket to stock MSC-labeled products. Check the MSC Web site (www.msc.org) to find retailers who carry MSC products, and spend your seafood dollars there.

While many fish are disappearing, other great seafoods are being harvested responsibly, including: Alaskan or Canadian halibut, Atlantic striped bass, Pacific market squid, Pacific albacore, Mahi-mahi, Australian rock lobster, farmed mussels, clams, oysters, Dungeness crab, U.S.-farmed caviar, and wild Alaskan salmon. Your choices at the supermarket can make a difference. By buying sustainable fish products, you are supporting healthier oceans and healthier environment.

From: Focus: 25(2), March-April 2003

Long-Line Experiment Is Called Off

Swordfishing Threatening Protected Turtles

As we have reported frequently, all the sea turtles in the world's oceans are in peril of extinction. The causes are many: outright killing for meat and shells, habitat destruction, and incidental killing as a byproduct of trawling for shrimp and longlining for swordfish, tuna, and other species. To tackle the longlining problem, attorney Paul Achitoff sued the National Marine Fisheries Service, which banned swordfish longlining out of Hawaii. Then, in early 2002, the agency issued a permit that would allow the swordfish longliners to try an experiment: half their hooks would be set in the usual way, which is known to kill turtles. The other half would be set with the bait dyed blue, differently shaped hooks, and camouflaged gear. The agency conceded that the experiment would likely contribute to the extinction of one or more species, but proceeded to issue the permit anyway. Achitoff went back to court on behalf of The Ocean Conservancy, Turtle Island Restoration Network, and Center for Biological Diversity. The district court refused to block the permit even though acknowledging a likely violation of law. Achitoff appealed and the government withdrew the permit, agreeing to conduct a full environmental impact study as the conservationists had demanded.

From: In Brief: Winter 2003

A Behnke Bargain!

Bob Behnke's beautiful book, Trout and Salmon of North America, was available, as of April 18, 2003 at $26.95 (plus $3.50 shipping, any sized order) (beats Amazon.com) from: Edward R. Hamilton, Bookseller, Falls Village, CT 06031-5000. Catalog #2250535, checks only.

Protecting Marine Mammals Off California's Coast

Gillnet Fishery Under the Microscope

The California drift gillnet fishery has more than 100 vessels that fish offshore from San Diego to San Francisco, primarily for swordfish. Drift gillnets can be over a mile long and up to 158 feet deep. They are attached to the stern of a fishing boat and allowed to drift below the ocean surface during the night. When the nets are pulled up, often birds or mammals caught in them die.

Four species of threatened and endangered sea turtles are killed by gillnets, including the endangered Pacific leatherback, threatened loggerheads and olive ridley turtles – often at numbers exceeding the incidental take allowed by the National Marine Fisheries Service. In addition, a wide variety of fish species, sea birds, whales, dolphins, and other marine mammals are illegally killed in the nets.

On behalf of the Center for Biological Diversity and the Sea Turtle Restoration Project, Deborah Sivas at Earthjustice's Environmental Law Clinic at Stanford sued the National Marine Fisheries Service for its failure to protect endangered sea turtles and protected whales and dolphins from gillnet fisheries off the California Coast. Under the Endangered Species Act and Marine Mammal Protection Act, the agency is required to adequately evaluate the effects of these fisheries on threatened and endangered marine species.

As a result of the suit, NMFS has instituted time/area closures to protect sea turtles and, for the first time, has brought the California/Oregon gillnet fishery under a Marine Mammal Protection Act permit. Earthjustice recently filed a follow-up suit to compel full implementation of the closure requirements.

From: In Brief: Winter 2003

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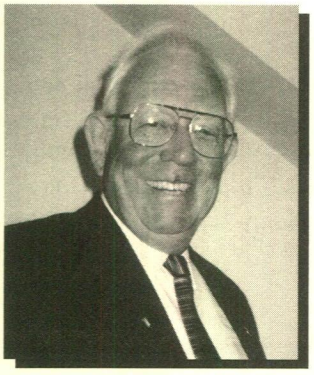


President's Note

Dear Members, Fellows, Associates and Emeriti:

It's hard to believe, but nearly a year has passed since the 2002 Board of Control (BOC) meeting in Baltimore, MD, last August. This year's BOC meeting will be held on Saturday, August 9, and Sunday, August 10 in the Beauport Room at the Quebec Hilton Hotel in Quebec City, P.Q., Canada. The meeting will begin at 8:00 am, and end at 5:00 pm, on both dates. Following the meeting on Sunday, AIFRB will be hosting its Annual Reception between 5:30 pm and 7:30 pm for members, invited guests, and potential recruits in a hospitality suite (yet to be identified) at the hotel. I invite and encourage all AIFRB Members, Fellows, Associates and Emeriti who are planning to attend the annual meeting of the American Fisheries Society (which immediately follows our BOC meeting), to come a day or two early and attend the BOC meeting. There are many important issues on the agenda, the discussions on which would benefit from your involvement and input. Remember, this is YOUR organization!

Immediately proceeding the BOC meeting, I will be "incommunicado" somewhere (not to be divulged) on the Gaspe' Peninsula between July 25 and August 7 on my annual fly-fishing expedition in pursuit of the wily and ever-elusive Atlantic salmon (this will be my 32nd continuous year), and then driving from there to Quebec City on August 8. If you need to get in touch with me prior to the BOC meeting, it will have to be before July 22. I hope to see many of you there.

Sincerely,

Dick Schaefer, President

Bern Presented Outstanding Achievement Award

On Thursday, June 19, 2003 Dr. Howard A. Bern was presented the Institute's prestigious Outstanding Achievement Award for Individual Accomplishments for 2002 by Northern California District Director Tom Keegan during a District meeting and ceremony at Berkeley, CA. Dr Bern, Professor Emeritus, University of California at Berkeley was recognized for his lifelong research and influence. (see *Briefs* March-April, 2003). The present understanding of the developmental physiology of salmonid fishes largely has been shaped by the work on Pacific salmon of Dr. Bern and the many collaborators under his direction. Dr. Bern, or just Howard as he prefers, took the opportunity upon receiving his award to honor his longtime collaborator Dr. Richard Nishioka, also retired. Howard also related that he was proud to be included in the company of previous Outstanding Achievement Award recipients. Dr. Bern reciprocated the award by announcing his intention, at long last, to join the AIFRB. The Institute and the Northern California District will be honored by his membership.

Submitted by: Tom Keegan, Director, Northern California District

Howard Bern (right) holds plaques symbolizing his 2002 Outstanding Achievement Award with longtime collaborator Richard Nishioka.

The AIFRB is a 501(c)(3) tax-exempt nonprofit organization (EIN 61-6050711).

EPA 2003 Science Achievement Award Presented to Dr. Robert T. Lackey

The U.S. Environmental Protection Agency (EPA) awarded Corvallis fisheries biologist Robert T. Lackey its 2003 Science Achievement Award for ecology. Dr. Lackey received the award from Christine Todd Whitman, administrator of EPA, in a Washington, D.C., in a ceremony on Thursday May 15.

Robert Lackey recipient of the EPA 2003 Science Achievement Award

Lackey is a scientist with EPA's environmental research lab in Corvallis. He also is a courtesy professor of fisheries science at Oregon State University and an adjunct professor of political science at OSU. In announcing Lackey's selection, Dr. Paul Gilman, EPA's assistant administrator for research, commended Dr. Lackey for "outstanding scientific achievement in assessing the long-term causes of the decline of wild salmon in the Pacific Northwest and options for their recovery." Since 1850 wild salmon in California, Oregon, Washington and Idaho have declined to a point where current runs are less than 10 percent of the 1850 levels. Lackey's research bridges the gap between what scientists have learned about the biology of salmon and the various options to restore salmon runs.

For the past 35 years he has dealt with a range of natural resource issues from positions in government and academia. He has written 100 scientific journal articles. Dr. Lackey also has long been active in natural resources education, having taught at five North American universities. He continues to regularly teach a graduate course in ecological policy at Oregon State University and was 1999-2000 Fulbright Scholar at the University of Northern British Columbia. A Canadian by birth, Dr. Lackey holds a Doctor of Philosophy degree in Fisheries and Wildlife Science from Colorado State University. He is a Certified Fisheries Scientist and a Fellow in the American Institute of Fishery Research Biologists.

Membership Report

Tom Lambert, Chairperson, Membership Committee, submitted the following report on changes in AIFRB membership during the period July 1, 2002 to May 1, 2003.

New Members:

Associate-Student: Dan J. Daugherty - Central States & Middle Canada Region; Yannis Papastamatiou – Southern California District; Darin Topping – Southern California District; Diane C. Tulipani – Southern California District.

Associate-Professional: Michele Barlow – Northern California District; Kim M. Anthony – Southern California District; Even K. Benn – Northern California District; Carol J. Raifsnider – Northern California District.

Member: Axayacatl Rocha-Olivares – SW States & Western Mexico Region; Larry Travanti – Northern California District.

Fellow: Mary M. Yoklavich – Northern California District; Jim Perry – Central States & Middle Canada Region.

Promotions:

To Member: Shelley L. Moore – Southern California District.

To Fellow: Jeffrey Breiwick – Northwestern Washington District; William Seaman, Jr. – Florida District; Chi-Lu Sum – Taiwan; William E. Kelso – Southeastern States and E. Mexico Region.

Emeritus: Ole A. Mathisen – Northwestern Washington District; Carlos Fetterolf – Great Lakes, South Central District; Theodore R. Merrell – Southeast Alaska District; Kendall Warner – New England District; Louis H. Carufel – Northern Alaska; John J. Magnuson – Central States and Middle Canada Region; William H. Herke – Southeastern States and E. Mexico Region; H.G. Moser – Northwestern States; Jerry E. Reeves – Northwestern Washington District.

Direct inquiries on joining AIFRB or requests for promotion to: Tom Lambert, AIFRB Membership Chairperson, 3162 Mariola Road, Sebastopol, CA 95472; Phone (704) 829-7882, Fax (707) 829-8234, Email lambert5@pacbell.net.

Fellow Bruce Miller (Semi) Retires: Parties with AIFRB

A little background on this party is that Prof. Bruce Miller NW Washington District Director of AIFRB, decided that there was no better way to celebrate his recent retirement from full-time faculty duty (he will teach until Spring 2006) at the University of Washington (UW) than with friends, students, co-workers, and colleagues at one of Prof. Ken Chew's famous AIFRB Chinese dinners on May 22, 2003.

Everyone was invited, whether or not they belonged to AIFRB, and spouses, friends, etc. were welcomed. UW Professor and AIFRB Fellow Don Gunderson was Master of Ceremonies for the retirement celebration and he provided a very special evening, neither too somber, nor too raucous for mixed company. The party was on Thursday evening, May 22, 2003, and started at 6 pm (attitude adjustment hour) with dinner served at 7 pm at the China Harbor, 2040 Westlake Avenue North, Seattle, featuring the usual "5-star imperial Chinese cuisine with garden fresh northwest ingredients."

Submitted by Kate Myers

All Invited to Board of Control Meeting and Reception

Quebec, Quebec, August 9-10, 2003

The Annual Meeting of the AIFRB Board of Control will be held at the Hotel Hilton Quebec, Quebec City, Quebec, Canada, in the Beauport Room, from 8 am to 5 pm both Saturday and Sunday August 9-10, 2003. This meeting is open to all Fellows, Members, and Associate Members of AIFRB. On Sunday, August 10, 2003, please join us at the Annual Reception of the AIFRB to be held at 5:30 pm to 7:30 pm in the Hotel Hilton Quebec, Quebec City, Quebec, Canada. The reception follows the Annual Meeting of the Board of Control, AIFRB.

Losses

George Post
5835 Bouquet Avenue
Richmond, California 94805-1101

Hiroshi Kasahara
June 8, 2003

Herb Jaenicke, May 28, 2003

By Richard R. Straty and Bruce L. Wing

Herb Jaenicke was our close friend and working associate for the past 45 years, which dates back to when he came to Alaska as a Fishery Research Biologist with the Auke Bay Fisheries Laboratory. Herb was born in San Francisco, California and lived in Salinas California for many years before entering the U.S. Army in 1952. He served in the Army until 1955. While in the Army he was stationed at Fort Richardson near Anchorage, Alaska. This, his first taste of Alaska, influenced his selection of a career in fisheries and Alaska as his future and permanent home. He served in the Army National Guard from 1955 to 1961, part of which time was with the Alaska National Guard. Herb's first fisheries position in Alaska was as Biological Aid with the U.S. Fish and Wildlife Service in 1955 working with a stream improvement project (essentially clearing streams of obstructions such as beaver dams and log jams which prevent salmon from reaching their spawning grounds. In 1958 Herb earned his BS degree in Fisheries Management from Humboldt State College and began his employment as a Fisheries Research Biologist with what is now the Auke Bay Laboratory. This was just prior to Alaska statehood and several years before the present Auke Bay Laboratory was built and was shortly after the research staff dealing with Alaska Fisheries was transferred from the Seattle Laboratory to the new headquarters in Juneau, Alaska. From 1958 to 1966 Herb was project leader of sockeye smolt enumeration studies carried out on the major river systems of Bristol Bay.

From 1967 to 1973 Herb was assistant project leader of early marine life sockeye salmon studies in Bristol Bay and the eastern Bering Sea. Until these studies were begun virtually nothing was known of the early marine life of this important commercial species. In fact much of what is now known of the early marine life of this species can be attributed to the results of Herb's research. It was during these studies where Herb's talents as a field man were demonstrated. The studies involved long days at sea, initially on inadequate small vessels, frequently in rough weather characteristic of the eastern Bering Sea.

From 1974 to 1980 Herb served as project leader of limnological studies on Lake Nunavagaluck where the State of Alaska proposed a sockeye salmon hatchery to enhance Bristol Bay stocks. From 1984 to his retirement in 1998 Herb supervised field research on several projects concerned with the early marine life of salmon in southeast Alaska and the Gulf of Alaska, and with the carrying capacity of the north Pacific Ocean for salmon. Herb was also the primary person responsible for seeing that many of the Auke Bay Laboratory's valuable documents concerning Alaskan fisheries were deposited in the national archives.

In December 1997 Herb was awarded the U.S. Department of Commerce Bronze Medal for his research contributions to the Nation's (Alaska) fisheries. Following retirement in 1998 Herb continued to be an active researcher. He returned periodically to his old haunts to assure that archiving projects were being completed, assisting others to find archived data sets and to assist in the collection of field data for several long-term studies.

Beyond his professional career, Herb was active as a volunteer in a number of Juneau community projects. He actively served with the Boy Scouts of America for nearly 20 years and was an executive board member of the Southeast Alaska Area Council. He was granted the Silver Beaver Award, Scouting's highest award, for his service to scouting and the youth in the community. He was also active with the Juneau Film Society, and with organization of several badminton groups each fall. He donated much time to "Trail Mix" a local program devoted to maintaining and improving the many hiking trails in the Juneau area. Herb thoroughly enjoyed interacting with people and was well known as a party organizer for all his groups. He was especially talented in producing and participating in outlandish skits, parties, and picnics.

A Brief Review: Symposium: Biology, Ecology, and Management of Pacific Coast Sharks, Parts I & II

Held at the 2003 Annual Meeting Western Division of the American Fisheries Society and the California/Nevada Chapter of the American Fisheries Society, San Diego, CA, April 17, 2003.

Overall, I found the presentations made throughout this symposium to be very interesting and informative. The diversity in topics presented illustrated the progress that has been made; yet much of the conclusions indicated that shark researcher still have much to learn about the various shark species that inhabit the waters of the eastern Pacific. An exciting aspect of the information presented during the symposium was that researchers were following interesting leads and new technology to determine actual impacts on shark fisheries, as well as how best to implement conservation management plans.

Such important information as breeding and nursery areas needs to be conclusively determined. Many of the researchers proposed that increases in landings of pregnant females and very immature animals might indicate that breeding and nursery areas were nearby. They also indicated that harvesting of these two groups of any shark species would be detrimental to the viability of that species' population. I was particularly struck by the information presented by Robert Hueter from the two-year study he led, which put real numbers to the landings of elasmobranches from the waters around Baja California. He estimated that 20.4 million elasmobranches/year were harvest from the Baja area.

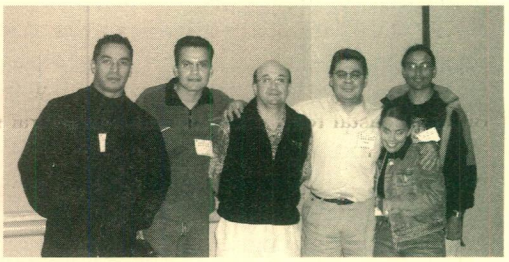
I thought that the information presented by the scientists from Mexico to be a very important and serious beginning to the work that is needed there. Especially after hearing Robert Hueter's presentation, the information being collected by the Mexican researchers is extremely important to help them with maintaining elasmobranches populations.

On a subject near and dear to my heart, I learned some information that I will be able to include in my own master's thesis on the pelagic red crab, *Pleuroncodes planipes*. I learned that several different shark species, like the common thresher shark and silky shark, eat the pelagic red crab.

Thank you and congratulations to you all on a wonderful day full of learning about sharks.

By Diane Tulipani, Student Associate — Southern California District

At the suggestion of Gary Sakawaga, AIFRB served as a contractor to underwrite Mexican participants travel and meeting costs to the AFS Western Division Meeting held in San Diego last month. AIFRB has also prepared a proceedings report to the sponsor agencies (Southwest Fisheries Science Center, CICESE, and AIFRB). Diane Tulipani, a new student associate in the Southern California District, was recruited by Mike Hinton to serve as rapporteur for a small stipend. The Institute was able to book a management fee of several hundred dollars. The symposium proceedings are available at the Southern California District website. Some hard copies have been prepared.



Mexican scientists attending the Pacific Sharks Symposium, who were sponsored by AIFRB. They are: (left to right) Lenin Alberto Guerrero-Maldonado, Juan Carlos Perez Jimenez, Oscar Sosa Nishizaki, Leonardo Castillo-Geniz, Felipe Galvan-Magana, Jorge Ramirez Gonzalez.

New Major Works by Members

Biology of the Spotted Seatrout

The first comprehensive volume on the basic biology of this important species

By Stephen A. Bortone, Ph.D.

Sanibel-Captiva Conservation Foundation, Sanibel, Florida, USA

Life History Features as Potential Indicators of Estuarine Conditions

The spotted seatrout is an important species not only for recreational and commercial fisheries, but also as an integral part of many estuarine ecosystems. As one of the few fishes that live its entire life within an estuarine system, the species has tremendous potential as a monitor or sentinel for estuarine conditions. Prepared by the foremost authorities in their respective fields, **Biology of the Spotted Seatrout** presents an up-to-date summary of what is known about the basic biology of this important species. This innovative reference provides current life history information on this species for the express purpose of beginning the task of assessing differences in estuarine restricted sub-populations of spotted seatrout. It serves as a model of a biological summary directed toward determining which of the life history parameters will most aptly serve as bioindicators to meet overall environmental management needs. It integrates estuarine-specific life history features into the overall management of both estuaries and an estuarine dependent fishery.

Biology of the Spotted Seatrout includes a classic systematic approach to studying the relationships between seatrout genera as well as a more modern approach to investigating intra- and inter-estuarine differences in genetic structure. Ecologists, fisheries biologists and managers, and environmental scientists worldwide will be able to use the information presented in this book as a model on which to establish a database of information to be used to assess and compare estuarine conditions and environmental health. This valuable book serves as a blueprint for bringing together the biological criteria necessary to begin landscape scale comparisons of estuaries based on the biological information of totally estuarine dependent species, such as the spotted seatrout.

Features

- Exhibits a directed effort toward the goal of improving our ability to monitor estuaries and fisheries simultaneously.
- Covers the spotted seatrout's biology, reproduction, genetics, behavior, demography, and ecology.
- Includes three unique chapters covering the management and assessment of spotted seatrout.

CRC Press
Catalog no. 1129, January 2003, 328 pp.
ISBN: 0-8493-1129-2, $149.95

Trophic Organization in Coastal Systems

By Robert J. Livingston
Professor of Biological Science and Director of the Center for Aquatic Research and Resource Management, Florida State University, Tallahassee, FL, USA

An Alternative Approach to Coastal Research

Derived from an unprecedented research effort covering over 70 field years of field data in a series of studies, **Trophic Organization in Coastal Systems** represents an alternative approach to coastal research that has been successfully applied to coastal resource management issues. This unique book is based upon a sequence of long-term, interdisciplinary studies of a series of coastal regions in the NE Gulf of Mexico that include nutrient loading, habitat definition, quantified collections of organisms from microbes to fishes, and the determination of the trophic organization that defines the processes that shape the productivity of these areas.

A multidisciplinary team of marine scientists, chemists, physical oceanographers, geologists, hydrologists, engineers, experimental biologists, and taxonomists have created a singular database of changes in a series of Gulf of Mexico coastal systems. This field information, together with field and laboratory experimentation, is integrated to advance our understanding of how coastal food webs work. The central focus is on the relationship of species-specific phytoplankton communities with associated food webs of coastal systems and the relationship of tropho-dynamic processes to long-term changes (natural and polluted) in such areas. The impact of phytoplankton blooms on trophic organization is also discussed.

The author, a renowned marine scientist, provides detailed knowledge of the processes that drive coastal ecosystems. He presents an in-depth discussion on how there is a hierarchy of cycles of differing periods associated with the formation and development of aquatic food webs. Trophic Organization in Coastal Systems will be particularly useful to those involved in research related to the importance of aquatic food webs. The principles and processes of trophic organization presented here can serve as a valuable model for research in other regions of the world.

Features

- Demonstrates how increased levels of human activity in ecologically sensitive coastal areas affect trophic relationships.
- Illustrates how the organization of plant communities is a critical factor in the definition of aquatic food webs.
- Discusses how food gathering is a primary determinant of the distribution of animals.
- Proposes that both quantity and quality of food types are associated with population maintenance and growth.
- Shows how many aquatic species undergo ontogenetic changes in their feeding habits that ultimately define their habitat needs.

CRC Press
Catalog no. 1110, January 2003, 408 pp.
ISBN: 0-8493-1110-1, $129.95

Boreal Shield Watersheds
Lake Trout Ecosystems in a Changing Environment

Edited by John Gunn, Laurentian University, Sudbury, Ontario, Canada and Richard Ryder, RAR & Associates, Thunder Bay, Ontario, Canada

This book explores the functioning of the Boreal Shield ecosystems, focusing on the lake trout as the model and indicator of environmental change and management. This thorough compendium analyzes the risks to and durability of this environment in relation to local, regional, and global human activity. It examines the impact of water pollution, acid rain, climate change, sport fisheries, invasive species and watershed disturbance.

CRC Press
Catalog no. L1646, August 2003 c.384 pp.
ISBN: 1-5667-7, $139.95

Important Meetings:

56th Annual Meeting of the Gulf and Caribbean Fisheries Institute

First Announcement and Call For Papers
November 10-14, 2003 in Tortola, British Virgin Islands

Northern California District considers Abalone

On May 20th Peter Haaker presented information on the status of the abalone population as well as abalone recovery plans.

The meeting will be held at the H. Lavity Stoutt Community College campus on Tortola, British Virgin Islands. Sessions will focus on: Biology, Ecology, and Assessment of the Reef and Pelagic Fishes; Biology, Ecology, and Assessment of Invertebrate Marine Fisheries; Management and Socio-Economics of Marine Fisheries (special session); Marine Protected Areas and Ecological Reserves; Essential Fish Habitat; Caribbean Aquaculture; Recreational Fishes; and Marine Science Education in the Caribbean and Gulf of Mexico (tentative special session).

Additionally, there will be a general poster session/reception. Abstracts for the 56th GCFI are due July 31, 2003. Abstracts will be accepted in English, French or Spanish: French and Spanish papers should also be accompanied by a title, abstract, and key works in English. English abstracts must be accompanied with Spanish translations. Abstracts should not exceed 300 words.

Please include your full name and the full name of all authors, addresses of all authors, and 3-mail address(es) for the corresponding author(s). You may submit abstracts as attachments in Microsoft Word or Corel Word Perfect formats. In the subject line of the e-mail, please list the name of the author(s) as they will appear in the program (e.g., SmithGarciaJones.doc). If you are unable to submit via e-mail, please send abstracts to: LeRoy Creswell, Executive Secretary, IFAS/UFL, Sea Grant College Program, 8400 Picos Road, Ste. 101, Fort Pierce, FL 34945-3045; Phone (772) 462-1660, Fax (772) 462-1510.

Please indicate whether you are requesting presentation during an oral session or the poster session. Permission to present at an oral session requires submission of a full and complete manuscript in the proper format prior to presentation. Poster presentations do not require submission of a manuscript (although they are enthusiastically accepted). However, students wishing to compete for several student awards offered are required to submit a manuscript for publication in the GCFI Proceedings. Manuscript preparation guidelines are available on the GCFI website (www.gcfi.org) or can be requested from the Executive Secretary.

Registration for the meeting is US $100 (which includes membership and a copy of the GCFI Proceedings). GCFI accepts checks, money orders, and U.S. currency for registration – credit cards are not accepted. Check with GCFI website for student and daily registration rates. Registration is taken at the meeting venue – no pre-registration is required. However, you can pre-register for the meeting if it is required for travel reimbursement (contact LeRoy Creswell).

For lots of information about the 56th GCFI, visit the website: It includes a map of Tortola, transportation information, hotel information, GCFI student awards, and guidelines for submitting abstracts and manuscripts. As the meeting comes closer, more information about the program will be posted.

