



# *American Institute of Fishery Research Biologists*

*Promoting excellence in fishery science*

Website: [www.iattc.org/aifrb/](http://www.iattc.org/aifrb/)

## ... BRIEFS ...

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## President's Message

Greetings!

The annual meeting of the Board of Control has been scheduled to precede the AFS meeting in Lake Placid, NY. on Saturday-Sunday, September 9-10. Drs. Joe Rachlin and Barbara Warkentine are making arrangements for our meeting. Our thanks to them for all their efforts to make the meeting a success. Dr. Doug Vaughan is organizing two AIFRB-AFS symposia to be held at the AFS meetings this year: "Biology and Assessment of Protogynous Hermaphrodites" and "Abundance Estimation and Stock Assessment: Recent Quantitative Advances" (see pp 5-6). I hope you will all be there to support them and enjoy the presentations.

The W.F. Thompson Award committee, chaired by Dr. Bill Bayliff is currently soliciting nominations for best student paper for 2004. If you know of an outstanding student paper published that year, please contact Bill at [wbyliff@iattc.org](mailto:wbyliff@iattc.org) by April 15. Bill is also looking for a few good reviewers for these papers. If you are interested in being a reviewer, please contact Bill. This is one of the Institute's important awards for outstanding science so please take the time to help Bill and his committee. On behalf of all of AIFRB I want to thank the reviewers for a tremendous job in reviewing the 2003 papers. Thank you.

The Steering and Fund Raising Committees for the 50<sup>th</sup> Anniversary Symposium, "The Future of Fisheries Science and Management in North America", have continued to work on their plans. The Committees felt they needed a little extra time to organize the symposium so the symposium has been rescheduled for February 2007, still in Seattle. We have funding commitments from NOAA Fisheries and Sea Grant and are waiting to hear from DFO, Canada as well. The two fishery agencies have expressed strong interest in the symposium. General announcements of the symposium should go out in *Science*, *National Fisherman*, etc shortly.

An important part of our organization is the awards we give for outstanding fishery biology and conservation research. The committees for each award work hard to select the best research and scientists for recognition. But your help is needed! Please take the time to submit nominations for these awards. The deadlines for nominations are announced in BRIEFS and will be on our new web page; if you have questions about the selection criteria or process, please contact the award chairs or your District or Regional Directors, who are listed in the BRIEFS.

Linda

## Meet the Production Editor! John Merriner, M.O.L.\*

John V. Merriner retired 3 January 2006 after 23 years of service to the national Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) and 12 years of service to the Commonwealth of Virginia, Virginia Institute of Marine Science (VIMS). John began his career in fisheries science and management in 1970 at the VIMS and the School of Marine Science of the College of William and Mary. John moved on the Beaufort Laboratory of NOAA Fisheries in 1982.

Hailing from Winchester, VA, John began his higher education at Rutgers, the State University of New Jersey (New Brunswick) from which he took a BS in psychology in 1964. He entered North Carolina State University in 1964 and took MS and Ph.D. degrees in Zoology in 1967 and 1973. John's masters thesis dealt with the hatching success of induced centrarchid hybrids as a tool for assessing of alpha level systematic relations. John's Ph.D. dissertation was an exhaustive study of weakfish (*Cynoscion regalis*) life history with a pioneering management plan for the fisheries for this species in North Carolina.

At VIMS, John's work began in the Institute's Advisory Services function, where he worked in the anadromous fish program. At the time of a deep depression in striped bass standing stocks, anadromous fish work in Chesapeake Bay meant mainly the management of river herrings, the alosines. Concurrently, John worked in the Environmental Data Base Directory Project that

sought to organize and make available environmental data, including data on stiped bass abundance and habitat attributes. John became a Senior Marine Scientist and moved up into administration at VIMS; he served as Department Head of Ichthyology from 1975 to 1982, and eventually served as Acting Division Chief of the Fisheries Division until his departure in 1982.