Quality: The Focus of Asian Aquaculture

September 22-25, 2003
Miracle Grand Hotel – Bangkok, Thailand
The Official Meeting of the Asian-Pacific Chapter of the World Aquaculture Society
Hosted by Department of Fisheries, Thailand
Celebrating 77th Anniversary

Seafood quality issues have come to the fore in recent years and the meeting is intended to focus on the issue of quality in Asian production and in world markets for seafood. The quality theme will be the subject of a plenary session at the Opening Ceremony and will be further featured in the final plenary session on the International Markets, Quality and the Role of Asian-Pacific Aquaculture Producers to be held on the final afternoon of the meeting.

In addition to the Plenary sessions, there will be 3 days packed with sessions, workshops and discussions by leaders in the fields of aquaculture. Special sessions will focus on: Shrimp Culture, including the culture of *Litopenaeus vannamei* in Asia, Fish Culture and Mollusk Culture. A special one day session will be held with simultaneous translation between Thai and English to provide a forum for Thai and international speakers to share experiences.

As with all WAS meetings, there will be a trade show featuring the latest developments in aquaculture production equipment and systems – an ideal opportunity to see new equipment and services designed to maximize production efficiency and increase your profit potential.

Dan Fegan, President, WAS Asian-Pacific Chapter

For more information contact:

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Nation's Federal Marine Fisheries Managers to Host Fisheries Conference

November 13-15, 2003

Omni-Shoreham Hotel and Conference Center, 2500 Calvert Street, Washington, D.C.

Mark your calendar and save the date to attend the first-ever fisheries management conference co-sponsored by the eight Regional Fishery Management Councils and the National Marine Fisheries Service (NOAA Fisheries). The conference is open to the public and will be held in Washington, D.C. November 13-15, 2003.

The conference, titled Managing Our Nation's Marine Fisheries – Past, Present, and Future, promises to be an educational and insightful experience. Whether you are a fisherman, an environmental advocate, a policymaker or a reporter who covers the fisheries beat, you will find the conference sessions to be pertinent and informative as Congress considers the re-authorization of the Magnuson-Stevens Fishery Conservation and Management Act, which governs management decisions for our nation's marine fisheries.

The conference aims to educate the public and the media on the fishery management process and current management research initiatives, and to help bridge the gap between perception and reality regarding management of our nation's fisheries. The conference also will provide a forum for information exchange and examination of a wide range of perspectives on future management and marine research directions.

Whether you are interested in regional bycatch issues, have concerns about human impacts on fish habitats, want to learn more about ecosystem management, marine research or conservation of protected species, you will find what you are looking for this November in Washington, D.C.

The conference will offer the opportunity to meet with Council executive directors and chairmen, as well as others involved in living marine resource management.

Conference Logistics
Registration: Advance registration requested. Attendance is free of charge.
Contact: Wayne Swingle, Phone (813) 228-2815.

BAD = Best Available Data, NRC Wonders

Nominations have been sought for the National Research Council Committee on the Defining Best Available Science for Fisheries Management

A committee of 8 members will be formed to examine the application of the term "best available scientific information" in fisheries management as described in the statement task (see below). The committee will be formed according to National Research Council guidelines regarding balance and conflict of interest.

The areas of expertise that were sought for this study include: natural resource law and policy, fisheries science, fish stock assessment, resource economics, and marine ecology. Some individuals may fit more than one category. Nominations could include both U.S. and foreign scientists.

Statement of Task

This study will examine the application of the term "best scientific information available" as the basis for fishery conservation and management measures required under National Standard 2 of the Magnuson-Stevens Act. A workshop will be convened to discuss the original rationale behind this standard and its subsequent application in developing fishery management plans. Workshop attendees will also explore the interpretation of this standard by the courts in response to legal challenges of the scientific basis of regulatory actions. Questions to be considered include the following: How should adherence to the standard be measured? How and when should it be employed? Should the standard be applied to exclude information deemed inadequate or should information be ranked and applied in relation to relevance and rigor? A brief report will be produced with recommendations for more uniform application of "best scientific information available" in the preparation of fishery management plans.

Submitted by: Gary Sakagawa

Freshwater scarcity issues threaten America's Most Endangered Rivers of 2003

America's Most Endangered Rivers of 2003:

1. Big Sunflower River, Mississippi: Flood Control; 2. Klamath River, Oregon, California: Irrigation, Hydropower, Pollution; 3. Ipswich River, Massachusetts: Municipal water withdrawal; 4. Gunnison River, Colorado: Water withdrawal, Impoundment; 5. Rio Grande, Colorado, New Mexico, Texas: Water withdrawal; 6. Mattaponi River, Virginia: Municipal water withdrawal (see articles in this issue); 7. Platte River, Colorado, Wyoming, Nebraska: Irrigation withdrawal; 8. Snake, Wyoming, Idaho, Oregon, Washington: Impoundments; 9. Tallapoosa River, Alabama: Hydropower operations; 10. Trinity River, Texas: Flood Control.

From: American Rivers, Spring/Summer 2003

Note: Canning River, Alaska – off list, old news. Ed.

SHAD I: Decision on King William reservoir permit delayed

Hundreds of opponents filled a school auditorium April 22 urging the Virginia Marine Resources Commission (VMRC) to reject a permit that would allow up to 75 million gallons a day to be drawn from a critical shad spawning area in the Mattaponi River to fill the proposed King William Reservoir. At the same time, officials from Newport News – who have been planning the reservoir for more than a decade – insisted that the approval of the project was essential to secure a long-term water supply for their region. "There will come a day, if we don't get this permit, that the water will not be there when we need it, and 600,000 people will want to know why," Newport News Mayor Joe Frank told the commission. He was joined by mayors from the neighboring jurisdictions, and business leaders. Newport News officials, citing their own studies, dispute claims that the intake would have a significant impact on the shad population, but nonetheless offered to shut down the intake for two months during the spawning season.

The debate was the latest chapter in the city's decade-old quest to build the reservoir, which is strongly opposed by environmental groups and residents in rural King William County, where it would be built. Besides the intake in the Mattaponi River, the reservoir would drown 430 acres of wetlands – the most ever allowed in the region since the Clean Water Act was passed in 1972. It would also affect scores of Native American archaeological sites. Because of its impacts, the project needs approval from the Army Corps of Engineers. The Corps' Norfolk District initially recommended rejecting the project, saying the region's future need for water was too uncertain to justify the environmental impacts of the project. But before leaving office, former Gov. Jim Gilmore requested a review by the Corps' North Atlantic Division, which last fall agreed that the city's need for water was valid. The North Atlantic Division indicated it would approve the project if the city first secured all necessary state approvals. That made the decision by the VRMC, which must issue a permit for the water intake on the Mattaponi, critical for the project. But the commission's staff echoed concerns raised by Virginia Institute of Marine Sciences (VIMS) scientists that the proposed intake was in the middle of prime shad spawning and nursery habitat, and that thousands of shad eggs and larvae could be killed as they were dragged across the intake's 12 underwater screens, each of which are 7 feet in diameter.

Shad, anadromous fish that spawn in freshwater rivers but live most of their lives in the ocean, are protected throughout the Chesapeake Bay by a fishing moratorium, and shad fishing is being phased out along the Atlantic Coast to help depleted populations rebuild. Restoration of the shad population, which was once the Chesapeake's largest commercial fishery, has been a priority of the Bay Program, with the Bay states annually stocking millions of hatchery-reared fish in tributaries throughout the watershed as part of an effort to rebuild a self-sustaining population.

As a compromise, the city offered not to draw water from the Mattaponi from March 15 to May 15 unless the governor declared a drought emergency. After 2020, the restriction would be lifted unless the fishing moratorium is still in place. VIMS scientists earlier recommended against making any decision until a comprehensive study was completed of future water needs, saying the intake, coupled with impacts from future development and water demands within the Mattaponi basin, could add up to more stress than the shad population would withstand. Scientists hired by the city disputed conclusions of the VIMS scientists. "The VIMS assessment, I feel, is just unsupportable," said William Richkus, vice president of Versar, Inc., a consultant hired by Newport News to review the VIMS analysis. The consultants said the state-of-the-art design on the intake would minimize the impact on shad eggs and larvae. And, using computer models, they predicted the lost eggs and larvae would result in only six fewer adult shad produced in the river. VIMS scientists said there were no reliable models to predict the impact of the lost eggs and larvae on the adult population. "These are interesting debates we can have in the academic field," said Roger Mann, VIMS acting director for research and advisory services. Noting that a moratorium was in place for shad fishing in the Bay, he said any increased mortality in a key spawning area could hurt efforts to rebuild the population.

If the commission approves a compromise allowing the intake but prohibiting water withdrawals during the spring, it

would not be the last word on the issue. Commission officials said withdrawal restrictions during the spring, when flows are at their highest, meant the city would likely need to increase withdrawals during other parts of the year. Because flows during the rest of the year are generally low, pumping more water could increase salinity levels in the tidal area around the intake. Carl Custalow, assistant chief of the nearby Mattaponi Indian Reservation said the project would undercut efforts by the Mattaponi Reservation, which has used hatchery to stock shad in the river for decades. "Over the years, we have lost much of our land to greed as other people have taken our resources," Custalow said. "Now, with this reservoir, people want to take our river as well."

From: Bay Journal, May 2003

Shad II: VA agency rejects permit for reservoir

Concerns about impact of intake pipes on shad, migratory fish cited

By Karl Blankenship

In May, the shad struck back. For more than a century, dams and other obstacles have blocked the migratory fish from many of their historic spawning areas in rivers throughout the Bay watershed and along the entire East Coast. But on May 14, concerns about the shad and their spawning grounds on the Mattaponi River may have become the insurmountable obstacle to plans for a 1,500-acre reservoir, as the Virginia Marine Resources Commission voted 6-2 to deny permit critical for the project.

Scientists from VIMS, as well as the commission's staff, recommended that the intake pipe permit be denied to safeguard the shad, which are protected by a fishing moratorium throughout the Chesapeake. After the meeting, Newport News Mayor Joe Frank criticized the commission for being "confused by the science" and yielding to "emotional" appeals from the projects opponents.

Whether Newport News would pursue the issue remained unclear. The normal route of appeal would be to the state Circuit Court, but Frank expressed concern that this could leave the issue tied up for years. The city has already spent more than $18 million on the project over the past decade to design and plan the reservoir.

From: Bay Journal, June 2003

Commonwealth of the Northern Marianas Islands Passes Bill to Ban Fishing with Scuba

The Saipan and Northern Islands Legislative Delegation has passed a bill prohibiting the use of scuba and similar gear for fishing around the island of Saipan and the Northern Islands. Introduced by Congressman Pete Castro and sponsored by several others, including Congressman Arnold I. Palacios, a former director of the CNMI's Division of Fish and Wildlife, House Local Bill Number 13-033 is now headed to the governor for his action. If approved, it will become unlawful for fisherman (commercial or non-commercial) to use scuba or other related diving devices when fishing or harvesting marine life within the lagoon and coastal waters of the municipality of Saipan and the Northern Islands.

The bill was introduced following the delegation's findings that the use of scuba and other related devices have caused significant depletion of fish and other marine life within the lagoon and coastal waters. The delegation also noted that preserving and regulating the fishing and harvesting of marine life in these areas is essential to maintaining, preserving and enhancing the marine ecosystem for the use and enjoyment of future generations of Northern Marianas residents.

If signed into law, the penalty for using scuba and other related devices to fish would be a fine of not more than $1,000 or imprisonment for not more than six months or both. In addition, the scuba apparatus and other equipment used in this form of fishing – such as spear gun, the boat and its motor – would be confiscated and donated to the Division of Fish and Wildlife to assist in its monitoring and enforcement of fishing regulations. All fines collected would be deposited into the Fish and Game Conservation Fund in a special account to support conservation and enforcement activities within the municipality Saipan and the Northern Islands. The Department of Lands and Natural Resources, in consultation with the Division of Fish and Wildlife, would enforce the provisions of the proposed legislation.

From: Pacific Island Fishery News, Spring 2003

NMFS Establishes New Pacific Islands Region

On April 21, 2003, the National Marine Fisheries Service (NMFS, also known as NOAA Fisheries) established a new region in the Western Pacific to provide better customer service and ecosystem management of resources within the expansive area of the Pacific islands. The new Pacific Islands Regional Office (PIRO) and Pacific Islands Fisheries Science Center (PIFSC) were elevated in organizational status from a local area and laboratory, respectively. The action will allow NOAA Fisheries to better address the unique and growing importance of living marine resources to constituents in the U.S. Pacific Islands.

The implementation of the new region marks the culmination of much effort by the Western Pacific Fishery Management Council to place the U.S. Pacific Islands on an equal footing with other administrative regions in the United States (Alaska, Northwest, Southwest, Southeast and Northwest). Until recently, the U.S. Pacific Islands were incorporated within the Southwest Region, which also includes California. The Southwest Regional Office and Science Center are based in Long Beach and La Jolla, respectively, and all management decisions relating to the U.S. Pacific Islands were transmitted through these offices prior to being forwarded to NMFS headquarters in Washington, D.C.

The Pacific Islands Region has now been 'liberated' from its ties with the U.S. West Coast and will liaise and report directly to NMFS headquarters," Council Executive Director Kitty M. Simonds stated. "More of the decisions that may affect fisheries in the U.S. Pacific Islands will be made internally within the region."

The new Pacific Islands Region includes the largest geographical area of all U.S. regions. Bounded by the Hawaiian Archipelago in the north, American Samoa and U.S. possessions in the south, and the Marianas Archipelago in the west, the total area of the exclusive economic zone (EEZ) under PIRO jurisdiction is more than 1.7 million square nautical miles, which is equal to the total EEZ of the entire U.S. mainland (including Alaska). The PIRO will carry out living marine resources conservation and management responsibilities assigned to NOAA Fisheries in the Central and Western Pacific and will have a structure similar to other regions, with three major operational divisions: sustainable fisheries, protected resources and habitat conservation.

The PIFSC will retain its existing structure with five research divisions (coral reef ecosystems, fish biology and ecology, ecosystems and environment, protected species, and fishery management and performance). The PIFSC's responsibility will be to provide high-quality scientific research and advice for fisheries management and conservation and for the recovery of protected species throughout the Pacific Islands Region. The PIFSC's current staff of 168 is expected to increase by 17 to handle its increased responsibilities.

The PIRO and the PIFSC will be included in an effort to consolidate all NOAA offices in the Pacific. Plans to establish a NOAA campus where all NOAA offices will reside are in the early planning stages.

From: Pacific Island Fishery News, May 2003

Oregon Inlet Jetties Won't Be Constructed

Good riddance to a fishery threatening boondoggle!

Raleigh (AP) – The Oregon Inlet jetties, proposed in 1970 as a way to make the fragile inlet safer for fishing vessels, will not be built, several government agencies said Thursday, May 1, 2003. Instead, the U.S. Army Corps of Engineers will improve the current 14-foot navigation channel, the agencies said. In addition, the Corps will work with the National Oceanic and Atmospheric Administration (NOAA) to provide more precise navigation data on changing sand conditions in the inlet. The Corps, along with the White House Council on Environmental Quality and the Interior and Commerce departments said they had agreed not to continue the jetties project. "This was a difficult decision to reach, but ultimately it was the right decision," said Interior Secretary Gale A. Norton. "From the Interior Department's perspective, we have a mandate to protect and conserve our nation's parks and refuges for the benefit of the American people."

Congress first authorized the project in 1970, with then-Sen. Jesse Helms a major supporter. Bureaucratic infighting and environmentalists stalled the project. Last fall, a report by General Accounting Office said a 2001 study of the project's cost and benefits was so badly flawed it "does not provide a reliable basis for deciding whether to proceed with the project." It recommended the Corps conduct a new, more comprehensive study before proceeding. The jetties involved the Corps dredging a 20-foot by 400-foot navigation channel to accommodate deep draft fishing vessels and constructing two jetties to divert sands from the channel. Oregon Inlet is the only break in the northern part of the Outer Banks barrier islands, providing access for boats between the Atlantic Ocean and the Albemarle Pamlico Sound. It would have had an initial cost of $108 million in addition to annual dredging costs of $6.1 million.

From: Sun Journal, New Bern, N.C., Friday, May 2, 2003

This project generated great concern about ingress of larval fishes to the giant Albemarle-Pamlico estuarine complex. Ed.

Iowa State University Regents approve merger of animal ecology and forestry

The Board of Regents, State of Iowa, has approved the merger of the animal ecology and forestry departments. The new name of the department is the Department of Natural Resource Ecology and Management. The department chair is Mike Kelly, who said the new department will be able to "train students in a more holistic manner." Faculty assignments and curriculum are being developed.

From: ISU Ag Alumni Forum, II (I) Spring 2003

Editors Question:

At one time the incorporation of university fish and wildlife programs into departments shared with forestry programs was regarded by many as inevitably detrimental to the fur and fin operations. Is that opinion still widely held or justified?

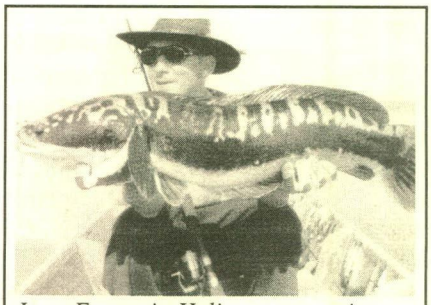
British scientists say fish do feel pain

London, April 30 – Anglers take note, British scientists say that after years of debate, they now have proof that fish feel pain. Animal activists are on the warpath after a study released on Wednesday showed how rainbow trout react to discomfort. They condemned fishing as cruel and demanded an end to the sport – but anglers themselves dismissed the study.

The research found that fish have receptors in their heads and that subjecting them to noxious substances causes "adverse behavioral and physiological changes." "This fulfills the criteria for animal pain," Dr. Lynne Sneddon, who headed the research, published by the Royal Society, Britain's national academy of science. Bee venom or acetic acid was injected into the lips of some of the trout, while control groups of fish were injected with saline solution or merely handled. The trout injected with venom or acid began to show "rocking" motion – similar to that seen in stressed higher vertebrates – and those injected with acetic acid began rubbing their lips in the gravel of their tank. "These do not appear to be reflex responses," Sneddon said.

The affected fish also took three times longer to resume feeding activity, compared with those in the control groups. The team from the Roslin Institute and the University of Edinburgh found the fish had polymodal nociceptors – receptors that respond to tissue-damaging stimuli – on their heads. It is the first time these receptors have been found in fish. They have similar properties to those found in amphibians, birds and mammals including humans. Animal activists said the findings showed that fishing was cruel.

Condensed from: Reuters, June 16, 2003



Jean-Francois Helias was casting an artificial lure near the Krassio Dam in Suphanburi, Thailand when this 13 lb 3 oz giant snakehead decided to have lunch last December. After a 15-minute fight, Helias boated the big snakehead that qualified for a men's 12-lb line class record.
From: International Angler, 65(3) May-June, 2003

Council Seeks Public Comment on Experimental Closed Area

Oculina Bank Area off Florida Subject of Public Hearing in June

Oculina coral (*Oculina varicossa*), or ivory tree coral, is distributed along the South Atlantic shelf with concentrations found off the central East Coast of Florida. Unique among coral reefs, the Oculina Banks are composed of a single species of delicately branched coral that grows on ancient limestone ridges and pinnacles distributed throughout the area. The Oculina coral provides habitat for a diversity of fish and other marine animals. Because of this diversity, the coral areas have been subjected to heavy fishing pressure since the 1960's and fishing gear, including bottom trawling, has had a devastating effect on the fragile coral.

In 1984, the South Atlantic Fishery Management Council designated a 92-square nautical mile portion of the Oculina Bank as a "Habitat Area of Particular Concern" or HAPC. This designation categorized the area as having special biological significance and prohibited the use of bottom-tending fishing gear such as trawls, dredges, and fish traps within the area to protect the coral habitat. Unfortunately, by the late 1980's continued fishing pressure had resulted in severe declines in fish populations within the area. In 1994, as a result of research conducted by the Harbor Branch Oceanographic Institute showing continued declines, the Council designated the Oculina Bank HAPC at the Oculina Experimental Closed Area, and closed the area to all bottom fishing for snapper and grouper species. Two years later, the area was further protected by prohibiting all fishing vessels from anchoring in the area and an outlying border was established to prohibit trawling by rock shrimp vessels near the closed area. In 2000, the HAPC was expanded to include the area closed to rock shrimp fishing, approximately 60 nautical miles long and 5 miles wide, and eliminated all bottom-tending gear and anchoring to protect the coral habitat.

The 92-sq. nautical mile Oculina Experimental Closed Area, now located within the larger HAPC, was established by Amendment 6 to the Council's Snapper Grouper Fishery Management Plan (FMP). As outlined in the Amendment, the designation of the Experimental Closed Area was to end ten years from the June 27, 1994 establishment date if it is not reauthorized. The Council, through Amendment 13A, is now addressing various options for the area. These options range from taking no action and allowing the closed area designation to end, to extending the closure for an indefinite period of time. The Council's preferred option is to extend the period for an additional 10 years, beginning in June of 2004.

The Council held a public hearing regarding the proposed actions in Amendment 13A to the Snapper Grouper FMP during its June meeting in Cocoa Beach, Florida. For more information, contact the Council office or visit the Council's web site at www.safmc.net.

The South Atlantic Fishery Management Council, one of eight regional councils, conserves and manages fish stock from three to 200 miles offshore of North and South Carolina, Georgia and east Florida.

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Warkentine Receives Distinguished Service Award

President Schaefer presents the Institutes Distinguished Service Award to Barbara Warkentine, Secretary of the Institute since 1996.

At the August 2003 AIFRB Board of Control Meeting in Quebec City, Canada, President Richard Schaefer presented the Institute's Distinguished Service Award to Barbara E. Warkentine.

Barbara first joined the Institute as an Associate Member in 1986, and was the winner of several Research Assistance Awards, and upon completion of her doctorate degree was promptly promoted to member. During this period Barbara served as secretary of what was then the New York – New Jersey District. When the District Director became the Institute's Treasurer, Barbara took over the duties of District Director from 1993-2000, and during this period spearheaded the reorganization of the Northeast Region, and incorporated Pennsylvania and Connecticut along with New York and New Jersey into the new Keystone District. She has also long served on the Membership committee. Barbara also worked with former Presidents Vaughn Anthony, Clark Hubbs, and Gary Sakagawa to develop the Institute's Procedures Manual and Briefing Books into their present form. In 1996 Barbara was persuaded to take over the vacant position of Institute Secretary, a position she has held continuously to the present day. In 1998, following her appointment as Full Professor at SUNY Maritime College, Barbara was elected a Fellow of AIFRB.

It is in recognition of her outstanding service and dedication to the goals and functioning of the Institute that the Awards Committee has seen fit to honor her with the Distinguished Service Award for 2002.

Editor's Note: Not only has Barbara worked hard, she has worked cheerfully and with good heart. She has, many times, made my job as Editor immensely easier by prompt, accurate fulfillment of my requests. Congratulations, Barbara!

Sakagawa Honored by AIFRB and AFS

Gerry Ault presents painting by James Harris to Gary Sakagawa as a special award for exceptional service as AIFRB Past President.

On behalf of the AIFRB Board of Control and in recognition of his tireless and incredibly insightful efforts as Past-President, Dr. Gary Sakagawa was presented an original signed-painting by world renowned marine artist James Harris entitled "Champion Slam" (picturing a permit, a tarpon, and a bonefish) by Research Assistance Awards Chair Jerry Ault in La Jolla, California, over the Christmas holidays 2002.

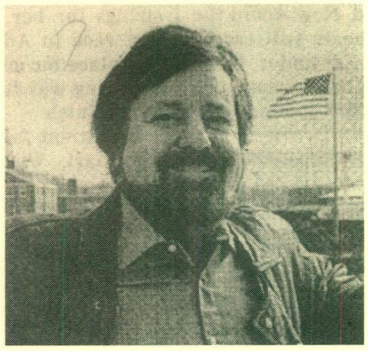
Gary also received the Award of Excellence from the Western Division American Fisheries Society on April 15, 2003.

SOSA-Nishizaki Recipient of AFS Western Division Award of Excellence.

Dr. Oscan Sosa-Nishizaki was honored by the Western Division of the American Fisheries Society as recipient of their Award of Excellence at the Western Division April Meeting.

The AIFRB is a 501(c)(3) tax-exempt nonprofit organization (EIN 61-6050711).

Fellow Sissenwine Earns Excellence Awards



The American Fisheries Society presented two awards in excellence to a long-time Falmouth, MA resident yesterday at a meeting of the American Fisheries Society in Quebec, Canada.

Michael P. Sissenwine of Whitecaps Drive is the 2003 recipient of both the William E. Ricker Resource Conservation Award for accomplishment in aquatic resource conservation and the Oscar E. Sette award for sustained excellence in marine fishery biology through research, teaching, and administration.

From 1996 to 2002, Dr. Sissenwine served as director of the National Oceanic and Atmospheric Administration Northeast Fisheries Science Center in Woods Hole. The center comprises five laboratories and 300 employees using two NOAA offshore research vessels. Dr. Sissenwine earned his doctorate in oceanography from the University of Rhode Island in 1975 and has been chief science advisor for the National Marine Fisheries Service since March 2003. As chief science advisor, he oversees scientific activities that support conservation and management of the nation's marine resources. He is responsible for about 1,400 staff in six fisheries science centers throughout the country. These science centers use 30 laboratories and eight offshore research vessels.

"I could not be more thrilled with the selection of Mike Sissenwine for this recognition by the American Fisheries Society," said Dr. William T. Hogarth, director of the National Oceanic and Atmospheric Administration. "As one of the world's top marine scientists, Dr. Sissenwine has dedicated his career in service to the country and the environment by helping develop world-class scientific principles used to support fishery management programs, and NOAA Fisheries is fortunate to have him lead our scientific programs," said Dr. Hogarth.