While at VIMS, John served as an Assistant and then Associate Professor of Marine Science in the School of Marine Science at the College of William and Mary in Virginia. John's voracious reading appetite for all things fishy, along with an encyclopedic knowledge of fish and fisheries is reflected in the diversity of research problems attached by his graduate students. John guided nine MS students and five Ph.D. students through to degrees in his 12 years in the School of Marine Science. Never domineering, John was a quiet mentor who led by example, using his own workhorse ethic as a standard for his students. Thesis and dissertation topics included physiological energetics, functional morphology, trophodynamics, reproductive biology, population level toxicant affects, and comprehensive life-history studies with fishery management implications. Three of his Ph.D. students worked in the early life history of fishes including juvenile fishes.

In Federal service, John began as Acting Chief of the Fisheries Branch of the NOAA Fisheries, Southeast Fisheries Science Center's (SEFSC) Beaufort Laboratory; later John moved into the Branch Chief position. In this position, John had oversight of fisheries research programs in Atlantic and gulf menhaden, coastal pelagies, and reef fishes. John served this position until the transition of the then 100 year old Beaufort Laboratory from NMFS or it's predecessor organizations, to NOAA's National Ocean Service. With the transfer complete, John served as Advisor to the NOS Center Director for fisheries.

John Merriner is a 41 year member of the American Society of Ichthyologists and Herpetologists, a 38 year member of the American Fisheries Society (Marine Fisheries Section and Early Life History Section), and a 32 year member of the American Institute of Fisheries Research Biologists (AIFRB). John was a former member of the Southeast Estuarine Research Society and Sigma Xi Society.

A steadfast advocate of diversity in the workplace, John Merriner promoted education and advancement of minorities of women and minorities of fisheries professions. He received the NOAA Equal Employment Opportunity Person of the Year Award in 1999.

Fisheries scientists find their motivation and gratification in many places - a passion for angling, an association with the commercial fishing enterprise, or simply a fascination with chondrichthyans and osteichthyans as evolutionary successful aquatic vertebrates. John indulged in each of these. John Merriner's true calling, his vocation really, was in the translation and communication of the work of fisheries scientists to fisheries management. John published 23 senior authored, and 30 junior authored papers in peer-review journals, and one book chapter. He also was the author of numerous reports to Management Councils, Commissions and ad hoc committees. John served as a liaison for the Southeast Fisheries Science Center to the South Atlantic Fishery Management Council, Gulf of Mexico Fishery Management Council, the Caribbean Fishery Management Council, and the Atlantic States Marine Fisheries Commission. He contributed heavily to several management plans, most recently for red porgy. John received the NOAA Group Administrators Award in 2003 for significantly increasing public confidence in NOAA's assessments of population status for specific marine fisheries in the southeastern United States with the development and application of the Southeast Data Assessment Review process. Pursuant with the communication of fisheries science, John served as Scientific Editor of Fisheries Bulletin from 1998 to 2002 and as Production Editor of *Briefs*, the newsletter of AIFRB from 1999 to 2005.

Fisheries scientists and fisheries managers, as well as students, colleagues, and friends, will sorely miss John Merriner and his tireless efforts.

\* Man of Leisure

*Contributed by Jeff Govoni*

## **And Two More Retirements**

**Dora Reader**

still reachable at Great Lakes Science Center

**Charles A. Barans**

Now: 644 Clearview Drive  
Charleston, SC 29412

## **McGowan New District Director Northern California**

Michael McGowan can be reached at Maristics, Inc located at 1442-A Walnut Street, Ste. 1888, Berkeley, CA 94709.

# Founding Fellow: John B. Glude

John Glude was born in Silverdale, Washington, on August 2, 1918 and was graduated from Silverdale High School as class salutatorian in 1935 at the age of 16. He then went on to college at the University of Washington where he earned a BSc. in fisheries, with a minor in engineering, in 1939 and, subsequently, an MBA from the same institution.

His first job following graduation was with the Washington Department of Fisheries (WDF) which he left briefly during World War II to serve as naval architect draftsman at the Tacoma Naval Shipyard. Following the War, he returned to his position as a fishery biologist with the WDF. He was involved with research on the effects of pollution from pulp mills on oysters. This work formed the basis for regulatory actions and the preservation of the valuable oyster resources in the State of Washington. In addition, Mr. Glude was responsible for overseeing the import of seed oysters from Japan for use along the northwest US coastline while employed by the WDF.

In 1948, Mr. Glude left the WDF to accept a position at the Woods Hole Oceanographic Institution in Massachusetts to conduct research on the abundance and survival of soft shell clams along the entire US Atlantic coast. The research project was moved the following year to the site of a former federal fish hatchery in Boothbay Harbor, Maine. After being elevated to the position of laboratory director, he initiated further investigations into the artificial propagation of clams and other marine species. His research during those years on the soft shell clam was considered ground-breaking and is still referred to extensively today.

He later joined the US Fish and Wildlife Service and, subsequently, the National Marine Fisheries Service (NMFS), as its laboratory director in Annapolis, Maryland, where he supervised research over methods for farming shellfish with an emphasis on oysters. When that laboratory later was closed, Mr. Glude was reassigned to the NMFS headquarters in Washington, DC, to take charge of that agency's Shellfish Research Branch and its seven regional laboratories. While there, he developed the first National Aquaculture Plan, and led a team of experts to assist Ireland in improving its fisheries resources. His last agency assignment was as Assistant Regional Director of the NMFS's Northwest Regional Office in Seattle, Washington, a position he occupied until his retirement from federal service.

Following retirement, Mr. Glude formed his own consulting company, i.e., Glude Aquaculture Consultants. Among his many pursuits in that capacity, he served as an aquaculture consultant to the U.N. Food and Agriculture Organization.

In addition to his life-long membership in the AIFRB, Mr. Glude was also a life member of several other professional organizations. He served both as Vice President and President of the World Aquaculture Society, and for 2 years as President of the National Shellfisheries Association. During his career, he published more than 100 scientific papers on clam and oyster culture.

Mr. Glude was an avid outdoorsman; he particularly enjoyed fly fishing, duck hunting, kayaking and wind surfing. He passed away on October 19, 2004 in Annapolis, Maryland.

*Assembled by Dick Schaefer*

## Treasure Found: Personal Code of Ethics

by W.F. Thompson

Presented: Pacific Fishery Biologists Meeting

Lake Wilderness March 23, 1956

A code of ethics must be based upon certain beliefs. May I state them, frankly admitting that I no more than any man have ruled my life in complete conformity to them.

I believe that I earn my place in this world by the service I can give, not by what I can take from others. I am a part of humanity. Its health and prosperity are my health and prosperity. I help to build today what my children and my students will use and depend upon tomorrow. I am part of a living, evolving, functional organism, and as that part I must plan my life.

I believe that my fellow man must serve as I do, and be served as I am. I owe him his due, his place in the sun, for he cannot help me unless I help him.

Because of these beliefs, and because I have chosen to serve as a scientist, I must play my part in making my science effective. I must further its development; must contribute to its store of knowledge; must take part in its activities.

My intellectual lineage is that of free men. My inheritance is from Darwin, Agassiz, and Jordan and from all those great men who have done things and in turn have left them for me to build on. My debt is to them, and I must keep alive the flame they have kindled. I owe them homage. I must serve no mean politician but rather the great ones in my science. I am a servant of the temple, not the priest; of the principle, not the man.

Because of these beliefs, and because I am one of a scientific group with a purpose in the world, the success of my fellows in their service is vital to me. I must help them to learn, to do, and to play their part. I must help them by recognizing their accomplishments and by giving them their chances. I must not only make my own contributions with my own research, but I must be a teacher for those who can use my help, always maintaining high standards.