From: Falmouth Enterprise

A Lost Colleague Remembered

Hiroshi Kasahara
1919 – June 2003
Obituary

Dr. Hiroshi Kasahara, widely known international civil servant and academician specializing in fisheries development and management, and a long-time Member and Fellow of the American Institute of Fishery Research Biologists, died in Seattle, Washington in June after a long illness.

Dr. Kasahara was born in Japan in 1919 and graduated from the Fisheries Department, Faculty of Agriculture, of the University of Tokyo in March 1941. After service in the Japanese Army from December 1941 to June 1943, he worked at the Research Institute of Nippon Suisan Kaisha Ltd. to June 1950 and studied for his Ph.D. degree, which he received in 1951.

Dr. Kasahara's international career began in 1954 when he became the Assistant Director of the International North Pacific Fisheries Commission in Vancouver, B.C., Canada where he remained until 1964. During this period he published his comprehensive study on the "Fisheries Resources of the North Pacific Ocean", as part of the H.R. MacMillan Lecture series at the University of British Columbia. Part I appeared in 1961 and Part II in 1964.

In the latter year he left the INPFC and joined the United Nations Special Fund and Development Program in New York where he served until 1970 as Senior Project Officer, Fisheries and Oceanographic Projects, working with fishery development projects in many countries throughout the world.

Dr. Kasahara's academic career began in 1970 when he joined the University of Washington College of Fisheries as Professor of Fisheries and Associate Dean. During this period, Professor Kasahara also served on the International Marine Science Affairs Panel of the National Academy of Sciences Committee on Oceanography and Ocean Affairs Board and was a co-author of its report issued in 1972. While at the university, Prof. Kasahara joined with an interdisciplinary faculty group in advocating the restructuring of the major marine units of the University to create a single college. This objective was later accomplished, in 1982, with the creation of the College of Ocean and Fishery Science, consisting of the School of Oceanography, School of Fisheries (later the School of Aquatic and Fishery Sciences), and the Institute of Marine Studies (later the School of Marine Affairs).

In 1973, Dr. Kasahara returned to his international work when he left the University to join the Fisheries Department of the United Nations Food and Agriculture Organization in Rome where he was Director of the Fishery Resources and Environment Division. Dr. Kasahara retired from FAO in 1984. Dr. Kasahara is survived by his wife Toshiko.

Submitted by: Wilham T. Burke, Professor of Law Emeritus, University of Washington

William Burke's Eulogy for Hiroshi Kasahara

In the 1960s I was on the faculty at Ohio State University where we created a project to bring together people who were professionally involved in use and management of the ocean with others who were mainly social scientists and lawyers who were concerned with problems of maintaining social order and promoting general welfare. The idea was that these were two very different groups of people and that there ought to be more substantial communication between them in light of the political, social, economic and legal problems that were becoming widely recognized as significant.

We sought individuals who were well informed about major uses of the marine environment. Two of the principal experts consulted for this search and widely known for their expertise in fishery science and affairs on a global basis, were Wilber (Wib) M. Chapman and M.B. (Benny) Schaefer. In their opinion, Hiroshi stood out among those who were knowledgeable about global fisheries, which was then, as it is still today, one of the most controversial, complex and difficult sectors of ocean use and management. Accordingly, we invited Hiroshi to prepare the lead paper for the first segment of our conference in March 1967. Hiroshi was at that time on the staff of the United Nations Development Program. While Hiroshi was considered to be very well informed about world fisheries in general, his knowledge and understanding of Pacific Ocean fisheries was especially notable. He had served for several years as Assistant Director of the International North Pacific Fisheries Commission whose headquarters were in Vancouver, B.C. He also had produced a most comprehensive study on the "Fisheries Resources of the North Pacific Ocean" which was published in two parts in the H.R. MacMillan Lecture Series at the University of British Columbia.

At the time of this meeting, Hiroshi was already highly regarded for his expertise in fisheries and international fisheries management, and his paper for the meeting was meticulous in its coverage of fundamental issues. Little did I know at the time that I would before long learn first hand how Hiroshi accomplished the work he did. The following year I left Ohio State to join the University of Washington law school faculty and to my surprise very shortly thereafter Hiroshi joined the faculty of the then College of Fisheries.

This was very fortunate for me since my interests in international fishery regulation paralleled Hiroshi's and his presence allowed me (and many others) to profit from his understanding and knowledge of global fisheries. I was fortunate enough to enlist Hiroshi as a collaborator and senior investigator in a joint research project in North Pacific Fisheries Management. This was part of a larger series of studies funded by the Ford Foundation for the purpose of input into the preparatory work then getting underway for a global conference to negotiate a comprehensive agreement on the law of the sea, including fisheries as a central issue to be examined.

In the process of completing our study I got the full treatment of Hiroshi's truly ferocious attack on a research problem. He was indefatigable. We would do separate drafts of an agreed outline and then join in revising each other's work. I still can remember this because it was excruciating. Hiroshi was a perfectionist beyond any I had previously experienced. There was not a misplaced or misconceived jot or title that escaped his close eye. This lengthy monograph was edited and published in 1973 with the title "North Pacific Fisheries Management" by Resources for the Future, a Washington, D.C. research group.

About the same time, the U.W. law school was creating a new graduate program of study in law and marine affairs. Hiroshi was a vital part of the development of the curriculum for this course of study, and taught a course in the College of Fisheries which our students could take with profit.

Hiroshi was also a major participant in the efforts we began in 1970 to persuade the University to integrate and restructure the various and separate components of its units concerned with the ocean. Our aim at the time was to try to get a larger unit created that would bring together the several units concerned with the marine environment. Hiroshi shared this perspective and was a member of the small group, which initially wrote a letter to then President Odegaard to make the case, and later met with him to lobby for this change. Although this did not succeed initially, a new unit called the Institute for Marine Studies was created in 1972. Several years later the University reconsidered this question and a new college was created to include the College of Fisheries (which became the School of Fisheries, now the School of Aquatic and Fishery Sciences), the School of Oceanography (formerly Department of Oceanography), and the Institute for Marine Studies (subsequently changed to the School of Marine Affairs).

Also during this period, I took advantage of his expertise by persuading him to join in a unit I chaired in the National Academy of Sciences called the International Marine Science Affairs Panel, a subgroup of the then Committee of Oceanography (later the Ocean Affairs Board). Here again Hiroshi's writing skills and previous global experience in United Nations operations were invaluable and along with Warren Wooster, John Knauss and myself drafted an Academy report with the same title as the Panel.

Not long after this work, the College of Fisheries hierarchy was changed and Hiroshi lost his position as Associate Dean and in 1973 Hiroshi left for the United Nations Food and Agriculture Organization in Rome. Hiroshi became the Director of the Fishery Resources and Environment Division where he remained until his retirement in 1984. Hiroshi then returned to Seattle where he again helped us to organize and conduct research on the new regime for ocean fisheries. Hiroshi's health deteriorated not long thereafter and he was unable to join in our projects but his earlier contributions were vital.

Fond Thoughts of Hiroshi Kasahara

Lorraine Kissack Southward

I had not seen Hiroshi Kasahara since he left the International North Pacific Fisheries Commission to work with FAO in Rome, about 40 years ago. Even so, hearing that he had died brought great sadness to me. I met Hiroshi-san in 1958. He was then Assistant Director of the International North Pacific Fisheries Commission, headquartered at the University of British Columbia in Vancouver, B.C. Roy Jackson was the Executive Director. They needed a typist to help the secretary, and I was hired. When the secretary quit shortly after I began as a temporary typist, I was hired as secretary. I did not know then that I was entering into association with a couple of the brightest and the best in fisheries science and administration. But I soon learned. I remember my associate Hiroshi-san and his wife, Toshiko-san, with affection and joy. Working with him was stimulating, challenging, and fun. He was adamant about accuracy and detail. I don't know if I came to INPFC with nit-picker tendencies or if I learned attention to minute detail from him during the years we worked together on statistical reports, annual reports, research bulletins, and annual meeting papers. He taught me so much, in a kindly manner, smiling ever so slightly when he was surprised that I did not already know something that was self-evident to him. I remember especially the incredible ability he had to translate the scientific reports submitted for the annual meetings. He sat down at the Dictaphone machine with a Japanese-language report in his hand, and the little blue cylinders turned until full of an English version. His language skills were absolutely amazing. He was, in short, brilliant. Because Japanese scientists could read English, the English documents were not translated. But he could have done that with skill, too. The Kasaharas were hospitable to me. We enjoyed good food and music together. I remember especially how pleased they were when I was able to provide them with program notes from a performance of the Soviet Army Chorus and Band. They had a recording of Victoria de los Angeles singing with cellos, about 10 cellos, I think. Once while visiting them, I admired a small wooden bowl. That was when I learned not to admire things in a Japanese home because the owners would give it to you! That bowl is in my living room today, a tangible remembrance of time spent with good friends. Toshiko-san once gave me a small watercolor that was done by someone in her family. I am looking at that painting now, and realizing again how much I treasure my friendship with these wonderful people. As I said, I have not seen them for many years, but time has not dimmed my affection and admiration. With the passing of this man, my world seems a lesser place.

Outstanding Achievement Awards 2003:

Initial Announcement: More Later

Individual Achievement Award: Brian J. Rothschild

Dr. Brian J. Rothschild has an outstanding scientific record. He has many publications and his work on stochastic processes and operation research, recruitment theory, and biological and physical processes are widely cited. Much of his work has involved founding or developing scientific committees including GLOBEC and ICES. Dr. Rothschild has served in many NMFS and NOAA Positions such as Deputy Director, Director and Policy Advisor. His work nationally and internationally on fishery scientific and management agenda has been widely recognized. In addition, his guidance and mentoring of students and scientists has been exceptional. Dr. Rothschild's over one-half century of service to fisheries is deserving of this award.

Group Achievement Award: NWFSC Ecotoxicology Team

The Northwest Fishery Science Center, NMFS, NOAA Ecotoxicology Research Team for more than 30 years has made many valuable contributions to our understanding of the effects of contaminants on marine species. The group has a long record of innovative research that provides the basis for fisheries management and conservation. The group has a strong training program, from elementary school through graduate level both locally and internationally, and students and post docs have been an integral part of their research programs for many years. Individual scientists and the group have been recognized for their scientific contributions in the field of contaminant effects. New analytical techniques to rapidly assess exposure of fish to oil-related compounds that are now used worldwide were developed by the Ecotoxicology Research Team. The Ecotoxicology Team has been a leader in research on effects of contaminants on fish, monitoring of coastal environments, and has helped in the restoration of many polluted sites around the nation.

Members of the AIFRB Board of Control assembled at Quebec, Quebec, August 9-10, 2003

Board of Control. Left to Right: Dora Passino-Reader, Kevin Friedland, Gary Sakagawa, Marty Golden, Allen Shimada, Tom Keegan, Dick Schaefer, Barbara Warkentine, Joe Rachlin, Gerry Ault, Tom Lambert, Morris Southward. Attending, but not pictured were Gil Radonski, Joe Margraf, and Gene Huntsman.

Treasurer's Report for FY 2003

(as of August 1, 2003)

Allen Shimada

(abridged by Editor)

As of Friday, August 1, 2003 I can report general improvement in the state of the Treasury. For a second year, the Institute did not require transfer of investment income to cover operating expenses. Dividends and interest amounting to $1,114 were reinvested. AIFRB continues to lose dues paying members and receipts have declined from $17,032 (FY 01) to $13,145 (FY 02) to $12,320 in FY 03. 80 members are delinquent one year (-$2,400) and 56 members are delinquent two years (-$3,360). Total membership will fall to 688, if two-year delinquents are dropped.

Of special note is a $7,000 service contract received from the NMFS-SWFSC. The Institute managed travel reimbursement and registration fees for Mexican scientists attending the Pacific Coast Sharks Symposium held at the AFS/Western Division Meeting at San Diego, CA. AIFRB also provided a student rapporteur and delivered a proceedings report. A management fee of $2,920 is reported in net income.

Good progress continues in the reduction of annual operating expenses. BRIEFS is the largest outlay ($7,014). BOC travel reimbursement is budgeted for $4,400. The cap on W.F. Thompson Best Paper and Research Assistance awards has been helpful in balancing the budget. Officer and committee chair expense reimbursements remain modest.

Tax deductible contributions to Unrestricted Use, and retained in operating cash ($1,114), have partially offset the shortfall in dues collection.

In September 2002, the Founders Fund received a second donation of $10,000 from Dr. and Mrs. Hiroshi Kasahara. The general membership contributed an additional $2,160.

Over the past 11 months, the Institute's two equity accounts have participated in the rise of the general market. Account valuation has increased dramatically, particularly from early March 2003 onward. On August 1, 2003, the combined Founders Fund and the Smith Barney Capital accounts are valued at $72,893. This represents a $26,962 (+58.7%) increase over fiscal year-end 2002. Cost basis for the combined accounts increased from $66,639 to $82,893 (+24.4%) and represents reinvested dividends and new contributions made during FY 2003. Unrealized gain/loss improved from –35.8% in 2002 to –12.8% or -$10,623. Closed transactions income is $1,961. for a 2.69% annual return, which is two times the current dividend rate of the S&P 500.

American Institute of Fishery Research Biologists

Statement of Cash Receipts and Cash Disbursements

9/1/02 through 8/1/03

	9/1/01 to 8/31/02	9/1/02 to 8/1/03	Amount Difference
Cash Receipts			
AIFRB Service Contract	0.00	2,920.00	2,920.00
Founders/Capital/Unrestricted Funds	6,587.00	13,274.00	6,687.00
Member Dues	13,145.00	12,320.00	-825.00
District Donation	100.00	0.00	-100.00
Investment Income (Retained '02-'03)	1,454.03	1,114.63	-339.40
Supplemental Funds	500.00	4,080.00	3,580.00
Sequoia Bank Interest (Chk)	45.30	20.23	-25.07
Total Cash Receipts	21,831.33	33,728.86	11,897.53
Cash Disbursements			
AIFRB Meeting Service	0.00	0.00	0.00
AIFRB Reception	650.00	500.00	-150.00
AIFRB Awards			
Achievement Award Expense	167.07	197.83	30.76
Research Assistance Award	1,050.00	1,050.00	0.00
W. F. Thompson Award/Expense	500.00	500.00	0.00
Service Charges (Sequoia Bank/Schwab)	140.00	194.00	54.00
Board of Control	3,584.14	4,400.00	815.86
Bridge Loan	500.00	0.00	-500.00
BRIEFS Newsletter	6,990.64	7,014.41	23.77
Collection	0.00	0.00	0.00
District Donation	100.00	0.00	-100.00
District Recruitment	400.00	0.00	-400.00
Foreign Check Collection	0.00	0.00	0.00
Honorarium	0.00	0.00	0.00
License Fees	0.00	0.00	0.00
Membership Expense	140.09	0.00	-140.09
Other (4th WFC)	1,000.00	0.00	-1,000.00
President's Expense	0.00	587.93	587.93
Pr-Prof-Conduct	0.00	0.00	0.00
Production Editor	210.90	0.00	-210.90
Reimbursement	0.00	117.15	117.15
Service Contract Advance	0.00	4,080.00	4,080.00
Secretary's Expense	0.00	0.00	0.00
Transfer Funds (SQB/FF/SSB)	5,420.00	12,160.00	6,740.00
Travel Display	0.00	0.00	0.00
Treasurer's Expense	1,143.30	219.41	-923.89
Total Cash Disbursements	21,996.14	31,020.73	9,024.59
Net Change	-164.81	2,708.13	2,872.94
Beginning Cash Balance	2,610.73	2,445.92	-164.81
Estimated Cash at End of Year	2,445.92	5,154.05	2,708.13

Research Assistance Awards

2003 Recipients

Jerald Ault, Committee Chair

The Research Assistance (RA) Award established in 1986 is offered annually to AIFRB graduate students and other Associate members to support travel expenses associated with professional development. The RA provides a maximum award of $350 towards the opportunity to present results of an original paper or research project of merit at scientific meetings, or to conduct research at distant study sites. All AIFRB Associate Members in good standing are eligible. An individual may receive two awards in a lifetime. Five (5) AIFRB associate members received $210 awards in 2003. The award recipients, their affiliation, sponsor and meeting attended are listed below.

2003 Research Award Recipients: Mr. David Howe of the University of Massachusetts presented a paper entitled 'Temporal and spatial effects on the feeding of age-0 striped bass, (*Morone saxatilis*), in the mid-Hudson River' at the July 2003 meeting of the American Society of Ichthyologists and Herpetologists in Manaus, Brazil. Mr. Darin Topping of California State University at Long Beach presented the paper entitled "Movement patterns, site fidelity, and habitat use of California sheephead (*Labridae*) in a marine reserve" in July 2003 meeting of the American Society of Ichthyologists and Herpetologists in Manaus, Brazil. Mr. Dan J. Daugherty of Purdue University will present the paper entitled 'Seasonal movements and habitat use of flathead catfish in the St. Joseph River, Michigan' in the Ictalurid Symposium at the December 2003 meeting of the Midwest Fisheries and Wildlife Conference in Kansas City, Kansas. Mr. Yannis Papstamatiou of California State University at Long Beach traveled to Manaus, Brazil, to present the paper entitled 'Gastric pH changes associated with feeding: using pH to study the foraging ecology of sharks' at the American Elasmobranch Society in July 2003. Mr. Marcus Drymon of Grice Marine Laboratory, South Carolina, traveled to Manaus, Brazil, to present the paper entitled 'Age, growth and maturation of the finetooth shark, (*Carcharhinus isodon*), in southeastern US waters' at the American Elasmobranch Society in July 2003.

W.F. Thompson Award 2001

Best Student Paper

Jack Pearce, Committee Chair

The winner of the W.F. Thompson Award for the best student paper, 2001, is SungKwon Soh. Dr. Soh now resides in Korea. His paper, judged with nine others, was some distance ahead of the others. A well-written and conceived paper, it deals with a very timely topic, i.e. the use of reservations, sanctuaries, in the management of bottom dwelling species, rockfishes. It was a joy (fun) to read the almost two score titles, selecting the best, then judging the winner from ten best papers. Dr. Soh's paper:

The potential role of marine reserves in the management of shortraker rockfish (*Sebastes borealis*) and rougheye rockfish (*S. aleutianus*) in the Gulf of Alaska.

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Abstract – Shortraker and rougheye rockfish (*Sebastes borealis and S. aleutianus*) have been an independent management subgroup of the Gulf of Alaska slope rockfish assemblage since 1991. Special concerns are proposed for the management of these species because they are very slow growing, long-lived, and commercially important.

Marine reserves (harvest refugia) have often been proposed as a valuable management tool for mitigating overfishing and maintaining species and habitat diversity. Their effectiveness in fisheries management, however, is poorly understood and concepts regarding their use are largely untested. Our study investigated the potential role of harvest refugia in the management of these two species by using a Geographic Information System (GIS) application to design harvest refugia networks of varying spatial extent. Twenty-year projections employing a population dynamics model were used to compare ending biomass and fishing mortality under the current management system with biomass and fishing mortality under refuge management systems. The results indicate that harvest refugia can be used to greatly reduce discards and serial overfishing of substocks without reducing current catch levels.

Manuscript accepted 24 July 2000.
Fish. Bull. 99:168-179 (2001)

Candidates Chosen

The Nominating Committee, chaired by Gary Sakagawa, has chosen two candidates for the post of president elect: Linda Jones of the Northwest Fisheries Science Center, NMFS, NOAA, and; Douglas Vaughan of the Beaufort (NC) Group of the Southeast Fisheries Science Center, NMFS, NOAA

Biographies and other information about the candidates will be published in *Briefs* prior to the election in 2004.

AIFRB Sponsors Major Symposium at American Fisheries Society Meeting, Quebec, August 2003

The Institute sponsored a major symposium "New Quantitative Methods in Fishery Stock Assessments," at the American Fisheries Society (AFS) Meeting in Quebec, Quebec on August 14, 2003. Consisting of 17 papers the session was organized by Doug Vaughan, Mike Prager and Erik Williams of the Beaufort, NC facility of the Southeast Fisheries Science Center, NMFS, NOAA and by John Hoenig of the Virginia Institute of Marine Science. The Marine Fishery Section of AFS was a cosponsor. Abstracts of the talks given follow:

Comparisons of Alternative Surveys of Fishing Effort and Catch on Maine For-Hire Boats

D.A. Van Voorhees, W.R. Andrews, B.J. Joule, M. Metcalfe, C.S. Brown and R.B. Watts, U.S. Department of Commerce, NOAA Fisheries, Fisheries Statistics and Economics Division,

Since 1996, the Maine Department of Marine Resources and NOAA Fisheries have worked cooperatively to evaluate alternative survey methods for monitoring fishing effort and catch on charterboats and headboats operating out of Maine ports. A new boat directory telephone survey (BDTS) of fishing effort was tested and compared with the traditional random-digit-dialing coastal household telephone survey (CHTS) component of the NOAA Marine Recreational Fishery Statistics Survey (MRFSS). The BDTS, which collected recreational fishing effort data each week from operators of randomly selected boats, covered the for-hire fishery more completely and sampled for-hire fishing effort more efficiently than the traditional CHTS. Unlike the CHTS, the BDTS independently sampled and estimated effort for charterboats and headboats. The total effort estimates from the stratified BDTS were more precise than the traditional non-stratified MRFSS estimates, and they showed more credible annual and seasonal trends. Over the same time period, catches observed and reported in MRFSS dockside interviews of charterboat anglers were compared with catches reported by captains for the same fishing trips to evaluate quantitative and qualitative differences in the data collected. Although minor differences were found in counts of landed fish, significant differences were found in counts of released catches. Estimates of mean catches based on the dockside samples were expanded by BDTS and traditional MRFSS effort estimates to obtain and compare alternative estimates of total catch by species. In addition, the new estimates of effort and catch on headboats were compared with counts reported in the mandatory logbook required by the NOAA Vessel Trip Reporting program.

A New Approach for Modeling Growth and Estimating Consumption for Free Ranging Fishes

B.E. Thompson and D.B. Hayes, Department of Fisheries and Wildlife, Michigan State University

Traditional methods for modeling growth are often limited by missing recapture observations that prevent individual growth calculations for a give time interval. Our purpose is to present a method for modeling growth rates of free-ranging juvenile steelhead *Oncorhynchus mykiss* that addresses this limitation. Age-1 juvenile steelhead were individually marked with PIT tags, released at 13 sites within a Michigan watershed, and sampled monthly (May to November) with barge electrofishing. Individual growth was modeled using site-specific daily water temperature and by optimizing the proportion of maximum consumption (P) parameter for the bioenergetics equation. Results indicate that individual steelhead growth can be accurately modeled using water temperature and a site specific P. Spatial and seasonal variation in P had a greater influence on steelhead growth rates than water temperature. Neither size selective loss nor growth compensation was observed in this study. Advantages of using this method to model fish growth include the ability to: bridge data gaps where observations are lacking in individual length histories, rigorously test for differences in P across sites and time periods, estimate variability of P among fish within a given stream reach, and determine the relative effect of temperature versus other habitat components on fish growth.

Comparison of Two Approaches for Estimation of F from Catch-Survey Models Used to Assess the Blue Crab Stock of Delaware Bay

D.M. Kahn, Delaware Division of Fish and Wildlife

Catch-survey models estimate absolute stock size, using catch estimates in numbers and survey indices of relative abundance. Investigators have taken two approaches to estimate the impacts of fishing. Collie and Kruse (1998) used catch and stock size estimates to estimate exploitation. Conser and Idoine (1992) used estimates of stock size to estimate Z, then subtracted constant M to estimate F. Baranov's catch equation can be written as F= Z/A*U, where A is annual total mortality rate and U= exploitation. Estimates of F should then be functions of both U and Z. I take output of a catch-survey model of the Delaware Bay blue crab stock and develop two sets of estimates of F, from exploitation and from survival (Z). For this stock, density-dependant mortality and mortality from severe winters produce non-constant M. Analysis shows the first set of estimates are correlated with both exploitation and with Z. In contrast, the survival-based estimates of F are not correlated with exploitation, and so are undesirable for this stock. Although estimates of constant M are employed in two steps of the estimates of F from exploitation, these F estimates are still an improvement over those estimated from survival.

Multi-Year Index-Removal Models which Allow for Various Assumptions about Catchability for Tasmanian Rock Lobster

T.F. Ihde and J.M. Hoenig, College of William and Mary, Virginia Institute of Marine Science; S.D. Frusher, Tasmania Aquaculture and Fisheries Institute, University of Tasmania

Index-removal models are used to estimate abundance, exploitation rate and survey catchability coefficient in populations that experience a relatively large, known removal. The method requires that an index of population size be obtained from a survey before and after the removal and assume that the index is proportional to abundance. It is assumed that survey removals are negligible and that, except for the fishery removal, the population is closed between surveys. In the standard method, the catchability coefficient is assumed equal for both surveys, and parameter estimates are made separately each year. If catchability is constant, precision can be improved by analyzing data from all years simultaneously. In reality, however, catchability is often affected by a variety of factors, and changes over the fishing season. If pre- and post- season catchabilities differ, the standard method will provide biased results (an increase in catchability between surveys causes a positive bias in the population estimate). However, we show that a model incorporating seasonal changes in catchability can be developed if pre- and post-season indices have been obtained in at least two years with different harvest mortality rates, and if the seasonal catchability coefficients remain constant from year to year. We present two new index-removal models. The first assumes catchability remains constant, while the second assumes that pre- and post-harvest catchability coefficients differ but are constant between years. We then describe how to test assumptions about catchability, and thus determine which analysis is most appropriate for analyzing data from the Tasmanian rock lobster fishery.