Because of these beliefs and because of these duties, I must keep my self-respect and that of my fellows. I must act each day in the consciousness of my responsibilities and my privileges as a scientist. I must not consciously permit myself to be used for unworthy purposes. I must not use my place or have others use it to defraud others, or to render futile the processes of the society upon which we all depend.

Since my value, my worth to me fellows as a scientist, depends upon the contributions to knowledge that I make, and upon their acceptance for these, contributions must be real. They must not be pretense. What I offer must come from me. Since my contributions will be accepted and used only if I am respected and since my opportunities for service depend upon this, I must maintain my standing and my integrity. No false claims, no erroneous conclusions, no false theory, no stolen ideas must come from me.

That my fellow men can recognize me for what I am, so that they can see the metal in the instrument upon which they depend, I must not put forth false claims of merit. I must let others praise me if I am worthy. I must be modest in bearing, yet not avoid responsibility nor lack faith in myself or my abilities.

By reason of all these things, what I contribute to my science must be worthy. To make it worthy, it must be complete as a contribution and reach those who can use it. I must hold this completeness as a day-by-day objective. My aim must be the project for which I hold responsibility, not the money nor the position. I owe attainment of the objective as payment for the time and money invested in me. I must not labor day-by-day and leave my labor fruitless. In these things, I carry my own responsibilities; pay my own debts to the world, I am a scientist; not a serf.

W.F. Thompson

*The ideas above are apparently the basis of our Institute's principles of professional conduct. The original document, signed by Thompson, has been forwarded to archivist Kate Myers. Many thanks to Ted Merrell for preserving and presenting this historic document to me. It was an honor to handle it. Ed.*

## **Fiftieth Anniversary Symposium: Status Jan 10, 2006**

**By Linda Jones**

I want to bring you up to date on what has been happening on the 50th Anniversary Symposium and to invite comments. The Steering Committee and the co-conveners are developing the program and list of speakers. Invitations to specific scientists and general announcements of the symposium in Science, National Fishermen, etc., will soon go out. It will be described as an AIFRB 50th Anniversary Symposium in all the announcements so this will be our symposium alone.

Fund Raising: Vidar Weststad has agreed to chair the Fund Raising Committee which includes Tom Keegan and Bernard Megrey. NMFS has committed to providing 25K, perhaps more. We have applied to Department of Fisheries and Oceans and Dick Beamish believes they will provide some funds as will Sea Grant. We also have some commitments from industry and Washington. So we are making progress on the funding.

Symposium status: As the discussions of the co-conveners and Steering Committee have continued, the focus of the workshop has evolved and the title now is "The Future of Fisheries Science and Management in North America". The description of the symposium is: The symposium will examine the current state of fishery science in North America, in particular, the research opportunities and challenges for the next decade. These will be considered in the context of science in support of fishery management decision-making, policy and technology. Outcomes from the symposium will influence emerging issues and critical scientific questions relevant to fisheries and management in North American and worldwide. This is not exactly the symposium originally proposed, but NMFS and DFO are very interested in this symposium topic and NMFS at least would probably contribute additional funds to support it.

We are seeking good academic participation. One area that will be important is what academic curricula are important for the new ecosystem-approach to fishery management.

The disappointing news is that neither the co-conveners or the Funding Committee feel that they can meet the October 2006 time frame and are proposing February 2007 instead. I am disappointed by the delay, but think that we need to have a great symposium first and foremost. One benefit of waiting is that NMFS likely could provide some support for publication since it would be in a different fiscal year.

Symposium Co-conveners: Brian Rothschild and Dick Beamish; Steering Committee: Rick Methot, Bill Fox, Andy Rosenberg, John Boreman, Fred Serchuck, Steve Murawski

# District News: Northern California Vibrant! (anyone else out there?)

The Northern California AIFRB Banquet was held Saturday, January 28th at 5 pm at The Beach Chalet in San Francisco. Cocktails (The Beach Chalet has an extensive list of “in-house” brews) and sunset viewing (fog-dependent) at 5 pm, were followed by dinner at 6 pm. The dinner consisted of 3 courses (a starter, an entree and dessert). There were three entrees (fish, beef/pork, or vegetarian) which with wine, tax (go Arnie! ed.), gratuity and a little for the District cost \$35.

*Submitted by Michele Barlow*

*Briefs welcomes (cherishes, covets, pleads for, etc.) district news. Send anything in any form - stone tablets, papyrus scrolls, notes in bottles, emails. I'm really easy! Ed.*

## AIFRB Smyposia at AFS 2006 Lake Placid

### Proposal for Symposium at AFS 2006 Annual Meeting

#### **I. TITLE: Abundance Estimation and Stock Assessment: Recent Quantitative Advances**

**ORGANIZERS:** John M. Hoenig, Douglas S. Vaughan, Erik H. Williams

**DESCRIPTION:** This symposium will present recent advancements in quantitative methods for the understanding and management of fisheries. The papers presented will cover a wide area of applications related to the assessment of fish populations, both marine and freshwater. Speakers have been chosen from different agencies and universities from a wide geographic area. It is hoped that this broad focus will allow meeting attendees to be exposed to a wide range of perspectives. Quantitative methods symposia similar to this have been very well attended in the past, including those developed by the current organizers [Halifax (1994), Hartford (1998), Charlotte (1999), Phoenix (2001), Quebec City (2003), and most recently Madison (2004)]. Quantitative methodologies continue to advance rapidly, so a symposium at Lake Placid seems highly appropriate. Topics of recent interest will continue to be emphasized, including life history estimation, fisheries surveys, tagging, habitat and spatial statistics, assessments with limited data, biological reference points and control rules, multi-species modeling, and the interface between science and management.

**SPEAKERS AND TITLES:** Featured Speaker - To be announced; Burdick, S., J.E. Hightower, J. Buckel, K.H. Pollock, and L. Paramore: “Selectivity and Survival of North Carolina Red Drum Using 20 Years of Mark and Recapture Data.”; Christman, Mary, Jon Volstad, and Danny Lewis: “Spatially-Explicit Modeling of Population Dynamics of *Crassostrea virginica* in the Chesapeake Bay”; Clark, William: “Alarums and excursions: a biography of the Pacific halibut assessment.”; Gedamke, Todd, J.M. Hoenig, W. duPaul, and J. Musick: “New approaches to assessing skate populations: what we infer from a trawl survey.”; Hart, Dvora: “When do closures increase fishery yields?”; Hasbrouck, James: “Meta-analysis of marine survival of coho salmon in Alaska.”; Hoenig, J.M., D. Gauthier and W. Vogelbein: “Impact of mycobacteriosis on striped bass, as inferred from tagging data”; Ianelli, James: “Evaluating single-species, unit-stock assessment models under spatially dynamic conditions.”; Ihde, Thomas and J.M. Hoenig: “Performance of index-removal methods for estimating population size and exploitation rate.”; Kahn, D.M.: “Improving precision of parameter estimates via an iterative process for estimating and inputting year-specific M estimates in a catch-survey model of the Delaware Bay blue crab stock.”; Linton, B.C. and J.R. Bence: “Evaluating methods for estimating process and observation error in statistical catch-at-age analysis”; Maki, Kristin, J. M. Hoenig, D. M. Heisey, and J. E. Olney: “Comparing historical catch rates of American shad in multifilament and monofilament nets: A step towards setting restoration targets for Virginia stocks.”; Pollock, Ken H., J. Yoshizaki and C. Jones: “The use of population level natural tags based on otolith microchemistry: Estimation of demographic parameters.”; Rose, Ken: “Stock assessment of data-poor, unaged populations: A case study of the small pelagic fisheries.”; Schmidt, Dana: “Comparison of catch/age modeling with robust age structured mark/recapture analysis on some riverine fish stocks in the upper Columbia River”; Sharov, Alexei: “Atlantic striped bass assessment using catch at age and mark and recapture information”; Thorne, Richard E.: “Did the Exxon Valdez Oil Spill Change the Natural Mortality of Herring in Prince William Sound and Invalidate the Age-Structured Model?”; Yoshizaki, Jun and K. H. Pollock: “The