Combining Radio-Telemetry and Fisheries Tagging Models to Estimate Fishing and Natural Mortality Rates

K.H. Pollock and H. Jiang, Biomathematics Program, Department of Statistics, North Carolina State University; J.E. Hightower, U.S. Geological Survey, NC Cooperative Fish and Wildlife Research Unit, North Carolina State University

The traditional multiple year tag-return method is a fundamental approach for estimating fishing and natural mortality rates in fisheries. It can provide reliable and precise estimation of the parameters when the tag-reporting rate is known. However, it is often difficult to estimate the reporting rate accurately. An additional disadvantage is that this method has to estimate natural mortality indirectly because natural deaths are not observable. Recently fisheries biologists have begun to implement telemetry methods to estimate fishing and natural mortality. The advantage of the new telemetry method is that it contains direct information about natural mortality and survival. A shortcoming is that there is no direct information about both fishing and natural mortality to obtain more precise and effectively unbiased parameter estimates, including reporting rate estimates for the regular tags. Using simulation when radio-tag relocation probability (p) equals 1, we found that the relative standard error (RSE) of natural mortality (M) estimates in the combination method is much improved compared to the tag-return method and also improved compared to the telemetry method. The tag reporting rate estimates are typically very precisely estimated in the combined model. This is also important as tag reporting rate is not easy to estimate in many other situations.

Estimation of Survival Rates of Lake Trout from Lake Superior Using Cormack-Jolly-Seber Capture-Recapture Methods

K.H. Pollock and J. Yoshizaki, Depts of Statistics and Zoology, North Carolina State University; M.C. Fabrizio, National Marine Fisheries Service, Highlands, NJ; S.T. Schram, Wisconsin Dept of Natural Resources

We present survival estimates for lake trout marked and recaptured once per year at Gull Island Shoals on Western Lake Superior from 1969 to 1996. The estimates were computed using the Cormack-Jolly-Seber capture-recapture method and Program MARK. Akaike's Information Criterion (AIC) was used for model selection. This 27-year study is of great importance to understanding the population demography of lake trout in this system. Unfortunately until 1986 the two types of tags used had very high loss rates that complicate analysis. In addition, capture rates are low and variable between years. We discuss in detail the assumptions of our estimates, their precision, and the special methods we used to handle the tag loss. We also discuss the introduction of a refuge.

Production Models: A Simulation Study Evaluating the Incorporation of Age

E.N. Brooks, C. Porch, NOAA Fisheries/Southeast Fishery Science Center, and C.P. Goodyear

The simplicity and comparatively low input demands of surplus production models make them an appealing modeling tool, particularly when data are not available to use a more sophisticated model. However, their simplicity leads to criticisms for lacking biological detail (no age-structure, no explicit stock-recruit function, no fecundity or maturity at age, no age-specific mortality or selectivity). Age structured production models offer a step up in level of model complexity without requiring aged catch. They incorporate biological processes and age-structured parameters, and as a result, demand much more data. Despite the simplicity of surplus production models, several simulated evaluations have shown them to produce qualitatively valid results, and in some cases they performed as well as age structured production models. No large-scale comparison has been made to determine if this is a general result or if there are particular conditions where one model would be expected to outperform the other. Thus, we address the issue of model realism versus model dimensionality. We present results of a factorial simulation, where we evaluate the performance of both models in terms of their ability to estimate management benchmarks and current population status. We consider factors such as life history, selectivity pattern, multiple fisheries, CPUE trends, length of time series, and growth curve information (whether we know the "true" curve or borrow one from a related species). The ultimate question to be answered is: when aged catch is unavailable, does the more realistic age structured production model produce better estimates than a surplus production model?

Quantification of Productivity Regimes Using a Sissenwine-Shepard Model

R.K. Mohn, MFD/BIO, Dartmouth, NS

The Sissenwine-Shepard* framework is an age-structured production model, which is applied to VPA estimates for 4VW haddock for the period 1948-2001. MSY is used as a proxy for productivity and is estimated using moving data windows. The MSYs cycle from highly productive periods in the 1960s and the early 1980s of about 30,000 t/yr to lows of about 5,000 t/yr in the early 1970s and 1990s. The productivity is seen to be quite sensitive to changes in growth rate, natural mortality rate and stock-recruitment over the 54-year data series. However, it is insensitive the observed changes in maturity and partial recruitment. Implications of time or biomass dependent productivity and hence biological reference points are given.

*Sissenwine, M.P. and J.G. Shepard. 1987. An alternative perspective of recruitment overfishing and biological reference points. Can. J. Aquat. Sci. 44:913-918.

A Functional Response Model for Chinook Salmon in Lake Huron

N.E. Dobiesz and J.R. Bence, Michigan State University, Department of Fisheries and Wildlife

Using age-structured population models coupled with bioenergetics models we estimated that Chinook salmon predation in Lake Huron accounts for 70% of the total consumption of open-water prey fishes. Increases in the number of Chinook salmon stocked along with improvements in survival of stocked fish account for their approximately 60% increase in abundance and consumption from the mid 1980s to their peak values in the late 1990s. A decline in lake trout and Chinook salmon growth during this time period suggests forage demand may have exceeded prey availability. From 1974-1984 when Chinook salmon growth was high, an age 2 fish consumed a daily average of 81.5 g of prey fish during the growing season. As growth rates declined after 1985, the same fish consumed only 57.8 g of prey fish. While bioenergetics models have provided insights into forage demand based on growth, projections require, explicitly or implicitly, a functional response model that relates predator consumption of prey to prey abundance. We have parameterized a Type II functional response using our bioenergetics-based estimates of consumption by an individual Chinook salmon and will discuss the difficulties we encountered and uncertainties associated with the resulting parameter estimates.

VRAP, a Viability and Risk Assessment Model for Evaluating Harvest and Recovery of Listed Salmon Populations

N.J. Sands, Northwest Fisheries Science Center, NOAA

The Puget Sound Chinook Evolutionarily Significant Unit (ESU), containing 22 existing populations, was listed as threatened in 1999. Recovery planning entails modification to existing habitat, hatchery, and harvest management. The VRAP (viability and risk assessment procedure) model was developed to compare the risk of various levels of harvest on a salmon population given uncertainty in our estimates and projection of annual variability in environmental conditions that affect survival. The population size is projected for future years given a spawner recruit relationship that may include up to two environmental covariates, process error, and annual variability in the covariates. Environmental variation may include autocorrelation, trends, or cycles and may relate to natural effects or human changes in the habitat conditions. The model also includes an error factor for harvest management's ability to achieve target harvest rates. The model has been used to determine acceptable (i.e., does not impede rebuilding of stock levels) harvest levels under the ESA 4-d rule for several Puget Sound Chinook populations. The risks measured are for risk of extinction and probability of obtaining a target escapement threshold in a given number of years.

Performance of Time-Varying Catchability Estimators in a Statistical Catch-At-Age Analysis

M.J. Wilberg and J.R. Bence, Department of Fisheries and Wildlife, Michigan State University,

Statistical catch-at-age analysis (SCAA) has become an important tool for fishery stock assessment. Fishery effort is often used as a data source in SCAAs to constrain fishing mortality estimates. However, it is often thought that the relationship between fishing mortality and fishery effort (catchability) changes over time either through density dependent or density independent processes. We used Monte Carlo simulations to evaluate how different methods of estimating catchability within a SCAA model performed when the models were confronted with different data generating scenarios. Our data generating models included cases where catchability changed abruptly or gradually over time and where catchability was explicitly a function of population abundance, and we considered corresponding estimators. We evaluated the performance of the estimators by their bias and accuracy in determining quantities of interest such as abundance in the last year. Some estimators performed well only when applied to data simulated using a catchability model that matched the estimator. Other estimators, in particular those that allowed flexibility in how catchability changed over time, performed better in a wider range of circumstances. No estimator is best for all underlying models of catchability, hence stock assessment with alternative assumptions can be enlightening.

Comparison of Virtual Population Analysis and a Statistical Kill-At-Age Analysis for a Recreational Kill-Dominated Fishery

T.J. Quinn, II, Juneau Center, School of Fisheries and Ocean Sciences, University of Alaska Fairbanks, and J.R. Bence, Department of Fisheries and Wildlife, Michigan State University

We used simulations based on a walleye (*Stizostedion vitreum*) fishery to compare the efficacy of virtual population analysis (VPA) and statistical kill-at-age analysis with auxiliary survey information (KAWS). At low fishing mortality rates and high kill measurement error (CV=25%), VPA and KAWS models performed poorly. Relative error in estimates of vulnerable population, spawning stock biomass, and exploitation rate decreased with increasing fishing mortality. VPA model performance degraded more quickly than the KAWS models that assumed an incorrect kill selectivity pattern through time. The survey weighting term in the objective function of KAWS models had a significant effect of relative error of vulnerable population, spawning stock biomass, and exploitation rate in the final year, and there were significant interactions between the weighting term and other effects in this simulation exercise, which made interpretation of the consequences of different weightings difficult. The degree of non-additivity of fishing mortality substantially affected the reliability and bias of KAWS models that assume single kill selectivity through time. A KAWS model, which assumed that kill selectivities did not change, substantially overestimated the spawning stock biomass in the final year in a fishery with large non-additivity of fishing mortality. When using kill at age models, given the uncertainties in kill selectivities, it is likely prudent to use both VPA and KAWS models when estimating population size.

A Stochastic Decision Based Approach to Assess the Status of Exploited Populations

A.F. Sharov, Maryland Department of Natural Resources and T.E. Helser, Northwest Fisheries Science Center

We propose a two-tier stochastic decision-based framework that uses a mixed Monte Carlo – bootstrap procedure to estimate probability distribution for both the terminal year fishing mortality rate and the replacement fishing mortality rate, approximated by Fmed as an overfishing definition. Using the probability density of fishing mortality estimates (PDF), the stochastic decision based approach generates a probability profile by integrating the area under the PDF for different decision confidence levels which can be thought of as one tailed alpha probability from standard statistical hypothesis testing. We demonstrate this approach on several examples that include crustacean (blue crab) and finfish (striped bass) exploited populations. This approach can be extended to decisions regarding control laws that specify both maximum fishing rate and minimum biomass thresholds.

What Are Appropriate Rebuilding Targets for Overfished Stocks?

J.K.T. Brodziak, National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, MA and C.M. Legault, Southeast Fisheries Science Center, Miami

Worldwide, many fisheries resources have been depleted and are being overfished. In the United States, legislative mandates to recover overfished resources require setting rebuilding targets for stock biomass B_{MSY} and fishing mortality F_{MSY}. A key difficulty in determining appropriate targets for overfished stocks occurs if assessment information is only available for the recent past when overfishing was occurring. In particular, target biomasses of stocks with a long history of overfishing may be systematically underestimated due to the restricted range of observations. We develop an empirical Bayesian approach for estimating rebuilding targets of overfished stocks. Alternative stock-recruitment curves combined with uncorrelated or correlated error structures are used to construct likelihood functions for a set of candidate models. Informative priors for maximum recruitment are developed from statistics of observed recruitment distributions. Informative priors for the steepness of the stock-recruitment curve are developed from meta-analyses. Markov chain Monte Carlo techniques are used to sample the posterior distribution of stock-recruitment parameters. This uncertainty is then incorporated into standard age-structured techniques to calculate the distribution of B_{MSY} and F_{MSY}. Model probabilities are computed for each candidate model. Model-averaging techniques are then applied to estimate rebuilding targets that account for model selection uncertainty. We illustrate our approach using three overfished groundfish stocks from Georges Bank: Atlantic cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*) and yellowtail flounder (*Limanda ferrugineus*).

REPAST – A Framework for Calculation of Target Reference Points from Limit Reference Points

M.H. Prager, NOAA Beaufort Laboratory; C.E. Porch, NOAA Fisheries, Southeast Fisheries Science Center, Miami, FL; K.W. Shertzer, NOAA Beaufort Laboratory; J.F. Caddy, Departamento de Recursos del Mar, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mérida, Mexico

Precautionary fishery management requires distinguishing between target and limit reference points. We present a simple probability framework for deriving a target reference point in fishing mortality rate or biomass from the corresponding limit reference point. Our framework is a generalization of earlier work by Caddy and McGarvey. Both methods require an a priori management decision on the allowable probability of exceeding the limit reference point; our new method removes a major assumption by accounting for uncertainty in the limit reference point. Either method can be implemented easily on a modern desktop computer. Our generalized framework is more complete, and we believe that it has wide applicability in the use of fishery reference points, or for that matter in other conservation applications that strive for resource sustainability.

Multispecies Modeling of Atlantic Menhaden and Its Predators in Chesapeake Bay II: An Ecopath With Ecosim (EWE) Approach

R.J. Latour and M.J. Brush, Virginia Institute of Marine Science, College of William and Mary

There currently exists a great need to turn towards a multispecies approach to fisheries management. One aspect of this is the development of multispecies models which take into account direct and indirect trophic interactions among species. Our group is currently investigating various approaches to modeling multispecies fisheries, focusing on the menhaden-based food web in Chesapeake Bay. In this talk, we present an Ecopath with Ecosim (EwE) model of this food web, which is comprised of Atlantic menhaden, striped bass, bluefish, and constructed large-scale EwE model of Chesapeake Bay. The input parameters (i.e., biomass, total mortality, consumption to biomass ratio, diet composition, etc.) were obtained from single-species stock

assessments and/or fisheries independent survey data. The primary objective of the model is fisheries policy exploration. As such, the model was used to simulate a series of hypothetical management scenarios involving various fishing mortality rates for both Atlantic menhaden and each of its predators. The model was also used to explore the ecological role of Atlantic menhaden as both prey for important managed piscivores and as grazers of phytoplankton in Chesapeake Bay.

Multispecies Modeling of Atlantic Menhaden and Its Predators in Chesapeake Bay II: Coupling Species-Specific Bioenergetics Models

R.J. Latour and M.J. Brush, Virginia Institute of Marine Science, College of William and Mary

There currently exists a great need to turn towards a multispecies approach to fisheries management. One aspect of this is the development of multispecies models which take into account direct and indirect trophic interactions among species. Our group is currently investigating various approaches to modeling multispecies fisheries, focusing on the menhaden-based food web in Chesapeake Bay. In this talk, we present a multispecies bioenergetics model of this food web based on linked, individual-based models for Atlantic menhaden, striped bass, bluefish, and weakfish, with bay anchovy as an alternate prey source. Using existing menhaden bioenergetics models as a starting point, we have developed an age-structured menhaden model for Chesapeake Bay. To produce a model capable of predicting both growth and consumption, we considered various formulations for the latter, including use of the traditional p-value, foraging models, and functional responses. The menhaden model has been coupled to published bioenergetics models for striped bass, bluefish, weakfish, and bay anchovy, using the relationship between food concentration and predation rate as the link between predators and prey. Population size (and therefore biomass) calculations are run concurrently using estimates of recruitment and mortality due to predation and fishing. The resulting model is a process-oriented, "first principles" approach to simulating multispecies fisheries. As such, it is readily coupled to empirical or process-based models of lower trophic levels, thus making it possible to explore the impact of both top down (e.g. management scenarios) and bottom up (e.g. eutrophication, climate change) processes on multiple fish populations.

A Blue Marlin by Any Other Name...

As some of you may know, there has never been a wide acceptance of the scientific name "*Makaira mazara*" for blue marlin in the Pacific. Based on genetic work published beginning in 1995 and thereafter by Drs. John Graves, Jan McDowell and Vince Buonaccorsi, it has become clear that blue marlin is a single species in all oceans and the correct name species name is *Makaira nigricans.*

As a result, standardized reporting codes and tables are being updated in March 2004 to reflect this knowledge.

Submitted by: Michael G. Hinton

But a Catfish by Any Other Name is ...Not?

The 'Free Trade' Fix Is In – Editorial, New York Times

The United States government has just added a final flourish of hypocrisy to its efforts to crush the Vietnamese catfish industry under a mountain of protectionism. The Vietnamese, after doing well enough to capture a fair share of the American market, have been declared trade violators deserving permanent, prohibitive tariffs by the United States International Trade Commission.

The case against the Vietnamese was brutally rigged by American fishing and political interests. It stands as an appalling demonstration to striving commercial nations that all the talk of globalization has not reined in the old power politics of marketers in the United States, Europe and Japan. Their thumbs remain all over the scales of free trade.

No convincing evidence was presented that Vietnam is dumping its fish on the American market at prices below cost. To the contrary, a competitive edge was clearly won by hundreds of thousands of Vietnamese fishermen who were encouraged by the United States itself to set aside old wartime enmities and enter the emerging world market. The campaign that threatens to ruin them is rooted in myopic greed and blatant xenophobia. In one Orwellian tactic, labels for the fillets imported from Vietnam – genuine, obvious catfish – were denied the use of that very word in our markets by a well-timed amendment slipped into a Congressional appropriations bill.

Thus, the Vietnamese catfish can be called only "basa" or "tra" in this country. And they will also be saddled with punitive tariffs. The next time an American delegation sets off to preach the dogma of free trade abroad, poor nations would be within their rights to thumb their noses. Meanwhile, diners in search of egalitarian fare should consider demanding basa and tra by name as a rebuff to this nation's protectionist bottom feeders.

Submitted by: Andy Jahn

Gibbs Award for Excellence in Systematic Ichthyology

Nominations are solicited by the American Society of Ichthyologists and Herpetologists (ASIH) for the Robert H. Gibbs, Jr., Memorial Award for Excellence in Systematic Ichthyology. The Gibbs Award is presented annually in the memory of Robert H. Gibbs, Jr., Distinguished Fellow of the American Society of Ichthyologists and Herpetologists, and is made possible by an endowment fund established by the Society from a gift provided by Frigga Gibbs, Bob's wife. It is given for an outstanding body of published work ins systematic ichthyology to a citizen of a western hemisphere nation who has not been a previous recipient and consists of a plaque and a cash sum based on available income accrued to the endowed principal. The recipient, selected by committee, is recognized at the annual meeting of the Society.

Nominations may be made by any ichthyologist, including self nominations, and should include the nominee's curriculum vitae along with details of the nominee's specific contributions and their impacts on systematic ichthyology. Nominations are effective for three years and should be submitted by 1 March 2004 in order for the nominee to be eligible for the 2004 award. Three copies of the materials for each nominee should be sent to the Chairman of the 2004 Gibbs Award Committee, Dr. Henry L. Bart, Jr. (Tulane University Museum of Natural History, Belle Chasse, Louisiana 70037; E-mail: hank@museum.tulane.edu), or to the Secretary of ASIH, Dr. Maureen A. Donnelly (Biological Sciences – OE 167, Florida International University, University Park, Miami, Florida 33199; E-mail: Donnelly@fiu.edu).

In July 2003 at the annual meeting of ASIH in Manaus, Amazonas, Brazil, the award for 2003 was presented to Dr. G. David Johnson, Division of Fishes, National Museum of Natural History, Smithsonian Institution, Washington, D.C., for his numerous contributions clarifying the relationships of bony fishes.

Submitted by: William D. Anderson

Not By a Member – But Well Reviewed New Book

New Book, The Crimson Broadbill – Commercial Swordfishing the NW Atlantic, Puts Personal Spin On Findings of Pew Charitable Trust Fund's International Fisheries Study

Written by a marine biologist and physician, The Crimson Broadbill – Commercial Swordfishing the NW Atlantic is a personal sea story that describes the fine balance between conservation and commerce. From the history of the fishery to its current state, the reasons for our ocean's diminishing resources are explored, with suggestions as to what consumers and constituents alike can do to help protect our endangered billfish, tuna and sharks.

"The Crimson Broadbill is the most interesting combination of autobiography and sea story that I've ever encountered! It offers a thoughtful discourse of the plight of sharks, whales, and particularly swordfish, resulting from man's predation. Dr. Armbruster's treatments are well-reasoned and it is difficult to argue with a scientist who has actually done his sea time!" Dr. Robert B. Abel, President Emeritus, New Jersey Marine Sciences Consortium Founding Director, National Sea Grant Program

Visit this book at www.xlibris.com/thecrimson broadbill.html. Available online at Amazon, Borders, Barnes & Noble and from local bookstores. Contact: Thomas Armbruster BS, MD, Phone: 732-291-7762; E-Mail: tcarmbruster321@msn.com

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Gulf Shrimp: I

Marine Conservation Network Press Release Provides Incorrect Statements on Gulf Fisheries

Tampa, Florida July 11, 2003 – The Marine Conservation Network (MCN), a consortium of environmental groups, distributed a news release titled "Horrors of the Deep" in which they find fault with management of fisheries for each region of the country. In their discussion of the Gulf of Mexico Fisheries there are incorrect statements according to Wayne Swingle, Executive Director of the Gulf of Mexico Fishery Management Council based in Tampa, Florida. The first of these incorrect statements is titled Mismanagement Scary Fact which states: "Disaster relief, necessitated by poor management (underlined for emphasis) and international competition, to the shrimp industry in the Gulf of Mexico has cost American taxpayers $35 million." The first incorrect statement that says the shrimp stocks are mismanaged is definitely a false statement. None of the three stocks (brown, white, and pink) of shrimp has been overfished in the last 40 years according to scientific data presented by the National Marine Fisheries Service each year. These stocks, which are estuarine dependent, are jointly managed by the states and the Gulf Council.

Dr. Richard Leard, the Council's Chief Scientists, pointed out that the Gulf shrimp industry is this nation's single most valuable fishery with a 10-year (1991-2000) average annual landings of 176 million pounds (total weight) valued to the fishermen at approximately $492 million. Because most of the shrimp are consumed in restaurants, the annual value to the nation's gross National Product (GNP) is many times greater than the landed value.

The reason Congress granted disaster relief to the shrimp industry in the Gulf was that the U.S. market was flooded by foreign shrimp, principally raised in ponds, which depressed the prices paid to domestic fishermen. Mr. Swingle indicated that part of this appeared to be dumping of shrimp found unacceptable in the European Union market because antibiotics were used in culturing these shrimp. He also pointed out that the MCN press release incorrectly reported Gulf fishermen were granted $35 million, whereas the correct figure was $17 million.

Press Release: Gulf of Mexico Fishery Management Council

Gulf Shrimp: II

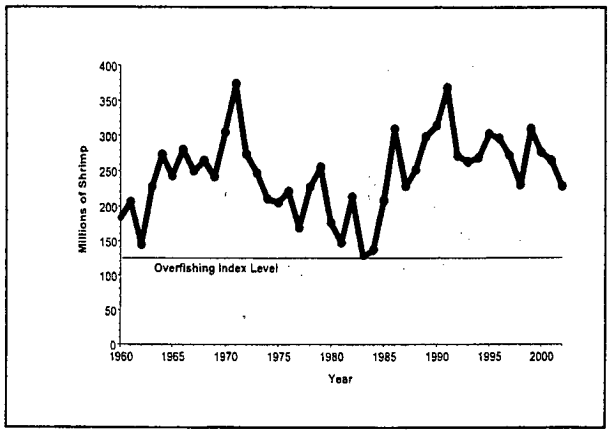

Figure 1. Brown shrimp *(Farfantepenaeus aztecus)* parent stock levels over the past 43 years.

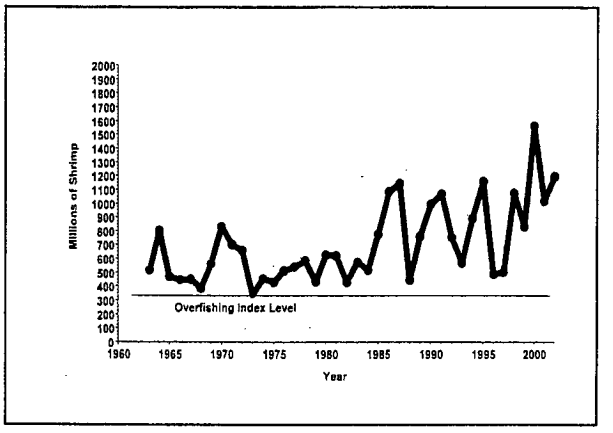

Figure 2. White shrimp *(Litopenaeus setiferous)* parent stock levels over the past 40 years.

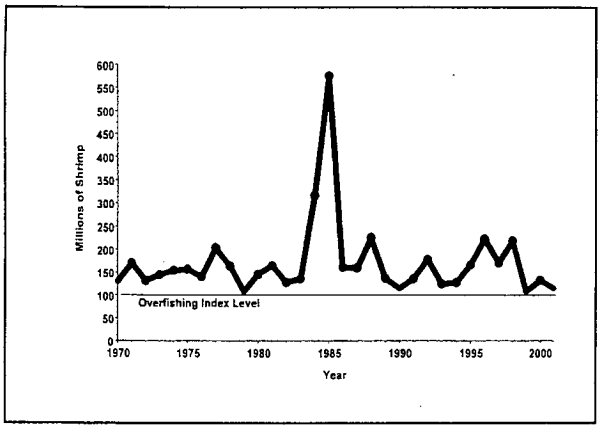

Figure 3. Pink shrimp *(Farfantepenaius duorarum)* parent stock levels over the past 33 years.

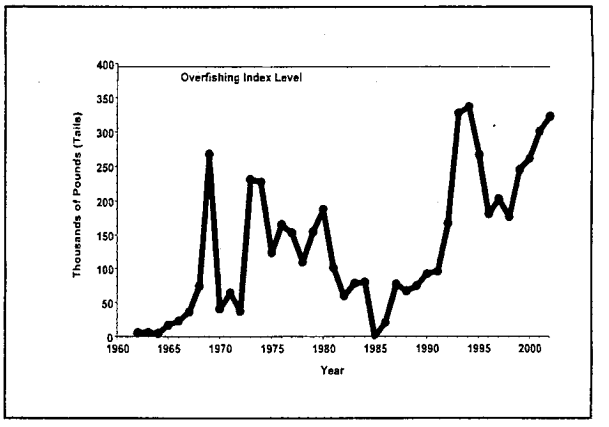

Figure 4. Royal red shrimp *(Hymenopenaeus robustus)* landing levels of the past 43 years.

From: Gulf Fishery News 25(4), July-August 2003

Attorneys Jaw over Jaws!