use of individual natural tags: models for estimation of population demographic parameters”; Wilberg, Michael: “Estimation of noncompliance with recreational bag limits for yellow perch in southern Lake Michigan”.

**CO-SPONSORS:** Marine Fisheries Section (AFS), Estuaries Section (AFS) and American Institute of Fisheries Research Biologists (AIFRB).

## **II. TITLE: Biology and Assessment of Protogynous Hermaphrodites**

**ORGANIZERS:** Elizabeth N. Brooks, Douglas S. Vaughan, Kyle W. Shertzer

**DESCRIPTION:** Protogynous hermaphrodites start life as female and later switch to male. This life history strategy provides unique challenges to fishery management, as the potential is for males to be more heavily exploited. This symposium will address basic biology, stock assessment, and management of protogynous hermaphrodites.

**SPEAKERS AND TITLES:** Mark Collins & Marcel Reichert: Age, growth, and reproductive biology of gag (*Mycteroperca microlepis*) from the southeastern United States; Chris Koenig & Felicia Coleman: Reproductive ecology of groupers of the southeastern US; Scott Heppell: Modeling efforts on management strategies for protogynous groupers. OR behavior/life history of protogynous groupers and how fishing aggregations may disrupt it; Doug Devries: The reproductive ecology of red porgy in the Gulf of Mexico and its implications for management; Roy A. Pemberton Jr: Reproduction and Demographics of Black Sea Bass, a Protogynous Hermaphrodite; Pat Harris: The effects of fishing and fishery regulations on life history characteristics of *Pagrus pagrus* (Sparidae) in Atlantic waters off the southeastern United States; Gary Fitzhugh: Evidence for skipped (asynchronous) annual reproduction among protogynous grouper species; Elizabeth Brooks, Kyle Shertzer and Todd Gedamke: An Evaluation of measures of spawning stock biomass for protogynous hermaphrodites; Richard S. McBride, Angela S. Collins, and Adam K. Richardson. Geographic and sex-specific patterns of age, size, and mortality for a hermaphroditic fish, hogfish (Labridae: *Lachnolaimus maximus*); Richard S. McBride, Lewis H. Bullock, Paul E. Thurman, and Michael R. Johnson. Sexual and reproductive development of a protogynous hermaphrodite, hogfish (Labridae: *Lachnolaimus maximus*).

**CO- SPONSORS:** Marine Fisheries Section (AFS) and American Institute of Fisheries Research Biologist (AIFRB).

# **Two Important Meetings**

*60th Annual Conference of the Southeastern Association of Fish and Wildlife Agencies  
Marriott Waterside Hotel in Norfolk, Virginia, November 5-8, 2006*

## **“Wildlife Management in the Next New World”**

### **Call for Papers - Manuscripts and abstracts are being requested for the 60th Annual SEAFWA Conference**

Fisheries and Wildlife Sessions: Fisheries and Wildlife manuscripts and abstracts will be peer-reviewed and, if accepted, will be published in the Proceedings of the Southeastern Association of Fish and Wildlife Agencies. Guidelines for submissions can be found at [SEAFWA2006.org](http://SEAFWA2006.org)

Contributors' participation in the Fisheries and Wildlife Technical Sessions will include:

- Oral presentation of peer-reviewed manuscripts, *deadline for manuscripts is April 28, 2006*
- Oral presentation of peer-reviewed abstracts (limited space available on the program), *deadline for abstracts is April 28, 2006*
- Posters, *deadline for posters is April 28, 2006*

More information at [SEAFWA2006.org](http://SEAFWA2006.org)

Hosted by the Virginia Department of Game and Inland Fisheries

# **Large Pelagic Fishes in the Caribbean and the Gulf of Mexico: Current Status and Integrated Management**

A one day symposium dedicated to scientific presentations and discussions of large pelagic fishes and fisheries will be convened as part of the Gulf and Caribbean Fisheries Institute annual conference November 5-10, 2006 in Belize City, Belize. The purpose of the symposium is to share current research on the biology and management of large pelagic fishes in the Caribbean Sea and Gulf of Mexico region and to develop a list of recommendations for future research and management of large pelagic fishes related to critical issues of regional concern. Species to be included in the symposium are billfish (marlins, sailfish and swordfish), tunas, large pelagic sharks, dolphin, wahoo and ocean sunfishes.

The symposium will consist of two keynote speakers, three invited theme speakers, contributed oral and poster presentations and an open panel discussion. The Symposium Themes are 1) Fisheries Ecology, 2) Movements and Population Structure, and 3) Management: Strategies, Problems and Solutions. A special symposium issue of Gulf and Caribbean Research will be published, and oral and poster presenters are encouraged to submit manuscripts for peer review in the issue.

Complete and updated information on the Symposium, including abstract submission information, can be found at the Gulf and Caribbean Fisheries Institute website ([www.gcfi.org](http://www.gcfi.org)). The initial call for papers was March 15, and the abstract deadline will be July 31, 2006.

The Symposium Organizing Committee consists of Jim Franks (University of Southern Mississippi, USA), Nancy Brown-Peterson (University of Southern Mississippi, USA), Mark S. Peterson (University of Southern Mississippi, USA), Pete Sheridan (National Marine Fisheries Service, Panama City, USA), Brian Luckhurst (Department of Environmental Protection, Bermuda), Hazel Oxenford (University of the West Indies, Barbados) and Patrick McConney (University of the West Indies, Barbados).

## **Lower 48 Pacific Salmon The Future? Two Views**

### **Advocates float radical ideas to save salmon**

By Winston Ross

From The Register-Guard, Thursday, January 26, 2006

Portland - Give up on streams that no longer can sustain wild salmon. Throw open the fish hatchery gates. Create a Wild Salmon National Park. Build new waterways instead of tearing down dams.

These are just a few of the conflicting, provocative and radical suggestions from a group of 33 scientists, salmon policy analysts and advocates who have been studying the future of wild salmon in the Pacific Northwest since 2002. The volunteer participants of a project called Salmon 2100 unveiled two dozen recommendations Wednesday that they said offer groundbreaking but pragmatic ideas for keeping salmon at sustainable levels through the year 2100. The fish have been reduced to one-tenth of historic levels, despite recent gains. The ideas are bold because the threats to wild salmon are so profound that none of the current efforts will sustain the fish for another century, the group concluded.

Four key factors will reduce salmon to a mere remnant of their historic numbers, if not drive the species toward extinction, the group said. Those threats are: 1) A likely quadrupling of population in the Northwest, to an estimated 65 million by 2100, 2) Increased scarcity and competition for water, 3) A system of commerce that favors profits over fish protection, 4) Individual lifestyle choices that ignore impacts to species such as salmon.

"We can't predict how these things are going to play out," said Bob Lackey, a senior fisheries biologist with the U.S. Environmental Protection Agency and co-leader of the project. "But they're not likely to change in ways that will be favorable to salmon. Wild salmon, by the end of the century, will be reduced to remnant runs in the lower 48 states. There will be runs along the coast, in my view, but practically speaking, in most places, they'll be gone." That's why Salmon 2100's members took a novel approach: accept that current efforts won't overcome salmon's looming obstacles. Then find a way to sustain the species anyway.