Third Suit to Protect Sharks

The National Marine Fisheries Service simply can't – or won't – get it right when it comes to managing the catching of large coastal sharks in the Atlantic and the Gulf of Mexico. The agency has known at least since 1993 that the large sharks have been seriously overfished. Indeed, the agency reduced quotas in 1997 and 1999, but when industry groups sued, NMFS entered a settlement agreement that resulted in the agency's issuing emergency quotas (in this case, the supposed emergency was threatening the profits of the industry) that have kept quotas perilously high. The latest round of litigation, brought by David Guest and Aliki Moncrief on behalf of the National Audubon Society and The Ocean Conservancy, challenges NMFS's decision to increase the commercial quotas for sharks by 33 percent and to suspend management measures, such as minimum size regulations, that would protect the sharks from being overfished.

From: In Brief, Spring-Summer, 2003

Freedom to Fish – License to Kill?

In coastal states around the nation, some recreational fishing groups are lobbying hard to pass "Freedom to Fish" laws. The name conjures up images of Huck Finn lazily casting for catfish on the Mississippi. The reality is different. These bills, backed by the multi-billion-dollar sportsfishing industry, would exempt recreational anglers from fishing restrictions in marine protected areas unless it can be "proven" that they are contributing significantly to declines in fish stocks. Such proof is virtually impossible to establish, due to the widespread lack of data and the influence of factors such as commercial fishing and pollution. Some states don't even require saltwater fishing licenses. "Establishing protected areas is complex and should be done through an inclusive process involving scientists and anglers – not by legislative fiat," says David Festa, our Oceans program director.

California wisely rejected one such bill, but similar bills have been gaining elsewhere, most notably in New Jersey. "Many recreational fishermen argue, 'I'm only one boat and I have no impact,'" says John Jolley, president of the 70-year-old West Palm Beach Fishing Club and AIFRB Member. "We have millions of people. Collectively we have a significant impact.

Environmental Defense is working with fishermen – both commercial and recreational – to find common ground. "Successful marine reserves can be designed with the interests of recreational fishermen in mind," says Festa. "We need to err on the side of the resource," adds Jolley. "We need to give the fish a break."

From: Solutions (Environmental Defense) 34(4), July-August 2003

Fishing Moratorium Needed to Protect Alaskan Corals

The recent discovery of at least 100 species of deepwater corals and sponges in Alaska – some possibly never before seen – led The Ocean Conservancy to ask the North Pacific Fishery Management Council to immediately halt bottom trawling in waters throughout the Aleutian Islands to protect these species, as well as depleted rockfish.

Bottom trawlers have been bringing hundreds of tons of coral to the surface in recent years. Once destroyed, these massive and slow growing colonies take hundreds to thousands of years to recover. Several species of long-lived rockfish that depend on the Aleutian coral forests for protection and shelter are also threatened by habitat destruction. Further damage to these corals could also compromise the fishing industry. Consequently, The Ocean Conservancy contends that a moratorium on bottom trawling is necessary to prevent further damage while managers map coral and develop suitable protection strategies. The Conservancy is also requesting immediate reductions in catch quotas to help stem overfishing and help fish populations recover. "In addition to preserving these newly discovered corals, we're trying to avert the same sort of emergency management response that accompanied the collapse of the West Coast rockfish," says Whit Sheard, Fish Conservation Program Manager for The Ocean Conservancy in Alaska. "After years of localized overfishing, these rockfish need strong protection to survive and rebuild, for their sake as well as for the future of the fisheries."

From: Blue Planet, Winter-Spring, 2003

Bass Fishermen Trying to Save Favorite Spots in Florida Everglades

Some dedicated bass fishermen are fighting to protect their fishing holes in the Florida Everglades, and appear to be making progress. In 2001 at a public hearing, the U.S. Army Corps of Engineers and the South Florida Water Management District unveiled plans for the Everglades Restoration that included the backfilling of many canals considered some of the best bass fishing waters in Florida. As a result of that meeting, a group of fishermen formed SAFER (South Florida Anglers for Everglades Restoration). Their goal is to protect the rights of all recreational fishermen and maintain the viability of the Everglades canal system as the great fishery it has been for decades. At the meeting, the agencies in charge of the restoration of Everglades National Park apparently were not aware that people fished in the water conservation areas of the park. Two years later, members of SAFER have gained attention of project managers regarding the benefits of leaving the canals open. As a result, a master plan was put in place to study the impacts of Everglades restoration on activities such as fishing, biking, bird-watching, boating, camping, hiking, and hunting. SAFER isn't claiming victory yet, but things are looking better for anglers.

From: International Angler 65(4), July-August, 2003

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Founding Fellow Collier Now Texas Hall of Famer

Founding Fellow Albert Collier was inducted into the Texas Hall of Fame for Science, Mathematics, and Technology on January 20, 2003. His introduction to the group assembled in Austin was by Sammy Ray, long time AIFRB membership committee chair and himself a prior inductee into the Hall of Fame. Collier was one of but nine inductees for 2003 and was recognized for his contribution to marine biology. Other disciplines recognized included astronomy, aeronautical engineering, ecology and evolutionary biology, biological sciences, chemistry, biotechnology, psychiatry, and the category "champion for science". The induction ceremony included recognition of the inductees, dinner, and entertainment by Campanas de America and by the University of Texas Ballet de Folklorico.

By: Gene Huntsman and Sammy Ray

Sammy Ray (left) and Founding Fellow Albert Collier at ceremony inducting new members to the Texas Hall of Fame for Science, Mathematics and Technology. Both are now members of the Hall of Fame. Photo provided by Sammy Ray.

Soh Receives Award

Past President Gary Sakagawa (left) presented a plaque and a check to the recipient of the W.F. Thompson Award for the best student paper of 2001 to Dr. Sung Kwon Soh of Korea at a ceremony at Raratonga, the Cook Islands, in early October 2003. Dr. Soh's paper, "The potential role of marine reserves in the management of shortfin rockfish (Sebastes borealis) and rougheye rockfish (Sebastes aleutianus) in the Gulf of Alaska, was coauthored with Donald Gunderson and Daniel Ito and published in Fishery Bulletin 99: 168-179.

Note: Educators and mentors should not fail to nominate eligible works for the 2002 award. Submissions should be to Jack Pearce, Thompson Award Committee Chair.

Selling AIFRB!!

Report and Recommendations

Recruitment & Marketing Committee 2002-2003

Co-Chairs: Marty Golden – Southern California District, Gilbert C. Radonski – Carolinas District

Members: Kim Anthony – Southern California District, Jon Brodziak – Northeast District, Dieter Busch – Keystone District, David Cowley – New Mexico & Arizona District, James Haynes – Keystone District, John Merriner – Carolinas District, William Phoel – Keystone District, Don Schloesser – Great Lakes District

Goals & Objectives:

The goals and objectives of this Committee are to identify ways to enhance the recruitment of new members and the retention of existing members to ensure a viable organization for the future. The charge of this Committee is to come up with ideas that can be implemented to meet these goals and objectives.

Preamble:

Richard Schaefer, upon assuming the duties of the American Institute of Fishery Research Biologists (AIFRB) President, stated concern for retention/recruitment of AIFRB members. He cited the problem of a maturing AIFRB

The AIFRB is a 501(c)(3) tax-exempt nonprofit organization (EIN 61-6050711).

population noting that fish stocks come at risk when attrition exceeds recruitment. Taking action to ensure that simile applied to the AIFRB population should not go unnoticed, he appointed a committee to investigate what can be done to retain and attract members and another to develop a marketing strategy. Marty Golden would chair the former and Gil Radonski the latter. The two chairs met and decided to form a single committee that was approved by President Schaefer.

To initiate a marketing program for AIFRB two questions must be addressed: What are we? and What do we want to be when we grow up? If we look at the first question and find that we like what we see, the exercise is finished. If we want to move on to the second question we must reinvent AIFRB. The matter of reinventing AIFRB is broached here in response to very thoughtful responses that Mary Golden received to queries of his committee members. How this proceeds is in the hands of the Board of Control. In this report I will assume that we like what we see and want to market the historic AIFRB. *–Gilbert C. Radonski*

Historic AIFRB:

The AIFRB was incorporated in 1956. The Incorporators, William F. Thompson and Clinton E. Atkinson, were joined by cadre of fishery scientists that includes the *crème de la crème* of their contemporary profession as Honorary Incorporators (ARTICLE VIII, AIFRB ARTICLES OF INCORPORTATION). In 1956 the fisheries profession was in its early stages of development (*The Historical Development of Fisheries Science and Management*, taken from a lecture given at the Fisheries Centennial Celebration www.nefsc.noaa.gov/history/stories/fsh_sci_history1.html#c, William F. Royce, 1985.) Based on the significant societal changes in the time frame 1956 to present, it could be argued that retention of the historic AIFRB does not reflect the needs of a profession that has matured and continues to be dynamic. But it can be strongly argued that the ethical growth of the profession has its roots in Article IV (Purposes) of the AIFRB ARTICLES OF INCORPORTATION, viz:

The purposes for which this Institute is incorporated are the following:

1. 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.

2. To maintain high professional standards in fishery research biology by recognition of achievement and by adherence to a code to be known as "Principals of Professional Conduct for Fishery Biologists."

3. To do everything necessary, suitable and proper for the accomplishment of any of the foregoing purposes; provided it be consistent with the provisions expressed herein and with the laws under which this Institute is incorporated.

4. In pursuing these purposes, the primary role of the Institute shall be concerned with the professional development and performance of its members, and the recognition of their competence and achievement.

From the incorporating document it is evident that the founders were advocates of an ethical profession that respected the fishery resource. There is no mention of any other form of advocacy on behalf of the membership other than that mentioned in item 4 of ARTICLE IV of the ARTICLES OF INCORPORATION of AIFRB. The officers of AIFRB are elected and serve without compensation; there are no bricks and mortar to call home and no paid staff. That was so in 1956 and remains true today, a remarkable record.

In comparison the American Fisheries Society (AFS), our sister professional organization, does have paid staff and a home building. In contrast to the AIFRB, their mission has evolved to issues beyond professionalism alone and has incurred the problem of raising sufficient funds to support programs the officers and staff espouse but which the members are not willing to underwrite. The AFS has done and admirable job over the years of bringing to the fore issues confronting the fishery resource. There are costs associated with their fine record of accomplishments. The human and financial resources necessary to run a business the size of AFS is significant.

There are those who see AIFRB as a subset of the AFS and periodically talks of merger of AIFRB into AFS surface. The situation has been debated by the Board of Control in 1964, 1970, 1991, and 1992. The position is clearly described in the AIFRB Bylaws, ARTICLE IV – DECLARATION OF AFFILIATION, viz:

Consideration of the problems raised by affiliation of the American Institute of Fishery Research Biologists with other biological organizations and of the role of the American Institute of Fishery Research Biologists demonstrates the continuing need for an independent, fully professional organization. Accordingly the American Institute of Fishery Research Biologists will not affiliate or merge with any other group.

Volume 32, number 1 of the AIFRB *BRIEFS* contained two articles germane to this report. The first is titled "The Inspiration for the Thompson Award," by J. Richard Dunn. The article described the career, and to a lesser extent the personality, of William F. Thompson. It is a profile of a leader and the prototype of the founders of AIFRB. His character was sturdy if not rough and fully loaded with integrity and principle. After reading the article it is easy to understand why AIFRB was created and endured.

The second article is titled, "AIFRB vs. the AFS – A Giant Difference," by Michael Hinton. The "versus" abbreviated in the title is not pejorative in the sense of competitive but more ameliorative in the sense of "compared to." There are differences between AFS and AIFRB and those differences are explored in a professional manner. The author does a fine job of comparing the two organizations on the basis of professionalism. It is a blueprint for an AIFRB recruitment program.

In summary, until debated by the Board of Control, the AIFRB will be marketed/promoted on the basis of its historic

program and performance. It is recommended that the Membership Committee created in Section 5 of the AIFRB Bylaws be assigned the responsibility to develop strategies for recruitment and retention of members.

Recommendations

To Improve Recruitment:

A) Put increased emphasis on recruiting students by:

1) Encouraging major professors to attend District meetings and bring students
   - Incentives?

2) Encourage Members & Fellows to attend District events to promote AIFRB with guests. (Such events are a forum for informal mentoring of young scientists)
   - Member recruitment incentives?

3) Do more advertising of AIFRB student award opportunities. Examples:
   - Get involved in science fair judging
   - Advertise the AIFRB website more

4) Remind students/young scientists that as an AIFRB member they will get opportunities to interact with established scientists, which in turn can lead to job opportunities.

B) Encourage colleagues to join and be active in District events so that they may meet promising young scientists (possible future employees).
   - Encourage members to establish dialogs with students at meetings and events – students are often intimidated to take the first step.
   - Encourage members to include their AIFRB affiliation when being introduced, recognized on a conference agenda or any other appropriate venue.

C) Emphasize the opportunity for peer recognition through AIFRB awards program and AIFRB "Briefs"
   - Develop an employer mailing list for "Briefs" – result more advertising.

D) Have President contact key employers to request that they develop an AIFRB support policy (e.g. one being worked on for NMFS). A sample policy could be developed and provided to perspective employers.

E) Develop innovative ways to advertise and market AIFRB

1) Ensure AIFRB website is optimized to address recruitment and retention goals
   - Note opportunities for student awards (in timely manner)
   - Recognize student research

2) Ensure AIFRB "Briefs" is optimized to address recruitment and retention goals.
   - Make sure every "Briefs" has the AIFRB website prominently displayed
   - Note opportunities for student awards (in timely manner)
   - Recognize student research
   - Do short biographic profiles of new members and other members in "Briefs"

3) Place ads and AIFRB news (taken from AIFRB "Briefs" and website) in professional newsletters
   - Sea Grant (numerous)
   - State Fish and Game Agencies (numerous)
   - Federal Agencies (numerous)

4) Place ads in professional journals
   - Fisheries and Transactions of the AFS
   - Copeia (American Society of Ichthyologists and Herpetologists)

5) Have AIFRB banners/booth/table at various fisheries related events – Banners should include website, names, phone numbers, and be interesting (pictures of student research, neat fish, etc.)
   - Create a National chair to produce custom banners for Chapter activities, etc.
   - AIFRB events
   - AFS annual meeting
   - Develop and distribute an AIFRB recruiting poster

6) Develop an AIFRB speaker's bureau
   - When members are "on the road" give presentations on their current research at agencies and universities and include the AIFRB connection in advertisement and in the introduction for each presentation.

To Improve Retention:

A) Conduct District events that members will be interested in attending. Examples:
   - Quarterly dinner meetings with an invited speaker
   - Conduct workshop on issues of interest (possible fundraisers?)
     (a) GIS training
     (b) Writing scientific papers
     (c) Scientific presentations
     (d) Grant writing
   - Conduct symposium on issue of interest (possible fundraisers?)
     (e) Marine protected areas
     (f) Artificial reefs
     (g) Exotic species
     (h) Sustainable fisheries
   - Recognize members publications and presentations in AIFRB "Briefs"

B) Conduct events at BOC meeting that members will be interested in attending. Examples:
   - Discussion on topic of current policy or scientific interest with a summary published in AIFRB "Briefs"

C) Get members involved in AIFRB business, as officers and on committees. Examples:
   - District membership committee
   - District event committee
   - District speaker committee
   - Join a National committee
   - Prepare and submit materials for AIFRB "Briefs"
   - District Directors should encourage all members to attend BOC

To Modify the Role of AIFRB: Many comments were provided addressing significant changes that AIFRB may want to consider. Some of these suggestions are listed below. It is recommended that they be discussed at the AIFRB Board of Control Meeting and for those of particular merit a committee could be formed to analyze them in detail.

- Expand AIFRB scholarship programs
- Publish very focused papers on specific philosophical issues to get AIFRB recognition as a "Think Tank".
- Encourage members to apply for funding/grants but use AIFRB as the endorsing program.
- Act as intermediary organization to fund projects of a philosophical nature similar to the National Academy of Science
- AIFRB sponsored lecture series. A prominent member tours a sector of the country speaking on a current issue – jointly funded by AIFRB and members institution, with member's institution funding as much as possible.
- Promote better implementation of Policy Item 9 (disseminate information on fishery science).
- AIFRB sponsored research reviews.

Marty and Gil eagerly desire comments, criticisms, and suggestions from members. Comments may be sent by regular or email to Editor, Briefs. See back cover for address.

Members at Work

An important initiative for Fishery Management
Marine Strategic Guidance for Implementing an Ecosystem-based Approach to Fisheries Management

A synopsis prepared by W. - Dieter N. Busch www.EIAdvisory Services.com

In July 2001, the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) and the Atlantic States Marine Fisheries Commission (ASMFC) joined forces to prepare a guidance document designed to assist fisheries management move towards the use of an ecosystem-based approach in resource management. In order to be in compliance with the Federal Advisory Committee Act (1971), the effort was carried out under the auspices of the Marine Fisheries Advisory Committee (MAFAC). The process relied on input from members of an interdisciplinary Technical Committee under the guidance of an interagency Ecosystem Approach Task Force, led by W.-Dieter N. Busch (ASMFC and NMFS contractor), Bonnie L. Brown (Virginia Commonwealth University), and Garry F. Mayer (NOAA Fisheries/HC). Initial input and guidance were obtained through a workshop. The resulting document underwent extensive editing as well as intramural and extramural peer review. Concepts from the document were presented in a special symposium of the American Fisheries Society 2002 annual meeting and at a number of other conferences and workshops.

The report, *Strategic Guidance for Implementing an Ecosystem-based Approach to Fisheries Management,* was completed and accepted by MAFAC in May. The text of the report may be obtained from the MAFAC web page, or from my web page. selected topics from the *Strategic Guidance* are summarized below.

Policy Challenges

The development of the *Strategic Guidance* builds on the process started by the Interagency Ecosystem Management Task Force and the Ecosystem Principles Advisory Panel. The ecosystem-based approach is a return to the holistic philosophy expressed in the *public trust doctrine* and in the resource husbandry promoted by the concept known as *traditional knowledge.* The ecosystem-based approach reemphasizes these guiding principles; all who use or *take* the natural resources must also *take care of* them. However, since the responsibility of caring for resources has been separated and assigned to various governmental agencies at the state and federal levels, the task of moving towards an ecosystem-based approach in fisheries management faces numerous obstacles.

Some perceive that use of an ecosystem-based approach to fisheries management requires such a great deal of new information and may change management so drastically that it can not be advanced at this time. The Fisheries Management Councils (FMCs) acknowledged that more data and direction are needed and expressed concern that the estimated cost of implementing ecosystem-based management would be high if the activity were mandated to be accomplished quickly and comprehensively. However, a more pragmatic view was also expressed by some of the FMCs - i.e., that moving towards the use of an ecosystem-based approach "is a process and can be started regardless of the level of information on hand."

Key Concepts

Specific activities that are part of the main structure for moving towards use of an ecosystem-based approach include:

1. Identification of the geographic area to be managed, its boundaries, and the mapped inventory of its major characteristics (as available).

Delineating Geographic Area(s) of the Ecosystem - Most management units are identified by political boundaries. However, to delineate ecosystem boundaries, it will be important to identify the geographic ranges/areas using ecological metrics. Political boundaries usually do not match ecological boundaries, leaving the management and assessment of a system disjointed. This problem is compounded because jurisdictions and mandates operate at different temporal and spatial scales (e.g., local, state, and federal management systems). Ecosystem-based initiatives may need to include significant focus on the current

condition, restoration (if needed), and sustainability of ecological parameters within the geographic area of responsibility. This would be in addition to the more common focus on sustainability of individual fish populations.

Delineating ecosystems or subsystems at various user-defined scales requires a hierarchal approach. It is reasonable to start with the Large Marine Ecosystem classification and step the area down as necessary using metrics such as:

A. Natural physical boundaries such as those of an estuary.

B. Range of key species and the physical conditions that limit this range.

C. Political boundaries of responsible jurisdictions.

2. Setting goals with reference to the larger environment, including ecosystem parameters or environmental conditions (e.g., water quality), that limit fishery management options. The guidance also includes the identification of specific elements/ indicators and their application to describing the goals and objectives of the desired future conditions/settings of the specific geographic area to be managed.

Public support and understanding will be improved when management decisions connected to achieving desired resources goals and objectives are clear, are based on quality information, and require management accountability. Accountability requires specific goals and quantifiable objectives. Such accountability is coming into use for terrestrial natural resource management but is not yet common in aquatic resource management. Therefore, the *Strategic Guidance* suggests the following:

A. Use an open and public process, guided by historic resource structure and limitations, to develop general goals and specific objectives that describe the "desired future condition" of the ecosystem and its major component parts.

B. Identify and define tolerance limits for the evolving or functional ecosystem within an acceptable range of fluctuations similar to the natural historic fluctuations.

C. Develop a process for evolving policy, direction, and resource objectives as well as an institutional process for implementation strategies, integrating inputs, and evaluating outcomes.

The process of determining the goals and objectives (future desired conditions) of an ecosystem-approach to marine fisheries management requires the use of measurable characteristics related to structure, composition or functioning of the ecological system. Because ecosystems are dynamic and can be unpredictable, a precautionary approach must be implemented to accommodate natural variability, our incomplete understanding of ecosystem structure and function, and other uncertainties encountered in setting ecosystem reference points and in assessing the direct and indirect effects of anthropogenic stressors, including fishing, on natural ecosystems. Once selected, the effectiveness of these indicator characteristics in identifying, describing, and conserving ecosystems and their natural resources must be reviewed with respect to uncertainties and unpredictability of responses to management actions. The following criteria should be considered:

A. Indicators for robust and resilient single species, multi-species, and/or the more holistic ecologically functioning eco-reach.

B. Descriptors or metrics that are easily understood (e.g., desired age depth, size range, geographic distribution, and abundance for species).

C. Needed/required habitat areas of particular concern to support important life history functions.

Characteristics of desirable ecosystem indicators include:

- Be reasonably simple to compute and understand,
- Have an intuitively reasonable interpretation,
- Be discussed in a comprehensive way (statistically, mathematically and /or ecologically),
- Have some appropriate foundation in terms of an ecological theory, statistics or mathematics, and
- Be applicable to marine ecosystems, including the open oceans, the EEZ, and continental shelf, and the near-shore and its watersheds.

3. Instituting proactive interagency communication and coordination with other resource regulatory agencies. This includes becoming familiar with their available descriptive data for the specific eco-reach and sharing in future planning.

Successful implementation of ecosystem-based approaches will require unprecedented changes in approach and communication. An ecosystem approach is, by design, interdisciplinary and should benefit from the coordination and cooperation of numerous agencies at all levels of government. The good news is that many agencies already are collecting and processing information that would provide major building blocks for implementing an ecosystem approach. However, most marine resource agencies or departments within these agencies still focus mostly on their direct responsibilities. For example, in a recent U.S. state survey of fish and wildlife agencies, only 64 percent cooperated with their state's environmental agency. An exception is the biannual "National Coastal Condition Report", which is a start in interagency cooperation dealing with marine resources. The addition of a few more trends in physical habitat and biological resources would make it even more applicable.

A. Focus on interactions among constituents, understanding of the problem, team building, and trust.

B. Put emphasis on "coordination and cooperation" as supposed to "control."

C. Access and incorporate local and regional expertise (regionalize).

Recommendations

A. Evaluate a limited number of current Fishery Management Plans with regard to ecosystem issues (delineate boundaries; set natural resource goals; establish indicators for measuring ecosystem effects; compile social and economic data; establish interagency cooperation) and recommended management tools. The outcomes would include improved understanding of the more common ecosystem issues that are adequately included while also identifying those challenges that are not being addressed.

B. Prepare a guidance document that describes ecosystem indicators and their recommended use and potential limitations through participation in the 2004 SCOR/IOC activities.

C. Assist in the preparation of "desires" natural resources goals, based on historic conditions and abundance and modified by current irreversible and reversible constraints. A limited number of successful examples of proactive development of common resource goals and objectives, for select ecosystems or eco-reaches (estuaries), could greatly advance the implementation of an ecosystem-based approach to resource management.

D. Assist in the preparation of one or more Fishery Ecosystem Plans (FEPs)(a comprehensive outline for preparation of an FEP is included in the *Strategic Guidance*). The FEP may be prepared at different scales such as on a broad scale for an LME or with more specific data for smaller geographic areas. The development of these FEPs should encourage the collection of all relevant information (biological, physical, and socioeconomic), processed through a logical sequence of analyses, leading to solid options.

E. Assist/encourage the standardization of data collection and reporting for habitat inventories (Geographic Information System inventories and mapping of physical and chemical conditions and trends). GIS inventories are planned or underway for some offshore areas by NOAA Fisheries, NOS, and USGS. GIS mapping of coastal watersheds has been underway by USFWS.

F. Regional interagency workshops may be needed to bring the various federal and state partners together in order to increase cooperation (to use the same "sheet of music"). In order for the *Strategic Guidance* to be as ecosystem-based as possible, it should include information, assessment, and/or management topics that are the responsibilities of agencies other than NMFS. An ecosystem-based approach acknowledges the need for partnerships; interagency workshops can/should be used to bring them together. New efforts (data compilation and management, new field collections) can/should be identified and prioritized at these workshops for/by each cooperating agency.

G. Through pilot projects, assist and encourage FMCs, states, and costal commissions in the preparation of assistance in setting the desired goals and quantifiable objectives, by eco-region. The objectives will need to reference life history metrics for key species, trophic guilds, or habitat important for supporting populations or communities.

Transition to ecosystem-based management benefits include, but are not limited to:

- Improve conserving natural resources and protecting biodiversity while optimizing social and economic benefits and minimizing negative social and economic impacts to communities.
- Improve public understanding of natural resource management; including public participation in the management process and in identifying required tradeoffs.
- Help bring fisheries management into compliance with existing and proposed laws because resource goals and objectives have been prepared to guide the restoration and maintenance of fish communities with respect to harvest effects, forage, and habitat, thereby reducing the incidence of unintended consequences of management.

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Losses

Harold Berkson

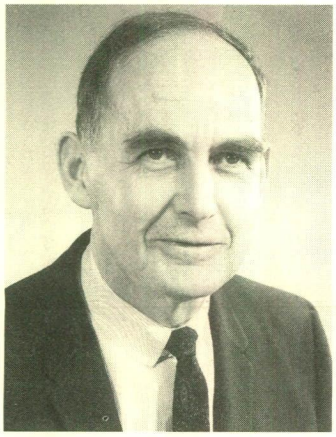
Forrest Hauck

Obituaries will be printed when available

Allyn H. Seymour, Sr.

August 1, 1913-September 2, 2003

Al died on September 2, 2003, one month after celebrating his 90th birthday. Soon after his birthday he suffered a stroke leaving him semi conscious for a period before passing on. His lovely wife Barbara preceeded him in death. The couple were outstanding hosts to and deeply loved by students and co-workers. They are survived by three sons Allyn H. Jr. "Mike", Denny R., and Gary N.; one brother Richard S. and seven grandchildren; and 5 great-grandchildren. Al will be greatly missed by his family, friends, former students, co-workers and his competitors on the handball court or at sport fishing. He was a great friend to all and extended himself in inquiring often about a person's family. Al became a Fellow in AIFRB in 1959, Emeritus in 1983. He also belonged to the American Fisheries Society and the Pacific Fishery Biologists. He authored numerous research papers and was a member and chairman of the National Academy of Sciences National Research Council's committee on Radioactivity in the Marine Environment.



Born in Seattle, Washington, Al graduated from Ballard High School and then went on to the University of Washington to earn a B. Sc. and Ph. D. degree in the College of Fisheries. In the fisherman's community of Ballard it is expected most youngsters will be born with or soon fitted to hip boots. Al measured up to expectation as he started his hobby of fishing early in his career. Professionally his early assignments often required foul weather gear. With the Washington State Department of Fisheries, one of his early assignments was the Minter Creek Hatchery on the Kitsap Peninsula. From there he went with the International Pacific Salmon Fisheries Commission working with sockeye salmon on the Fraser river and adjacent waters in British Columbia. During the period 1937-1947, he worked with the International Pacific Halibut Commission and spent numerous winters at sea in the north Pacific on chartered halibut schooners such as the M/V *Eagle* and the M/V *Tordinskjold*. Their job was test fishing to collect otoliths and plankton tows to count pelagic halibut eggs. Those studies through the years resulted in classic management techniques for a sustained halibut fishery in the north Pacific.

In 1947 Al joined Dr. Lauren Donaldson in the Applied Fisheries Laboratory, University of Washington, a group secretly founded during the Manhattan Project and concerned with nuclear reactors and salmon of the Columbia river. Working as an aquatic radioecologist on pioneering studies with the effects of ionizing radiation on aquatic organisms and follow up studies on the distribution and accumulation of radionuclides from nuclear weapons tests on both land and sea in the Central Pacific and their entrance into the clockwise North Pacific current. In 1956 he accepted a temporary assignment for two years to the Atomic Energy Commission in Washington D.C. Al soon became assistant director of the laboratory, known from 1957 to 1966 as the Laboratory of Radiation Biology. In the period starting in 1957 the US Atomic Energy Commission placed a strong emphasis upon "Peaceful Use of the Atom" of which Al was a strong proponent. Trace element studies were started in a nutrient deficient lake using radioisotopes. He returned to the lab and became director in 1966 when the name was again changed to the Laboratory of radiation ecology. Al was appointed Professor at the U of W, College of Fisheries, and taught a course series in Radiation Ecology until his retirement in 1978 as Professor Emeritus.

Al's studies took him to many places from atolls in the central Pacific to islands and coastline of the north Pacific and the outwash of the Columbia river. Field activities often depended upon military assistance such as helicopters, amphibious aircraft, LCI's, LST's, destroyer escorts, destroyers and ocean going tugs. On numerous occasions when the seas got rough, Al's smile would just grow wider while the rest of us were gauging the distance to the nearest leeward rail. He seemed to be well designed for rough weather. It was always a pleasure to work with Al both in the office, laboratory and in the field. Those of us who have had the privilege to associate with Al consider him a real gentleman and an outstanding scientist, fisherman and hand ball player. We miss you Al!

Submitted by: Paul Olson

Lost Sheep: A call to Action

In August at Quebec a list of delinquent members was distributed to the Board of Control (BOC) for their review. Treasurer Allen Shimada reported that as of August 2003 there were 80 one year and 56 two year delinquent members. This represented a $5,760 shortfall in revenue to the Institute. Shimada suggested that either the Chair of the Membership committee or the President send a letter to two-year delinquent members letting them know that they will be dropped. In order to stimulate payment of dues, the BOC reviewed the procedures for contacting these members. Treasurer Shimada carries delinquent members until December. By this time they will have received three notices from his office. Director Joe Rachlin asked how successful have District Directors been in recovering dues from their notices. Shimada stated that these have been effective and there is usually an inflow of dues shortly after BRIEFS have been mailed. Treasurer Shimada will send an excel file containing the delinquent members list to Secretary Warkentine for distribution to all BOC members. All BOC members were encouraged to contact their regional/district embers to encourage payment.

Members: If you are aware of a delinquent member, encourage them to continue their membership in America's most prestigious organization of fishery biologists. *Editor*

The Case of the Missing Rivers

Not by Arthur Conan Doyle

As one of the many notes concerning aquatic resources that I include in *Briefs*, I annually abstract the list of "America's ten most endangered rivers" as chosen by the organization, American Rivers. American Rivers is a group dedicated to clean rivers with natural flows. AIFRB activist and stalwart Bill Wilson is uncertain of the wisdom of including the list in *Briefs* and has written twice on that issue. Here is his latest missive:

> Hi Gene:
>
> If I'm beating a dead horse here, let me know. But I can't resist sending you another email on the American Rivers issue.
>
> I'm surprised at what I read in the May/June 2003 issue of *Briefs*. The article on America's Most Endangered Rivers now, conspicuously, does not list the Canning River in Alaska for 2003 (which the editor so adequately notes). How is it that a river considered to be so endangered as to rank number 2 on the American Rivers list in 2001 has now just disappeared from that list? Actually, every river on the 2001 list has been removed. Which makes one suspect that these lists are like a beauty contest - new candidates are selected each year based on the perceptions of American Rivers at the time...which ones look the "best" for the current year? Which then makes one wonder about the purpose of such lists. Regardless, I'm glad the Canning is off...never should have been there in the first place.
>
> *Bill Wilson*

Bill raises a logical and powerful point, one which had puzzled me a bit too. The explanation for the dynamism of the annual lists was provided by Eric Eckl, Director of Media Affairs for American Rivers.

> Hi Gene,
>
> We do our best each year to address the commonly held misperception that the Endangered Rivers Report is somehow a list of chronically impaired rivers — when in fact it is a list of rivers facing acute crises.
>
> The annual endangered rivers list is not a list of the worst rivers, but rather the rivers that we believe are most poised to take a TURN FOR THE WORSE in the coming twelve months. For example, if a dam is about to be authorized, if wetlands are about to be destroyed, if pollution standards are about to be relaxed, if a restoration effort is about to be botched, and if damaging new water divisions are planned, then a river is a promising candidate for our annual list. Rivers on the list have ranged from the nearly untouched Canning River in the Arctic National Wildlife Refuge to the lifeless and dewatered reaches of the Rio Grande, but in each case we are pointing to a situation that is likely to get worse rather than better — without public attention and outcry.
>
> *Eric Eckl*

Sounds logical to me!

I plan to continue including the lists from American Rivers for two reasons:

First, and generally, most biologists would agree that degraded rivers are an important obstacle to maintaining and replenishing fish populations. Thus, the American Rivers group has, on the whole, goals allied to those of most AIFRB members.

Second, most of us, by the time we have achieved membership in AIFRB, have discovered that often emotion, political acumen, and numerically strong support are as important in resolving resource issues as are logic and science! Thus I believe it pays to know what advocacy groups involved with aquatic resources are thinking.

But I will not require Bill to read the list.

Editor

Another Member At Work: this one might actually make money

Pompano Farming

By Michael F. McMaster

The natural spawning season for the revered Florida Pompano (*trachinotus carolinensis*) is now over and Mariculture Technologies International, Inc (MTI) (Michael McMaster, President) reports the successful completion of the first spring season their new Oak Hill, Florida facility.

The pompano, as all seafood connoisseurs know, is perhaps Florida's finest fish on the plate. There has been a shortage of the pompano due to Florida's state ban on gill net use by commercial fishermen. The Florida coastal waters remain abundant with the pompano but due to the fact that they are so difficult to catch by the commercial and recreational fishermen the seafood consumers rarely see them for sale anymore.

MTI is the world leader in integrated Florida pompano farming technology (see www.mariculture technology.com and www.pompano farms.com) for details.

MTI's adult pompano breeding facility was completed in March of this year. By May of this year MTI produced over 400,000 pompano eggs from only three female fish. This met their first production goal. The hatchery is now complete and ready to accept fertilized pompano eggs and other species.

MTI is now accepting advanced orders for pompano fry to be delivered starting in February 2004.

Those farmers interested in growing this finest of marine fish species are invited to contact us as soon as possible (sales@mariculturetechnology.com).

On the Agenda

Fishery Management issues currently or recently before U.S. Marine Fishery Management Councils:

A brief listing:

Western Pacific: Sea Turtles – long lines, Coral harvest, Coral reef fisheries; Private FADS, Blue Marlin, Reef area closures

North Pacific: Gulf of Alaska rationalization, Halibut subsistence fisheries, Pollock, Pribilof King Crab rebuilding

Pacific: Groundfish trawling – individual quotas, Chinook and coho salmon Fishery Regulation Assessment Model (FRAM) – Canadian Catches, Pacific sardine – 2004 harvest guidelines, Ground fish harvest 2005-2006, Groundfish individual quotas, Rebuilding plans (bocaccio, cowcod, widow, and yelloweye rockfish), Limited entry high seas long line – highly migratory species, Cabezon and lingcod stock assessments, Vessel monitoring – groundfish fishery

New England: Scallops – gear rules, closed area rotation, Monkfish FMP, Herring (stock status, limited access, effort controls), Red Crab – 2004 rules, Dogfish – rules 2004-2005, Groundfish – multi species FMP

Middle Atlantic: Spiny Dogfish quota 2004-2005, Summer Flounder, Black Sea Bass, Scup: Proposed Actions, Essential fish habitat – closed areas, Tilefish – permit system, Bycatch – reduction, state interactions

South Atlantic: Snapper-Grouper (73 reef associated species), Oculina Banks closed area (off Ft. Pierce, FL), Highly migratory species – billfish, tuna

Gulf of Mexico: Coral – protection and management, Yellowtail snapper – stock assessment, Red and other shallow water groupers; reduction in TAC-Alternatives, Tilefish quota, Shrimp – criteria for stock status and benchmarks, Mariculture – council policy, Sharks – bycatch in menhaden fishery

Caribbean: no recent mailings

Ed. Note: In my search for pertinent material for Briefs, I asked to receive mailing from all the councils. The unqualified champion in the mail department in terms of volume is the Pacific Council. However, to date, the quality award must go to the Western Pacific Council for their colorful, slick paper Pacific Island Fishery News with interesting and highly readable reports, including exotic recipes (e.g. Seared ahi over pohole shoots with sweet soy sauce and green onion oil drizzle). Perhaps the Caribbean Council lost my request, but they now hold the booby prize with zero mailings.

Council Approves Guam Bottomfish Area Restriction

After much deliberation, the Western Pacific Fishery Management Council voted during its 118th meeting, June 10-13, 2003, in Honolulu, to close federal waters within 50 nautical miles of Guam to bottomfish fishing by vessels over 50 feet in length. Under this amendment to the Bottomfish Fishery Management Plan (FMP) for the Western Pacific Region, Guam-based bottomfish vessels 50 feet and larger operating within the exclusive economic zone surrounding Guam would be required to have a federal permit and keep logbooks. The amendment will go to the Secretary of Commerce for approval.

Because the amendment has the potential to displace larger fishing vessels from Guam, the Council will investigate whether similar management measures for federal waters surrounding the Commonwealth of the Northern Mariana Islands (CNMI) are appropriate.

The Council may in the future also consider limiting entry to the Guam and CNMI bottomfish fisheries. A control date of June 13, 2003, was set for this potential measure.

For the Hawaii bottomfish fishery, the Council approved the process to award two Northwestern Hawaiian Islands (NWHI) Mau Zone bottomfish permits through the Community Development Program. This program aims to increase participation of indigenous communities in fisheries within the Council jurisdiction. Only 17 bottomfish permits are issued for the entire NWHI, 10 in the Mau and seven in the Hoomalu bottomfish zones.

From: Pacific Islands Fishery News, Summer 2003

A Case Study: Summer Flounder

Published Article in SeaGrant Magazine
by Chris Moore and Marla Trollman

Every year, scientists, fisheries managers and administrators participate in a process that affects thousands of Virginians and millions of dollars. That process, which involves numerous meetings and hundreds of man-hours, results in a number of commercial and recreational management measures that impact the commercial and recreational harvest of marine fish in the waters off the coast of Virginia. One fish, summer flounder, has been at the forefront of management efforts over the past several years.

Summer flounder, commonly known as fluke, is one of the most important finfish to Virginia fishermen. In 2001, about 2.7 million pounds of summer flounder valued at 3 million dollars were landed in Virginia ports. In addition, Virginia anglers spent millions of dollars on bait, tackle, gas, food and lodging to use hook and line to pursue fluke from shore, piers, and boats in Virginia waters from Chincoteague to Onancock.

The abundance of summer flounder in waters off Virginia is a true success story and directly relates to the positive impact that management measures have had on the stock. In 1988, the *Summer Flounder Fishery Management Plan* was implemented by the National Marine Fisheries Service (NMFS). Unfortunately, 1988 was also the year of a recruitment failure in the summer flounder stock. Because the fishery was highly dependent on incoming recruitment at that time, commercial and recreational landings dropped dramatically in 1989 and 1990. Survey values also indicated summer flounder abundance was at an all-time low.

The Mid-Atlantic Fishery Management Council (Council) and the Atlantic States Marine Fisheries Commission (Commission) responded to these declines by developing Amendment 2 to the Summer Flounder plan. That document, a comprehensive amendment first fully implemented in 1993, contained a number of management measures to regulate the commercial and recreational fisheries for summer flounder. These measures included a rebuilding schedule, commercial quotas, recreational harvest limits, size limits, gear restriction, and permit and reporting requirements.

The plan also detailed a process that is followed each year to establish the regulations for the upcoming season. The process begins in June when the stock assessment is completed by scientists in a summer flounder working group. The group includes representatives from coastal states, including Virginia, and the Council, Commission, and NMFS. Commercial and recreational landings and discards by Virginia fishermen as well as Virginia trawl surveys of the summer flounder population are used together with fisheries-dependent and fisheries-independent information from other east coast states and the federal

government to assess the current status of the stock.

Stock assessment results are utilized by the summer flounder monitoring committee to develop recommendations for consideration by the Council and the Commission's summer flounder board. These two management bodies include representatives from Virginia. In August, the Council and Board developed management measures based on recommendations from the monitoring committee, industry advisors and the public. These management measures include a total allowable landing level (TAL), which is divided into a commercial quota (60%) and a recreational harvest limit (40%), minimum fish size regulations, and gear requirements. In 2003, the TAL was 23.3 million pounds with an associated commercial quota for the coast – state and federal waters combined – of 13.98 million pounds. The commercial quota is allocated to each state from Massachusetts to North Carolina; in 2003 Virginia was allocated 2.9 million pounds.

The Council and Board meet again in December to decide on recreational regulations for the following year. These management groups review the most current information on the recreational fishery and compare the performance of the fishery to the recreational harvest limit. Since 2001, the Council and Board have decided to use "conservation equivalency" to constrain the recreational harvest. As a result, each state, including Virginia, is allocated a portion of the harvest limit to develop state-specific regulations to achieve the limit. In 2003, the recreational limit for Virginia is 689,000 fish. The regulations put in place to achieve this limit include an 8-fish possession limit, 17.5-inch minimum fish size, and a closed season from January 1st to March 28th.

The summer flounder stock has responded dramatically to the management measures adopted by the Council and Commission since 1993, the first year that Amendment 2 was implemented. Fishing mortality rates have dropped significantly and spawning stock biomass has increased over 700 percent from 1989 to 2001. Projections of stock status for 2003 indicate that the stock is no longer overfished.

From: Mid Atlantic Perspectives, Fall 2003

Federal Klamath Diversion Plan Found Illegal

Water Diversions a Disaster for Salmon

On the Northern California/Southern Oregon border, the federal Klamath Irrigation Project diverts massive amounts of water for irrigation from a river that was once the third mightiest salmon producer in the continental United States. Irrigation diversions from the Klamath River have helped drive three fish species to near extinction, resulting in their protection under the Endangered Species Act.

Recently the Bush administration finalized a ten-year plan that continues large irrigation diversions of water from the river and the communities downstream that rely on salmon. The Bush plan was created over the objections of a least one key government scientist, who tried to point out the damage the plan would wreak on the salmon and their habitat. Earthjustice brought a lawsuit challenging the plan for violating the ESA, and in July, a federal judge agreed, and told the government to redo it. Earthjustice attorneys Kristen Boyles and Michael Mayer represented the Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, The Wilderness Society, WaterWatch of Oregon, Northcoast Environmental Center, Oregon Natural Resources Council, Defenders of Wildlife, Klamath Forest Alliance, Headwaters, and Congressman Mike Thompson. Plaintiffs were joined by the Yurok and Hoopa Valley Tribes, and amicus briefs supporting the plaintiffs were filed by the cities of Arcata and Eureka; Del Norte, Humboldt, and Trinity Counties; and the Humboldt Bay Harbor, Recreation and Conservation District.

From: In Brief, Autumn 2003

Pacific Halibut

Recent Management Changes Affecting Alaskan Commercial, Guided Sport, and Subsistence Halibut Fisheries

As of August 2003

Overview

The Pacific halibut *Hippoglossus stenolepis* population is currently near peak abundance in Alaska, but is projected to decline due to low levels of recruitment of juvenile fish. Halibut are harvested by commercial, subsistence, personal use, guided sport, and non-guided sport users. Allocation issues likely will intensify as abundance declines.

Over the past 16 years, the North Pacific Fishery Management Council has addressed allocation issues in the commercial and guided sport halibut fisheries. Beginning in May 2003, a subsistence halibut fishery was defined in Alaska. The National Marine Fisheries Service (NMFS) is reviewing proposed changes to the subsistence program and inclusion of the charter halibut fishery in the current commercial Individual Fishing Quota program, prior to submission to the Secretary of Commerce for implementation. The Council has no plans to revise management of the non-guided sport halibut fishery.

Authorities

Halibut fisheries are regulated under the authority of the Northern Pacific Halibut Act of 1982, through the International Pacific Halibut Commission (IPHC), the Council and, ultimately through regulation by NMFS. Generally speaking, the IPHC is responsible for halibut conservation decisions, and NMFS manages the fisheries and enforces regulations under the authority of the Secretary of Commerce and the National Oceanic and Atmospheric Administration (NOAA). The State of Alaska has limited authority under the Halibut Act, but may pass halibut regulations that conform with federal regulations or laws.

Commercial Halibut Fishery

The halibut IFQ program began in 1995 after years of debate on how to address overcapitalization ("too many boats chasing too few fish") in the Alaska longline fisheries while maintaining the character and size of the fleet. Problems in the fishery included shore "derby" openings (1 day to 1 week), lost gear and resultant "ghost" fishing, gear conflicts, safety concerns, poor product quality, and low dockside prices.

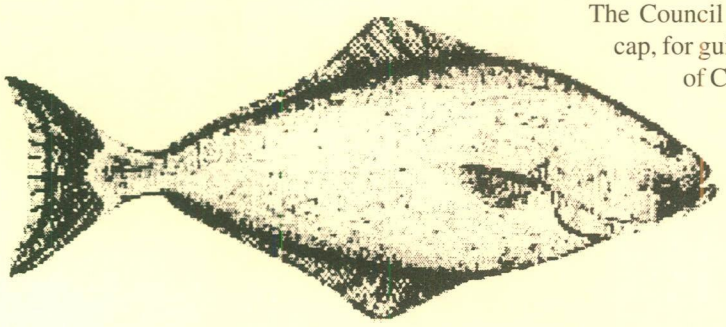
Commercial halibut quota shares are defined by IPHC regulatory area, vessel size, and block status. Quota shares are used to calculate each person's share of the annual quota set by the IPHS. Fishermen may buy and sell shares, but individual and vessel use caps, quota share block caps, and owner-on-board requirements limit the amount of consolidation that may occur. Strict record keeping and reporting requirements for both harvesters and buyers enhance monitoring and enforcement.

The season for halibut is now more than eight months from March 1 to November 15. Twenty-two percent of the commercial halibut quota in Western Alaska (Areas 4B-E) is allocated to 65 Bering Sea communities; this is known as the halibut community development quota program.

The original IFQ program was approved with strict limitations. Some of these have been relaxed as industry and mangers learned what restrictions could be lifted without jeopardizing the success of the program. In 2004, the IPHC and Council may consider extending the halibut season to nearly year-round. The Council has identified additional proposed changes for the IFQ halibut fisheries in Areas 3B, 4A, and 4B for analysis when staff becomes available. The Council also has called for new proposals. New and previously submitted proposals will be reviewed during its October 2003 meeting, including: Change the block program, Allow D-category quota shares to be fished on larger vessels, Sunset hired skipper provisions of initial recipients in all areas.

Guided Sport (Charter) Guideline Harvest Level

The Council has debated the need to limit halibut catch in the guided sport halibut fishery since 1993. Considerations included the ability to maintain the stability, economic viability and diversity of the halibut industry; the quality of the recreational experience; the access of subsistence users; and the socioeconomic well-being of the coastal communities dependent on the halibut resource.



The Council approved a Guideline Harvest Level (GHL), or harvest cap, for guided sport halibut anglers in February 2000. The Secretary of Commerce implemented GHLs of 1,432,000 lb (net weight) for Southeast Alaska (Area 2C) and 3,650,000 lb for Southcentral Alaska (Area 3A), effective on September 8, 2003. These amounts equate to 13.05 percent, and 14.11 percent, respectively, of the combined commercial and guided sport quota.

The GHLs establish an amount of halibut that will be monitored annually in the guided sport fishery. NOAA legal review identified concerns with the ability to automatically impose or lift management measures without additional public process as harvests exceed or drop below the GHL. Therefore, proposed GHL management measures that were adopted by the Council in October 2000 such as prohibiting skipper or crew harvest, annual limits, and lowered bag limits were not approved. Once a GHL has been exceeded, the Council would initiate analysis of management measures to restrain guided sport harvest to below the respective GHL.

Guided Sport (Charter) IFQ's

In 2001, the Council approved adding the guided sport fishery to the commercial halibut IFQ program as a more equitable way to distribute fishing privileges between the two sectors. The guided sport sector initially would be allocated approximately 13% of the combined commercial and guided sport quota in Southeast Alaska and Southcentral Alaska, which includes a buffer for growth. After initial allocation, quota shares could be bought and sold between and within sectors.

IFQs would fluctuate annually with the combined commercial and guided sport quotas as determined by the IPHC, and would decrease as the halibut stock declines. Quota would be initially issued to a vessel owner, or to a person who leased a vessel from an owner, and who carried clients in 1998 or 1999, and 2000. Seventy percent of an individual's initial allocation would be based on the average of his/her 1998 and 1999 Sport Charter vessel Logbook records with an additional 10% allocation for each year of operation for 1995-97. IFQs would be issued in numbers of fish. Up to 2% of the combined quota share would be set side initially for underdeveloped Gulf of Alaska coastal communities.

The Council submitted the analysis for this program for NMFS review in May 2003. Revision of the analysis in response to NMFS review and submission for Secretarial review is anticipated prior to the end of this year. Guided sport halibut IFQ measures are not yet in effect.

These regulations may be effective in 2007, assuming Secretarial approval in 2004, program development by NMFS in 2005 (including calculation, distribution, and appeals), and one-year delay between the issuance of quota and fishing to examine the geographic distribution of quota in 2006. The Council will be calling for nominations to a Charter IFQ Implementation Committee after the October 2003 Council meeting. The committee will provide advice on the development of proposed regulations. Letters of interest should be sent to the Council office. Appointees will be responsible for their own travel costs.

Halibut Subsistence Fishery

On May 15, 2003, Federal regulations defined a subsistence halibut fishery for approximately 88,000 eligible Alaska residents who were identified as having customary and traditional use of halibut. Participants must: (1) hold a Subsistence Halibut Registration Certificate; (2) use legal gear of up to 30 hooks per longline, hand line, rod and reel, or spear; (3) participate only in customary and traditional trade; and (4) not exceed a daily harvest limit of 20 halibut. Commercial sale of subsistence halibut is prohibited.

As of August 2003, 10,600 registration certificates have been issued, nearly equally split between Tribal and rural residents. Harvest data will be collected through cooperative agreements between local governments and tribes. More information can be found at www.fakr.noaa.gov/ram/subsistence/halibut.htm.

In April 2002, the Council approved changes to reduce the subsistence gear and bag limits in all of Southeast Alaska, Cook Inlet, Prince William Sound, and the Kodiak Road Zone and Chiniak Bay to limit rockfish and lingcod catches. The proposed rule will be addressed at the October 2003 Council meeting. The Council also will hear a report on the process under which the Board of Fisheries and the Federal Subsistence Board will review proposals for eligibility from excluded communities, Tribes, and individuals. Any changes to the eligibility lists requires a regulatory amendment and could take up to a year to be implemented. Final action to include Ninilchik will be debated at the October meeting. If approved, Ninilchik could be included by Spring 2004.

Local Area Management Plans

The Board of Fisheries has been awaiting implementation of the GHLs and Charter IFQs prior to recommending additional LAMPs to reduce competition for halibut. The Sitka Sound LAMP was implemented in 1998. Kodiak, Cook Inlet, and Prince William Sound communities want to develop halibut LAMPs. Other communities that can reach consensus will be considered. All proposals affecting halibut allocation first must be forwarded by the Board, adopted by the Council and approved by the Secretary.

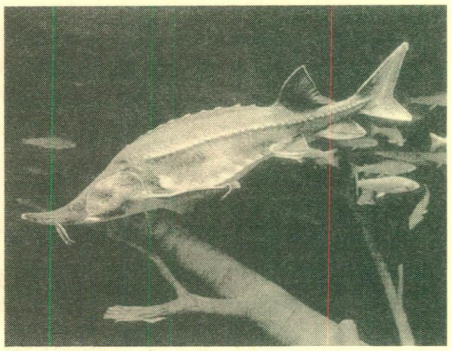
From: Leaflet prepared by North Pacific Fishery Management Council

World Caviar Trade Moving to North America

WWF Highlights Threats to U.S. Sturgeon, Paddlefish Stocks

The recent bust in California of what could be one of the largest caviar-poaching rings in recent U.S. history underscores the need for greater protections for North American caviar-producing fish, according to World Wildlife Fund (WWF) experts.

A report released in May by TRAFFIC, the wildlife trade monitoring network of WWF, found an increase in both legal and illegal trade of paddlefish and sturgeon in North America in recent years, coinciding with the dramatic decline of beluga sturgeon and other traditional caviar-producing fisheries around the Caspian Sea. The report came out, coincidentally, the same day authorities in California arrested 12 people accused of supplying illegal caviar up and down the West Coast; the 12 were accused of being part of a black market caviar ring along with eight others who were arrested on similar charges earlier in May.

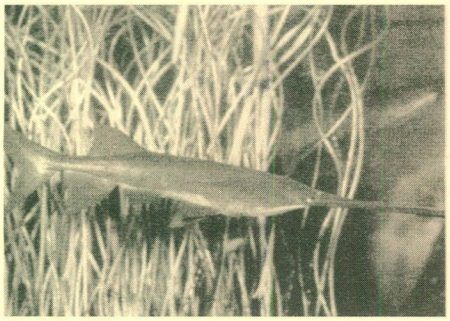


Richard T. Bryant

Sturgeon

"The arrests in California highlight the need to protect U.S. sturgeon and paddlefish, which are coming under increasing pressure from both the black market and from legal catch," said Craig Hoover, deputy director of TRAFFIC. "Unfortunately, we expect to see more of these cases since legal sources of caviar in the United States cannot meet the enormous world demand as the Caspian Sea caviar continues to decline."

In recent decades, Caspian Sea fisheries have produced most of the caviar in international trade. Once carefully regulated, the industry suffered from rampant overfishing and a Russian mafia takeover after the collapse of the Soviet Union. Beluga sturgeon stocks were reduced by as much as 90 percent and international trade restrictions were imposed. Increased harvest of sturgeon and paddlefish eggs for caviar could have a significant impact on several North American species, including those already considered endangered or threatened. The lower Columbia River supports the last major commercial and recreational fishery for the threatened white sturgeon, the largest freshwater fish in North America.



©WWF-Canon/Kevin Schafer

Paddlefish

Besides the recent case in California, criminal cases have recently been brought in Oregon, New York, Kentucky, and Tennessee against alleged black market caviar dealers in North America.

"Demand in major caviar-consuming countries primarily in the European Union, Japan, and the United States far outstrips what North American wild stock and commercial aquaculture are currently producing," Hoover said. "Unfortunately, our study found that many states' laws regulating catch and trade haven't caught up with the increased demand.

North American sturgeon and paddlefish are the largest alternative fisheries to the Caspian Sea for caviar production. But TRAFFIC found that wild fish stocks in North America are not plentiful enough to replace Caspian Sea production, and the fledgling aquaculture industry is years away from being able to supplant production from wild sources.

"North American caviar can be a profitable industry, but only if state with healthy paddlefish and sturgeon populations manage the resource carefully," Hoover said. "There are still some serious regulatory gaps that need to be filled and urgent action is needed to ensure that we don't repeat the mistakes of the past."

From: Focus, September-October 2003

Drop in Mercury

The World Health Organization in June lowered by half the level of methylmercury it considers acceptable in seafood. Dr. Linda Greer, director of National Resources Defense Council (NRDC's) Public Health Program, helped coordinate a group of 50 international scientists who urged the WHO to adopt the stricter standard. Dr. Greer also called on the U.S. Food and Drug Administration to follow suit. Our government's standard for how much methylmercury we should be consuming with our tuna salad is less stringent than even the WHO's original guidelines.

From: On Earth, Fall 2003

Protecting a Caribbean Park: Colombia

Corales Del Rosario National Park, a 296,400-acre marine park located 27 miles off the coast of northwestern Colombia, is one of the nation's most popular tourist areas. Unfortunately, tourism, along with dynamite fishing and poaching, has proved detrimental to the park's coral reefs, mangrove complexes, coastal wetlands and marine species. The Nature Conservancy is partnering with the park and the Center for Protected Area Management and Training at Colorado State University to determine the carrying capacity of the park's most popular areas. This study will provide scientific and technical information that will be used by area stakeholders to develop a tourism zoning and management plan, and thereby create a model for conducting similar studies in other parks in the Colombian Caribbean.

A new tourism zoning and management plan will protect the diverse marine life of Corales del Rosario National Park.

From: Nature Conservancy, Fall 2003: 53(3)

A Recreational View:

IGFA Comments On NMFS' Proposed Swordfish Rules

The National Marine Fisheries Service (NMFS) solicited comments on proposed rules affecting commercial North and South Atlantic swordfish quotas. The new rules would increase allowed landings in 2003, and a greater increase in 2004 for North Atlantic swordfish. It would also increase the quota for South Atlantic swordfish, and since U.S. long liners aren't even landing the quota they already have, the intent is to transfer 25 metric tons of the U.S. quota to Canada. This is more than the entire estimated U.S. recreational landings of swordfish in 2002. NMFS recently put restrictions on recreational landings of swordfish to control the expansion of the recreational swordfish fishery.

Mike Leech, International Game Fish Association (IGFA) Ambassador-at-Large, sent the following comments regarding the proposed commercial regulations to Chris Rogers, head of the Highly Migratory Species Division of NMFS:

Dear Chris:

The International Game Fish Association (IGFA) is a non-profit, membership supported conservation and record keeping organization with members and representatives in approximately 120 countries and territories. We represent the interests of recreational anglers and would like to comment on the Proposed Rule for North and South Atlantic Swordfish.

IGFA is opposed to ANY increase in North Atlantic swordfish quota in 2003, and an even greater increase in 2004 and 2005. Although the most recent stock assessment indicated an improvement in swordfish stocks, swordfish are still overfished. Any increase in quota will not only slow down or possibly reverse the improvement, but will also lead to an increase in dead discards of juvenile swordfish, severely overfished marlin as well as severely depleted shark populations.

Increasing the swordfish quota goes directly against your stated goal of risk adverse management. The increase in quota is even harder to understand since the U.S. hasn't landed its quota since 1995.

The United States should use its best efforts to get ICCAT to reduce overall swordfish quotas and refuse to accept increases in quota for overfished stocks of any HMS.

IGFA is also opposed to the 80 metric ton dead discard allowance for North Atlantic swordfish over and above the substantial increase in overall quota. All dead discards should be subtracted from the existing overly generous quota.

The proposed transfer of 25 metric tons of U.S. swordfish quota to Canada is strictly a political move to keep from losing part of the U.S. quota that is not being caught anyway. IGFA is opposed the transfer, and suggests instead that the U.S. insist that uncaught quota remain with the country that controls it. If the quota is not landed the stocks will rebuild faster and bycatch will be reduced as an added benefit. We must change our thinking that every ton of quota must be landed.

IGFA is opposed to the increase in quota of South Atlantic swordfish to 100 metric tons through 2005 and a further increase to 120 MT in 2007. Once again this represents increased pressure on a stock we have very little data on. This increase could lead to overfishing and is not needed by U.S. longliners.

It is NMFS' long-standing policy of supporting increased quotas on fisheries that are either overfished or approaching an overfished condition that has led to the depleted condition of many of our fisheries. NMFS needs to change its policy of supporting and encouraging over exploitation if we are ever going to have healthy fisheries.

Thank you for your consideration.

Sincerely,
Michael Leech
Ambassador-at-Large International Game Fish Association

From: International Angler: 65(5), September-October 2003

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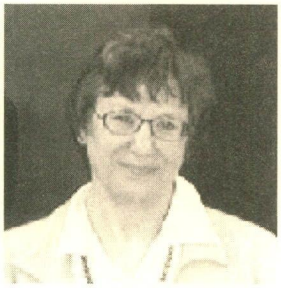
A Crucial Choice

Your Candidates for President-elect

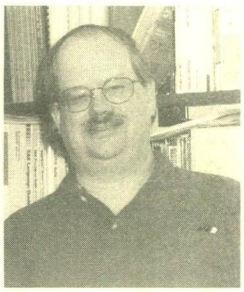
LINDA JONES



Linda Jones is currently the Deputy Science Director at the Northwest Fisheries Science Center in Seattle, Washington, of the National Marine Fisheries Service (NMFS). She has been with NMFS since 1979, starting as a project leader for an international research program and progressing to larger research programs and greater management responsibilities. Linda received her B.S. degree from San Diego State University (SDSU) in 1964. After finishing at SDSU, she worked for 5 years in the Neurobiology Department at University of California, San Diego (her hometown) conducting research on diverse topics, such as electric signals of South American electric fish and learning in octopus. She then returned to school, receiving a Ph.D in biological oceanography from Scripps Institution of Oceanography in 1977. After a year at the Marine Mammal Commission in Washington, D.C. as Assistant to the Scientific Director, Linda returned to the West Coast to lead a research program on the effects of bycatch in Japanese high-seas salmon driftnet fisheries. Ten years later, the highly controversial high-seas driftnet fisheries for squid and tuna by Japan, Taiwan and the Republic of Korea became the focus of her research. Linda worked with colleagues in NMFS and the Fish and Wildlife Service to build a research program to evaluate effects of these fisheries on all species caught by the driftnets. As a result of this work, Linda and her co-investigators received a Department of Commerce Silver Medal. She also received a commendation from Department of Commerce for implementing the high-seas observer program in the three driftnet fisheries with only a few months lead time. From 1979-1992, Linda was the science advisor on marine mammals and birds to the U.S. delegation of the International North Pacific Fish Commission and she was the U.S. lead for marine mammal and seabird research for the Commission. Because of her expertise in research on high-seas driftnet fisheries, Linda worked with the Department of State to negotiate the agreements for cooperative research and observer programs on high-seas driftnets. In 1989, Linda was selected to be the editor of the U.S.. Fishery Bulletin and NOAA Technical Reports for a three year term. This was a rewarding experience, due to the wide variety of fishery research published by these

(Cont. on page 2)

DOUGLAS S. VAUGHAN



Douglas Vaughan was born in Biddeford, ME, and raised in State College, PA, Wilmington, DE (twice), Cleveland, OH, and Wayne, NJ. He received his B.S. in Mathematics from the University of New Hampshire and M.A. in Mathematical Statistics from Pennsylvania State University. After working in Arlington, VA, as a Statistician for two years with the U.S. Environmental Protection Agency (Office of Water Quality), he returned to graduate school at the University of Rhode Island where he received his Ph.D. in Biological Oceanography (his dissertation was on population dynamics of Atlantic menhaden). Doug then went to work for Oak Ridge National Laboratory's Environmental Sciences Division where he was involved with the Hudson River Power Plant case and modeling the impact of power plant entrainment and impingement on striped bass populations. Since late 1982, he has been at the Beaufort Laboratory of the National Marine Fisheries Service. There, he has continued assessment modeling and work on both Atlantic and gulf menhaden, several sciaenids (weakfish and red drum), and snapper-grouper species (e.g., red porgy, black seabass). He has also been involved with analyzing bluefin tuna, swordfish, and Chesapeake Bay blue crabs. He continues to enjoy the challenge of sifting through often disparate data sets to tease out the status and trends of fish populations. In 2002, Doug was recognized for his scientific, technical and advisory contribution by the Atlantic States Marine Fisheries Commission with the Award of Excellence.

Doug joined the AIFRB in 1979, and was promoted to Fellow in 1987. He has served as the Carolina District's Vice-director from 1989-1994 and Director from 1994-1996. He has more recently served on the membership committee, and organized several symposia at the annual AFS meetings co-sponsored by AIFRB (most recently in Quebec City in 2003). Doug would like to encourage more active participation by the current AIFRB membership, continue efforts to make potential members more aware of the benefits of belonging to AIFRB, and especially to increase awareness of the goals and activities of AIFRB to agencies/managers who employ our members and potential members.

Remember to vote by March 31st!

The AIFRB is a 501(c)(3) tax-exempt nonprofit organization (EIN 61-6050711).

(Cont. from page 1, Linda Jones)
journals. In 1992, Linda became the Deputy Director at the NWFSC. She says her current duties have considerably broadened her knowledge of fisheries research and issues. This year she received the NOAA Administrators Award for her leadership in resolution of a West Coast groundfish issue. For relaxation, Linda enjoys rowing or any activity in, on or near the water.

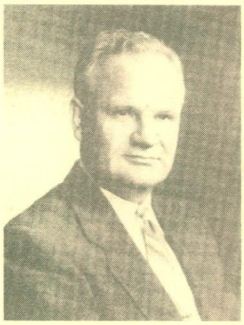
Linda has been a Fellow in AIFRB since 1993 and has served as the Chair for the Outstanding Achievement Award Committee for the past four years. With the excellent help of her committee members, she has worked to improve the guidelines and evaluation process for these important awards. For the future of the organization, Linda sees three areas she would like to focus on. The first is continuation of President Schaefer's efforts for promoting AIFRB to others. The second area is related to this, which is to find ways to bring the broad expertise of AIFRB members to focus on some of the critical fisheries issues globally and regionally. The third area is to build financial resources of AIFRB and provide a solid fiscal base for the organization of the future.

President Schaefer presents Outstanding Achievement Awards for 2003

Dr. Brian Rothschild (left) accepts plaque symbolizing the Institute's Outstanding Achievement Award (Individual) for 2003 from President Richard Schaefer during a gathering of friends and associates at the Century House Restaurant in New Bedford, Massachusetts on December 17, 2003.

On November 5, 2003, Dick Schaefer, President of the American Institute of Fisheries Research Biologists, presented the Northwest Fisheries Science Center's Ecotoxicology Program with an Outstanding Achievement Award (Group). This award, granted only 13 times in the Institute's 47 year history, recognized organizations that nurture excellence in fishery science and achieve excellence in research. The ceremony took place during the NOAA Fisheries-Sea Grant Association meeting at the Renaissance Madison Hotel in Seattle, WA. NOAA Fisheries and Northwest Fisheries Science Center representatives pictured from left to right; Dr. Mike Sissenwine, Director & Chief Science Advisor, Science Programs, NOAA Fisheries; Dr. Bill Hogarth, Assistant Administrator, NOAA Fisheries; Dr. Peggy Krahn, Program Manager, Environmental Conservation, Northwest Fisheries Science Center; Dr. John Stein, Salmon Science Coordinator, Northwest Fisheries Science Center; Dr. Tracy Collier (back row), Acting Division Director, Environmental Conservation, Northwest Fisheries Science Center; Usha Varanasi, Science & Research Director, Northwest Fisheries Science Center; and Dick Schaefer, President, American Institute of Fisheries Research Biologists).

Founding Member Kask: A brief biography



JOHN LAURENCE KASK
1906-1998

No.2 in an irregular series portraying the 26 founding members

John Laurence Kask, 1906-1998

Dr. John L. Kask was born, of Estonian immigrant parents, at Sylvan Lake, Alberta, Canada, in 1906. In his youth he worked as a commercial fisherman in British Columbia. He earned his B.A. degree at the University of British Columbia in 1928 and his Ph.D. degree at the University of Washington in 1936.

During his long professional career he held a large number of important jobs. His positions included the following: Assistant, Biological Board of Canada, 1928; Assistant Scientist, International Fisheries Commission (now the International Pacific Halibut Commission), 1929-1938; Associate Scientist and Assistant Director, International Pacific Salmon Fisheries Commission, 1939-1943; officer, U.S. Army, 1943-1945; Curator of Aquatic Biology, California Academy of Sciences, 1945-1948; Chief Biologist, FAO, 1948-1950; Chief Investigator and Assistant Director, Pacific Oceanic Fisheries Investigations (U.S. Fish and Wildlife Service, Hawaii), 1951; Chief Officer of Foreign Activity and Assistant Director of Fisheries, U.S. Fish and Wildlife Service, Washington, 1951-1953; Chairman and Science Administrator, Fisheries Research Board of Canada, 1953-1963; Director, Inter-American Tropical Tuna Commission (IATTC), 1963-1969. During 1947, while employed by the California Academy of Sciences, he served as a consultant for the U.S. Department of State where he helped rehabilitate the Japanese fisheries, which were in need of assistance after the Second World War. After his retirement, for about 10 years, he did consulting work on fisheries and biological oceanography for FAO.

Dr. Kask will perhaps be most remembered for his accomplishments as Chairman and Science Administrator for the Fisheries Research Board of Canada from 1953 to 1963. When he accepted that position there were about a dozen research stations

scattered around Canada, which operated more-or-less independently. He was instructed by the Minister of Fisheries to coordinate the work of these stations and make them more responsive to problems besetting the fishing industry. He succeeded in doing this, and also in making the Fisheries Research Board of Canada one of the finest fisheries research organizations in the world. His prophecies during that period about the dangers of overfishing and pollution proved to be correct.

Dr. Kask was Director of the IATTC from 1963 to 1969. He succeeded Dr. Milner B. Schaefer, who was Director from 1950 to 1963, and was followed by Dr. James Joseph, Director from1969 to mid-1999, and then by Dr. Robin L. Allen.

During Dr. Kask's tenure at the IATTC Mexico adhered to the Convention in 1964 and Canada in 1968, and catch quotas for yellowfin were first adopted in 1966. Some other highlights of his period as Director were the carrying out of oceanographic studies on the high seas and at the entrance of the Gulf of California (IATTC Bull., 14 (3) and 14 (4)), in the Panama Bight (IATTC Bull., 14 (2)), and in the Gulf of Guayaquil (Inst. Nac. Pesca, Bol. Cient. Téc., 4(1)).

Dr. Kask was an excellent speaker and writer, and he had the ability to handle people well. During his varied career he influenced dozens of people who eventually attained positions of great responsibility. All those who knew him respected and admired him greatly.

John Kask died in San Diego, CA on August 8, 1998.

Modified from: Annual Report of the Inter-American Tropical Tuna Commission, 1998. La Jolla, CA 2000.

A Member Not At Work:

An encounter with AIFRB Member William R. Nicholson

Excerpted from: Three Days to Thanksgiving written by T. Edward Nickens
Published in Shooting Sportsman XV (VI)
November-December, 2003

Nickens "old man" character is based on a meeting with Nicholson on the moss-draped White Oak River in coastal North Carolina.

But most of all I remember the old man. He was the only human we saw on the entire trip until we cruised far into the tidal zone, where a few houses huddled over the marsh on sparse high ground and fishermen cast for speckled trout along marsh humps. He waited for us to break camp on our second day on the river, floating in the quiet water just downstream of a big logjam. He was quiet and patient as Lee and I struggled with our boat and load, each of us out of the canoe and gingerly balancing atop a slick sunken log while we pulled the boat – *one, two, three, heave!* – laterally between us.

The old man was alone and happy to chat. He'd snuck upstream for five miles that morning and never fired a shot. I asked him about his canoe, a battered fiberglass boat painted tan, with simple board seats. "Made it myself," he said proudly. "More than 25 years ago." All he carried in it was a weathered trapper's basket and a pair of shotguns at the ready. He chuckled at our mountain of gear.

He was 78 years old, lean, like musclewood, with a deeply lined face and a quick smile. His routine was to paddle upstream and then motor back to his truck with a 2-hp outboard. "I've hunted this river for 40 years," he said, then looked down into the water for a brief moment, the silence widening like ripples in a pond. "But you get to be my age and you wonder how much longer you can do these sorts of crazy things."

"I wonder the same thing myself," I said, and he grinned. He knew a gift when he heard one.

"Why, you boys are just getting started." I remember how good that made me feel.

After we'd paddled out of earshot, Lee turned from the bow seat and said "I hope that's what I'm like when I'm his age." And I nodded in agreement. Then we paddled silently for a long, lovely stretch while we thought about the miles that had crossed under the khaki-colored hull of the old man's canoe, and the missed shots he'd cursed and laughed at, and the wonders he'd seen, and the wonders that remained for us around life's twists and turns if we would keep a firm hand on the paddle and an eye open for the random gifts that drift our way.

It was three days to Thanksgiving.

T. Edward Nickens writes regularly for magazines such as Smithsonian, National Geographic Adventure *and* National Wildlife.

Ed. Note: While Nicholson is aptly portrayed, Nickens' characterization of the canoe as battered is the grossest understatement. As a result of a severe disagreement between Nicholson, the laminating cloth, and the bonding resin during the at-home construction, the canoe sports a derma resembling an eczematous rhinoceros. Further, painted a color that would have been charitably called "fecal brindle" (paraphrased) by the earthy companions of my youth, the Nicholson canoe might be the ugliest ever to bear that name.

For the unfamiliar, Shooting Sportsman is a nationally distributed magazine of bird hunting and very fancy shotguns that might be characterized as the Playboy of shooting periodicals, in that both magazines portray equipment and practices most likely to be enjoyed vicariously.

-Excerpted material reprinted with permission of Shooting Sportsman magazine and of T. Edward Nickens.

Skud Responds to Recruitment Committee

Deemphasize NMFS (*aka NOAA Fisheries*) says past president

To BRIEFS Editor

I wish to commend President Dick Schaefer for appointing committees to address AIFRB's biggest problem – recruitment of members. This action and the committee's report in the recent issue of BRIEFS has brought the problem squarely before the membership in a way that I hope will stimulate action towards a strong recruiting effort.

In line with the committee's recommendations, I'd like to mention steps taken during my three-year presidency (1982, 83, 84 – an extra year at that time because of the unfortunate death of John Radovich). The Board of Control approved several actions to address the lack of new members. I think the effort that resulted in the greatest response was the distribution of a brochure to universities that had "fish-related" courses. As I recall, the brochure told about AIFRB and announced the changes in the requirements for eligibility as an Associate member. Members of the Board and officers of districts were also encouraged to increase their recruitment efforts.

The results of these actions are evident in the annual records of new members from 1979 to 2002 (only years available to me). In the three years (1982-1984), there were 185 recruits, averaging 62 per year. In the 21 other years, there were 648 new members, averaging 31 per year – arranged by three-year averages, the range was from 19 to 45. The two highest years of recruitment (70) were in 1983 and 1984 and over 60% of these were Associates.

Another suggestion that I think may improve recruitment is to select presidential candidates from academia – they have the closest contact with potential Associates. In the last 25 years, the office of President has been dominated by NMFS personnel – there have been 11 presidents, 7 of these from NMFS, 3 from academia and one state representative. And indeed, candidates recently selected for President-elect are from NMFS. I think this is very unhealthy for AIFRB and have often discussed this matter with other members. I've been told that the recent selection was made, in part, because of financial concerns, i.e. federal agencies are willing to support the travel and activities of AIFRB officers whereas other institutions may not offer such assistance. I understand the problem, but would rather limit travel than to select most presidents from one organization. Having presidents from academia (or other non-NMFS institutions) will not ensure better recruitment but would at least help to "spread the word" about AIFRB.

Another explanation I was given about the selection process was that many (not all ?) Fellows were unwilling to take on the job. In this regard, if any non-NMFS Fellows are willing to tackle the job, I hope they make their interest known to President Schaefer for future reference.

Bernard E. Skud, Oak Harbor, Washington, skud@whidbey.net

District Activities

Ault Speaks to New England District

The New England district met on November 7th at the Massachusetts Wildlife's Field Headquarters in Westborough, MA. Jerry Ault (Rosenstiel School of Marine and Atmospheric Science, University of Miami) gave a talk entitled 'Towards Sustainable Multispecies Fisheries in the Florida Coral Reef Ecosystem'. We discussed a wide range of issues and made some plans for future activities of the district.

First, members were and are solicited to help with recruitment to the District. Prospective members can contact Kevin Friedland or go directly to the website to learn how to join. Second, there was interest in having a spring meeting of the District. Of the meeting formats considered, the one people expressed the most interest in was a meeting that would take the form of a professional workshop on generalized additive models (GAM). Brian Rothschild suggested we have the meeting at either SMAST or Woods Hole. The workshop would highlight the research of an invited speaker, but in addition we will try to find someone willing to conduct a hands on session illustrating the application and interpretation of GAMs. The morning might be focused on the mechanics of doing a GAM analysis, whereas the afternoon could be a review of interpretation, assumptions and pitfalls of GAMs. An advanced graduate student may be chosen to conduct the training. Third, two copies of the commercial software @Risk were donated to the District by Palisade Corporation of New Field, New York. We plan to use these as incentives in a student recruitment effort.

Submitted by: Kevin Friedland, District Director

Northern California Elections

Elections in the Northern California District resulted in the following slate of officers:

Director: Diana Watters
Vice-Director: Dan Howard
Secretary-Treasurer: Michelle Barlowe

Submitted by: Lourdes Rugge

Losses

Don W. Kelley
Nevada City, CA

Paul E. Thompson
Alexandria, VA

Web Newsletters Recommended

For information on the Pelagic Fisheries Research Program of the University of Hawaii, you can go to www.soest.hawaii.edu, then scroll down to Teaching and Research>Pelagic Fisheries Research Program>Publications List>PFRP Newsletters. It is my opinion, these newsletters are well done, and contain a lot of interesting information.

Submitted by: William H. Bayliff, Inter-American Tropical Tuna Commission

Tuna Conference Scheduled

The 55th Tuna Conference is being planned for May 24-27, 2004, at the Lake Arrowhead Conference Center in California. The noted file contains the final announcement letter, registration form, abstract guidelines, information on student scholarships, and a request for updated contact data.

To Contact Paul Crone and Kevin Hill, Co-Chairs of the 55th Tuna Conference:

Southwest Fisheries Science Center
8604 La Jolla Shores Drive
La Jolla, CA 92037-1508 USA
Tel: 858-546-5637
Fax: 858-546-5653
Email: TunaConf2004@noaa.gov
Web: http://swfsc.nmfs.noaa.gov/tunaconf.html

Submitted by: Paul Crone and Kevin Hill, Co-Chairs, 55th Tuna Conference

Tagart Retires

Jack Tagart has recently retired from the Washington Department of Fish and Wildlife. His seat on the North Pacific Fishery Management Council will be taken by Farron Wallace.

Striped Bass I:

Striped bass suffer as overfishing eats away at their prey, menhaden

By Jim Price, President, Chesapeake Bay Ecological Foundation

The Atlantic Coast striped bass fishery reopened in 1990 after a five-year moratorium with new restrictions adopted by the Atlantic States Marine Fisheries Commission that established an annual quota and raised the striped bass minimum size limit in the Bay from 12 inches (roughly age-2), to 18 inches (roughly age-4). These measures altered the striped bass population's size structure and dramatically increased their forage demand in the Bay.

Since then, forage size Atlantic menhaden (ages 0-2), an essential part of the striped bass diet, have declined 74 percent and are no longer found throughout the Bay in sufficient numbers or adequate size to supply the forage demand of striped bass. Striped bass consumed larger prey and 300 percent more menhaden in the Bay before the menhaden purse seine (reduction) fishery began concentrating its efforts in Virginia's portion of the Bay in the mid-1960s.

From 1955 to 1965, the annual menhaden reduction fishery harvest from the Bay averaged 107 million pounds, or approximately 11 percent of the total coastal landings. During the 1990s, average landings by the menhaden reduction fishery increased to 379 million pounds or approximately 58 percent of the total coastal landings.

The Atlantic States Marine Fisheries Commission (ASMFC) is allowing age-2 menhaden to be overfished by the reduction fishery, which annually reduces their numbers to a level inadequate to serve the important ecological role they once played along the coast and in the Bay.

During the past decade, 87 percent of the reduction fishery harvest (as well as 48 percent of a separate, and smaller, menhaden bait fishery harvest) that came from the Chesapeake Bay, by numbers, were forage size menhaden (ages 0-2). Approximately 45 percent of the estimated total populations of ages 2-4 menhaden – which represent more than 99 percent of the spawning stock biomass – are removed annually by the purse seine fisheries.

In 1995, Kyle Hartman and Stephen Brandt published the results of a bioenergetics modeling study, conducted from 1990 to 1992, which concluded: "Total prey demand by age-3 striped bass exceeded supply by 80 percent, while demand by age-4 through age-6 striped bass was 101-103 percent higher than supply."

Forage size menhaden declined to an average of 544 billion fish during 1990-1992 and according to Hartman and Brandt's bioenergetics modeling data, they made up 65 percent of the Bay's ages 3-6 striped bass diet.

Anthony Overton in 2001 suggested that prey supply, availability and size were not able to support the production of older striped bass in the Bay. Forage size menhaden declined to an average of 233 billion fish from 1998 to 2001. Overton's bioenergetics modeling study reported that menhaden made up 21 percent of the Bay's ages 3-6 striped bass diet during 1998-2001.

Older striped bass consumption shifted from menhaden to bay anchovy, blue crab and alternative prey in an attempt to survive because of the reduced number of forage-size menhaden and overfishing by the reduction fishery which also contributed to the collapse of their forage base.

Bioenergetics modeling studies completed in 2001 indicate that by the time the Bay's striped bass reach age-6, they annually consume 38 percent less forage and weigh approximately 40 percent less than they did from 1955 to 1959.

Excerpted and abridged from: Bay Journal, December 2003

Striped Bass II:
MD's striped bass juvenile index 5th highest

Maryland's 2003 striped bass juvenile index was 25.8, the fifth highest mark in survey's 50-year history, the Maryland department of Natural Resources reported. The long-term average is 11.9. The survey historically has been a good predictor of future striped bass populations along the Atlantic Coast, as the Bay is its most important spawning area.

In this year's survey, the Upper Bay index was the highest documented since 1970. Reproduction in the Potomac and Choptank rivers was more than double their historic averages. Reproduction in the Nanticoke River was slightly above average.

Most anadromous fish, which are species that migrate from the ocean to fresh water to spawn, showed very poor reproduction during the drought conditions of 2002. This year, they benefited from the spring rains and mild temperatures, according to DNR biologists. Besides striped bass, yellow perch in the Upper Bay reproduced at near-record levels while white perch spawned highly successfully in all areas surveyed. American shad reproduction in the Potomac River and Upper Bay was high for the fourth consecutive year.

DNR biologists have monitored the success of striped bass in Maryland's portion of the Chesapeake since 1954. Biologists visit the same 22 sites monthly from July through September, collecting fish samples with two sweeps of a 100-foot beach seine net. The index is calculated as the average catch of young striped bass per sample.

From: Bay Journal, November 2003

Conch farm is a step toward restoring the population

Key West, Fla. (AP) – Hope grows in the six glowing tanks that make up Key West's new Conch Baby Farm. Tucked behind a seafood restaurant, conchs (queen conch) grown here aren't bound for tables but for Florida's waters, one of the few places in the world where conch stocks, while depleted, aren't gravely threatened.

Conch, the symbol of Key West and favorite fritter ingredient in Keys restaurants, hasn't been commercially harvested in Florida since the Ford administration. The opening of the Conch Baby Farm plays a modest but important role in efforts to replenish the state's stock, which has grown to some 40,000 conchs from less than half that a few years ago.

If the stocks are sufficiently replenished, conch could one day be harvested again in Florida. At the very least, more conchs mean healthier seabeds. And growing methods, if successful, could be imitated elsewhere in the Caribbean, where a new embargo against Keys suppliers is squeezing costs skyward and threatening this country's conch supply. A global marine trade watchdog, CITES, issued a warning this summer that Honduras, Dominican Republic and Haiti were dangerously overfishing their stocks. Fishermen from those countries were also likely poaching conch from other Caribbean countries, like Jamaica, home to the Pedro bank, one of the most vital queen conch stock areas in the region, the report said.

The National Oceanic & Atmospheric Administration backed an embargo, and Honduras and the Dominican

Republic agreed in October to stop exporting conch to the United States. Already, the ban is hurting the U.S. importers and threatens to devastate aspects of the Honduran and Dominican economies.

Conch is the second most valuable commercial species for some Caribbean countries, and the United States buys 80 percent of the region's conch. Honduras accounted for 27 percent of the supply, the Dominican Republic 7 percent, and 40 percent came from Jamaica, which suspended trading due to internal legal battles over fishing regulations.

From: Sun Journal, New Bern, NC – Tuesday, December 2, 2003

California Bans Krill Harvest in State and Federal Waters

On August 11, California Governor Gray Davis signed AB 1296, which prohibits the commercial harvest of krill in California state waters and in federal waters (from 3 to 200 miles offshore), as long as federal law does not regulate the taking of krill.

Krill is a small, shrimp-like crustacean preyed upon by many commercially important species including salmon, rockfish, squid, sardine, mackerel and flatfish. Some whales and seabirds also depend on krill as forage. The bill prohibits the taking or landing of krill of the genus *Thysanoessa* or the genus *Euphausia* for commercial purposes. The California bill amends a sunset clause that would have allowed the law to expire. This makes California the first state to enact a fishing ban on krill. However, limits on krill harvest are also included in the North Pacific Fishery Management Council's Groundfish Fishery Management Plan.

The bill was introduced by Assemblywoman Virginia Strom-Martin, and was aimed at "protecting the marine food web by stopping any krill fishery before it could be started in the state." The bill was requested by the Pacific Coast Federation of Fishermen's Associations and conservation groups after a krill fishery was established last year off British Columbia. To date, the Pacific Fishery Management Council has not considered prohibiting or limiting krill fishing off the U.S. West Coast. Proposals to limit krill harvesting have been discussed, but not formally proposed, by several California national marine sanctuaries.

From: Pacific Council News, September 2003

New Marine Park Established in Malaysia

Sulu-Sulawesi Protected Area Largest in Southeast Asia

The World Wildlife Fund (WWF) is celebrating the recent declaration of the 2.5-million acre Tun Mustapha Marine Park by the Malaysian government of Sabah. Once fully realized, Tun Mustapha will become the largest marine park in Southeast Asia.

Located off the coast of North Borneo, in the Sulu Sea, the park is an important conservation site for fish, turtles, and corals. It includes and surrounds Malaysia's largest island, Pulau Banggi, and is in a region with 50 large and small islands and a coastal population of more than 70,000, more than 4,000 of them fishermen.

Surrounded by parts of Malaysia, the Philippines, and Indonesia, the Sulu-Sulawesi ecoregion houses the richest variety of coral reef plant and animal life in the world. The two seas together contain about 450 species of coral. They also support sea turtle nesting beaches and some of the world's most diverse fish communities.

Unfortunately, in recent years overfishing and destructive fishing methods have done great harm to the region. Industrial fishing companies that harvest close to shore have taken a toll on productive and fragile waters. And fishermen using cyanide and dynamite have destroyed large sections of coral and depleted important fish populations.

"Thanks to the leadership of the former Chief Minister of Sabah, and our colleagues in the Sabah Parks, Universiti Malaysia Sabah, and the Sabah Fisheries, comprehensive planning and management of the Tun Mustapha Park will provide biodiversity and sustainable development benefits for present and future generations," said Robecca Jumin, WWF's Sulu-Sulawesi marine ecoregion Malaysia country coordinator.

From: Focus, November-December 2003

Did Californian Hook Million Dollar Bass?

Speculation is that whoever breaks the all-tackle record for largemouth bass could make a million dollars on endorsements. The current record has stood at 22 lb 4 oz since 1932 when George W. Perry was fishing on Montgomery Lake, Georgia and made his historic catch. Millions of bass anglers have been shooting for that record ever since.

Last August 24, Leaha Trew of Santa Rosa, California, went fishing with her son Javard on Spring Lake, California. They were fishing in Javard's 13-foot inflatable boat. Having no luck with plastic worms, Leaha switched to a stormwildeye 7" jerkbait on 8-lb line. It wasn't long before she hooked a big bass. It took her about 10 minutes of tugging before her son was able to net the fish.

Back on shore the fish was weighed, photographed, measured and released alive back into the lake. Neither Leaha nor her son realized it was a potential all-tackle record until later. The measurements were reported to be 29" overall length, 27-1/2" fork length and 25" girth. The bass pulled the Bogagrip scale down to slightly above the 22-1/2 lb reading.

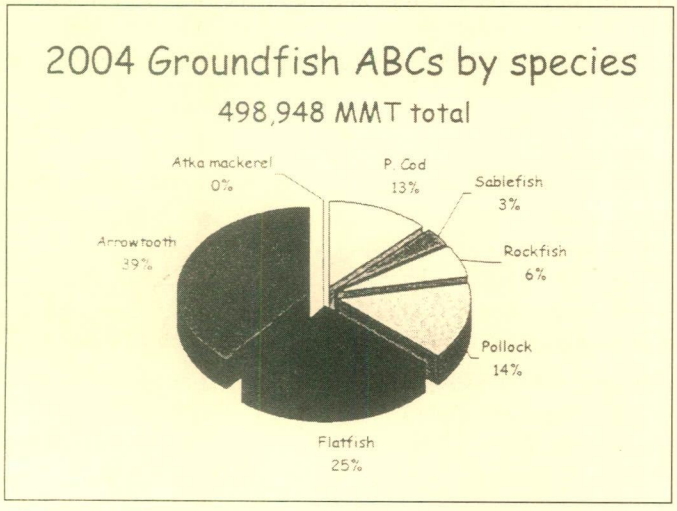
IGFA has received the record application and is investigating it as a potential record.

From: International Angler, 65(6) November-December 2003

Gulf of Alaska Groundfish

The North Pacific Fishery Management Council approved the 2003 Gulf of Alaska Stock Assessment and Fishery Evaluation (SAFE) report and recommended final catch specifications for the 2004 groundfish fisheries.

The sum of the recommended Acceptable Biological Catches (ABC) for 2004 is 498,948 mt, an increase of 19.8% from the 2003 ABC of 416,600 mt. This is principally due to an increase in pollock (+31%), Pacific cod (+19%), flathead sole (+25%) and arrowtooth flounder (+26%). The species group-specific ABCs that declined relative to 2003 are northern rockfish (-12%), other slope rockfish (-23%) and pelagic shelf rockfish (-19%). Other stocks such as thornyhead rockfish and Pacific ocean perch remained relatively the same. The abundances of pollock, Pacific cod and sablefish are below target stock size, while abundances of Pacific ocean perch, northern rockfish, light dusky rockfish, thornyheads, flathead sole and arrowtooth flounder are all above target stock size. None of the Gulf of Alaska stocks are overfished or approaching an overfished condition.



For most stocks the Council established Total Allowable Catches (TAC) equal to ABCs with some exceptions. These exceptions include Pacific cod, where the quota was reduced approximately 23.5% to account for the state waters fishery, and those fisheries where the bycatch of other target species is a concern, specifically for shallow water flatfish, flathead sole, arrowtooth flounder and other slope rockfish. For those fisheries, the TAC was set below the ABC.

From: North Pacific Fishery Management Council, December 2003

Chased out of Hawaii, Long-Line Fleet Meets Same Fate in California

Swordfishers are Decimating Turtles

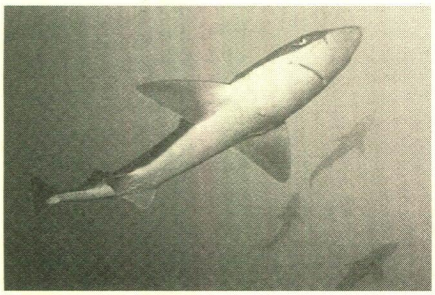
A few years ago, an Earthjustice lawsuit resulted in the closure of a tuna and swordfishery off Hawaii because the fishermen – who use baited hooks on lines as much as 20 miles long – were accidentally catching and killing protected sea turtles. The ships – around three dozen of them – weighed anchor and set up shop in southern California. There, NOAA Fisheries issued permits without investigating whether the long-lining activities would harm turtles.

But if it's illegal to kill turtles off Hawaii without demonstrating that the activity isn't threatening the survival of the various species of turtles, it ought to be illegal to do so off California as well, and such was the ruling by the Ninth Circuit Court of Appeals in August, in a case brought by Earthjustice attorney Deborah Sivas on behalf of the Turtle Island Restoration Network. At press time (mid October), the government was hinting that restrictions on the fishing boats would be forthcoming shortly and Sivas was contemplating seeking an emergency injunction.

From: In Brief, Winter 2004

Massachusetts Mismanagement Threatens Dogfish

In June, the Atlantic States Marine Fisheries Commission (ASMFC) voted to keep the limit per fishing trip for the spiny dogfish shark at a level more than ten times that recommended by scientists and dictated by rebuilding plans. This decision angered environmentalists who fear that continued targeted fishing will collapse the already damaged population.



Massachusetts has long championed the high fishing limits; at the ASMFC's February meeting, public officials used their own numbers to sway other states to raise catch limits. Massachusetts landed nearly 80 percent of the total U.S. Atlantic dogfish take in 2001.

"By ramping up the dogfish trip limit more than ten-fold, Massachusetts is leading an extermination of a vital component of the marine ecosystem," said Sonja Fordham, The Ocean Conservancy's shark conservation specialist.

Fishermen target female dogfish because they grow larger than the males; this has led to a 75 percent decline in mature females since 1989 and seven years of record low numbers of pups. Like most sharks, dogfish are susceptible to overfishing because they grow slowly, mature late, and produce few young. Female dogfish cannot reproduce until they are 12 years old and average only six pups after a two-year gestation period.

"Basing quota calculations on the economic needs of a few and passing them off as science is inexcusable, especially from a state agency entrusted to represent all its citizens," added Fordham.

From: Blueplanet, Fall 2003

Proposed Offshore Alabama Mariculture Facility of Concern to Gulf of Mexico Council

The Gulf Council, at its November meeting, reviewed the proposed relocation by Biotechnologies Inc. of a mariculture facility in the Gulf of Mexico off Alabama. The current authorized location of the facility is in 47-foot-deep waters, 4.7 nautical miles off Fort Morgan, Alabama. The proposed relocation is in 85-foot-deep waters, 7.5 nautical miles off Alabama point, Alabama. Biotechnologies Inc. proposes to annually produce 5 million pounds of cobia, red drum, red snapper, hybrid striped bass, grouper, mahi-mahi, greater amberjack, and red porgy. The Council is concerned that project relocation and fencing 27.5

acres of public waters will cause user conflicts between the operation and recreational and commercial fishermen that currently use the area. Also, the proposed relocation area is immediately adjacent to a safety fairway and the Council is concerned that this would create a hazard to navigation.

The benthic area in the vicinity of the proposed relocation serves as essential fish habitat (EFH) for brown, white, and pink shrimp, and juvenile red snapper. Increased nutrients from fish waste and excess feed could lead to areas of low dissolved oxygen under and outside the area, adversely affecting these species.

The Council is also concerned that the applicant has not applied for an exempted fishing permit (EFP) from the National Marine Fisheries Service (NMFS). An EFP is required for any mariculture facility raising and harvesting fish in pens in the EEZ since it would be considered fishing as defined in the MSFCMA and subject to applicable fishing regulations.

From: Gulf Fishery News, September-December 2003

Albatross and Eider

The North Pacific Fishery Management Council was informed that the US Fish & Wildlife Service has issued two new Biological Opinions (BiOp) concerning the effects of the Alaskan groundfish fisheries on the endangered short-tailed albatross and the threatened Steller's eider. Both a programmatic BiOp and a BiOp on the Council's TAC-setting process have been released by the USFWS to the public. The BiOps conclude that implementation of the groundfish fishery FMPs and the actions related to the TAC-setting process are not likely to jeopardize the continued existence of these species. An Incidental Take Statement (ITS) accompanies the TAC-setting BiOp. This ITS authorizes the incidental take of four short-tailed albatross over a two year period in the Alaskan hook and line groundfish fisheries, and an incidental take of two short-tailed albatross in the Alaskan trawl groundfish fisheries over the time period the BiOp remains in effect (about five years). These incidental take limits are in addition to the take limit established in 1998 for the Pacific halibut hook-and-line fishery off Alaska, two short-tailed albatrosses in a two year period. If the level of anticipated take is exceeded in any of these fisheries, NMFS must immediately reinstate a consultation with the USFWS to review the need for possible modification to the fishery. The ITS also includes specific Reasonable and Prudent Measures NMFS must take to minimize the potential for take of these species. Staff contact is AIFRB Fellow Bill Wilson.

From: North Pacific Fishery Management Council, October 2003

You hold the key to a healthy ocean

Many of the fish we love to eat are disappearing from the world's oceans. Commercial fishing has wiped out an estimated 90% of the large predatory fish such as swordfish, marlin, tuna and sharks worldwide. Does that mean we have to stop eating fish? No, but with a little help, consumers can help preserve the oceans.

When you shop for dinner, choose fish that are well-managed or farmed responsible. That way you'll be supporting sustainable practices. To help you decide what fish to buy, Environmental Defense has created this guide listing some of the best and worst seafood choices for the environment.

Best Choices
Abalone — U.S. farmed
Anchovies
Arctic char — farmed
Catfish — U.S. farmed
Caviar — farmed sturgeon and paddlefish eggs
Clams — butter, geoducks, hard, littlenecks, Manila
Crab — Dungeness, snow (from Canada), stone
Crawfish — U.S.
Halibut — from Alaska
Herring — Atlantic sea herring
Mackerel — Spanish, Atlantic
Mahi mahi/dolphinfish — U.S. from the Atlantic
Mussels — New Zealand green, farmed blue*
Oysters — Pacific, European, farmed Eastern*
Sablefish/black cod — from Alaska
Salmon — wild from Alaska
Sardines
Scallops — bay (except Atlantic calicos)
Shrimp — Northern from Newfoundland
Spot prawns
Striped bass/Atlantic rockfish
Sturgeon and paddlefish — farmed
Tilapia — U.S.
*Try to find mollusks that are grown suspended in the water. Mollusks raised on bay bottoms are often harvested by dredging, which damages bottom habitat.

Worst Choices
Caviar — wild sturgeon and paddlefish eggs
Chilean seabass/toothfish
Cod — Atlantic
Grouper
Halibut — Atlantic
Lingcod
Lobster — spiny or rock (imported, except from Australia)
Monkfish/goosefish
Orange roughy
Rock cod/bocaccio/Pacific rockfish
Salmon — farmed or Atlantic
Shark
Shrimp/prawns — imported
Skate
Snapper
Swordfish
Sturgeon and paddlefish — wild
Tilefish
Tuna — bluefin

From: Environmental Defense

Whales Prevail Over Navy in Federal Court

In a stunning victory for marine animals around the planet, a federal court has barred the U.S. Navy from deploying a new, high-intensity sonar system across most of the world's oceans. Two months after hearing arguments in the case, U.S. Magistrate Judge Elizabeth LaPorte agreed with the Natural Resources Defense Council (NRDC) that the Bush Administration violated multiple environmental laws when it green-lighted a hazardous system whose ear-splitting, long-range noise could threaten the very survival of endangered populations of whales, sea turtles and other marine species. The Low Frequency Active (LFA) sonar system would blast hundreds of thousands of square miles of ocean habitat with noise so intense it could maim, deafen and kill large whales.

"This is a banner day for the environment," said NRDC President John Adams. "Thanks to the unflagging support of our 550,000 Members, we've not only won a life-saving reprieve for millions of marine mammals, we've sent a message loud and clear to the White House that it is not above our nation's environmental laws." The dramatic setback for the Navy is the culmination of a long, uphill battle that began in 1995 when NRDC first exposed the existence and dangers of a classified LFA sonar system that emitted sound waves so intense they could destroy a whale's eardrums and cause its lungs to hemorrhage. At the time, Pentagon-watchers gave NRDC virtually no chance of blocking the system's deployment. In the intervening years, however, a series of whale strandings and mass die-offs – all coinciding with the Navy's use of mid-frequency sonar – has buttressed NRDC's case against the lethal dangers of high-intensity sonar systems.

Last October, Judge LaPorte issued a temporary ban on LFA sonar. Her new ruling orders the Navy to begin negotiating the terms of a permanent injunction with NRDC, including a plan for safely testing the sonar system in a limited area. That injunction will not prevent the Navy from using the system during war or "heightened threat conditions." "Judge LaPorte has wisely affirmed that the American people are entitled to both national security and environmental protection," said NRDC senior attorney Joel Reynolds. Unsatisfied with that balanced ruling, the Bush Administration is now attempting an end run around the courts by asking Congress to exempt the Department of Defense from the Marine Mammal Protection Act entirely. The House has already passed such an exemption but the Senate has refused. As we go to press, NRDC is fighting hard in Congress to keep any such exemption out of the final military spending bills.

From: Natures' Voice, November-December 2003

WWF Helps Bring Sturgeon Back to Tennessee River

'King of Fishes' Considered Threatened in Native Range

For the fourth year in a row, the World Wildlife Fund (WWF) worked with other scientists, government agencies, and local conservation groups to release thousands of baby lake sturgeon into the French Broad River, part of the Tennessee River system. The May event drew scores of participants, including school children from nearby Knoxville.

Tennessee considers lake sturgeon endangered. They are nearing extinction in much of their traditional range. Dams, pollution, and overfishing have combined to drastically reduce lake sturgeon populations. They are exceptionally vulnerable to overfishing because female sturgeon take 15 to 20 years or more to mature and only spawn every 4 to 6 years during their 50 to 100 year lifespan. The more heavily they are fished, the less of a chance the fish have to reach reproductive maturity.

WWF worked on the sturgeon release with the Tennesse Wildlife Resources Agency, Tennessee Valley Authority (TVA), Tennessee Aquarium, City of Knoxville, United States Geological Survey, Conservation Fisheries, and the U.S. Fish and Wildlife Service. The release was made possible by TVA's Reservoir Release Improvement Program, which ensures a minimum flow of water below TVA's dams and increases the amount of available oxygen in the water, both essential for aquatic life.

"This is a long-term commitment for us," said Wendy Smith, director of WWF's Southeast Rivers and Streams program based in Nashville, Tennessee. "We're going to keep releasing and monitoring these fish – and working to improve their habitat – until they reproduce and there is a viable, self-reproducing population back in the Tennessee River and its tributaries."

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. Cleanup of the French Broad River has been an environmental success story and bodes well for the success of the sturgeon reintroduction program.

Another threat to lake sturgeon was recently documented in a report by TRAFFIC, WWF's wildlife trade monitoring network. The report found an increase in both legal and illegal catch and trade of paddlefish and sturgeon in North America in recent years, coinciding with the dramatic decline of beluga sturgeon and other traditional caviar-producing fisheries around the Caspian Sea.

From: Focus, November-December 2003

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