Some of the project's "policy prescriptions," to be published in a book later this year, actually conflict with each other, which is fine, Lackey said. The idea isn't to look for consensus on how to save wild salmon, but to propose a number of politically and socially palatable ideas that actually could work. Among the proposals:

- Create sanctuaries, even a Wild Salmon National Park, in areas that have the best likelihood of keeping wild salmon in

good shape. Abandon other runs that won't realistically survive the century. Some argue for shifting effort to high-elevation areas that will suffer fewer impacts from climate change. Others advocate for refuges on the coast.

"I'm not saying give up on the watershed," said Jim Martin, former salmon adviser to Oregon Gov. John Kitzhaber and chief of fisheries with the state Department of Fish and Wildlife. "I'm saying don't invest in places that are in direct trajectory of the growth juggernaut, and are going to get nailed by a changing climate. Invest in the areas where we still have some snowpack. ... We're going to lose salmon in these low-elevation streams; they won't be able to withstand the water temperatures." Martin also suggested offering incentives to local governments to control growth.

- Allow hatchery fish, traditionally excluded from interbreeding with wild stocks, to be released into the general population. Conservationists have said such a move would introduce disease into the wild salmon population and weaken the gene pool. But it certainly would bolster salmon runs, proponents say.
- Build new streams. "You can build streams on old floodplains, old farmland, behind railroad dikes, highway dikes," said Ernest Brannon, distinguished research professor of the Center for Salmonid and Freshwater Species at the University of Idaho. Brannon estimated such work could be done for a cost of \$50,000 per mile.
- Convince landowners that protecting salmon can benefit them economically, and the general public to reduce its footprint on the landscape. The choices people make about where to live what to eat and what to buy affect the environment salmon depend on for survival, some researchers said.

"The way to alter lifestyles is to change our ethical relationship with the land," said Jack Williams, chief scientist with Trout Unlimited and an adjunct professor at Southern Oregon University. "Live in a place that reduces our need to drive; think twice about purchasing a second vehicle; buy a low-emissions, low-polluting model; reduce travel; walk; eat less meat; buy organic foods from local growers; when you move, move to a smaller house or apartment; use energy-efficient appliances."

How likely such ideas are to come to fruition remains unclear. At the last minute, the chairman of the Bush administration's Council on Environmental Policy, James Connaughton, asked to be added to Wednesday's agenda, to respond to the project's ideas. He said his attitude about the fate of wild salmon was more "Pollyanna" than doom and gloom. "We have to reflect that we are making progress, albeit incrementally," Connaughton said. "All the runs have increased. It's important to know that runs can increase." Connaughton also brought two new policy initiatives from the administration - a review of fishing practices and U.S. hatcheries, which could lead to tighter fishing restrictions and fewer hatcheries down the road. But neither approach reflects the Salmon 2100 project's key premise - that minor tweaks to current approaches won't sustain salmon long-term, Lackey said after Connaughton's speech.

Still, the optimism level among the conference's attendees was high on Wednesday. Keynote speaker William Ruckelshaus, who served as EPA chief under Presidents Nixon and Reagan, encouraged participants to believe that they can make a difference. "Salmon recovery is right in the middle of an American paradox," said Ruckelshaus, speaking of the clash between values of people who want to protect fish and behaviors that harm them. "You've been told to help salmon recovery by Congress and the executive branch," he said. "When you're faced with seemingly insurmountable or intractable problems, you can either stew about them, convince yourselves that they can't be solved, or you can break them down into practical and solvable problems."

*Submitted by and thanks to: Bob Lackey*

## **Bush Policy on Salmon Shifts**

### **Administration wants to reduce harvests, shut some hatcheries**

By Jeff Barnard, Associated Press writer

Portland - The Bush administration wants to put salmon restoration on a new course by reducing harvests of threatened and endangered fish by U.S. and Canadian fishermen and shutting down hatcheries that are harming wild spawners. James Connaughton, chairman of the White House Council on Environmental Quality, announced the new policy Wednesday at a meeting of salmon scientists, many of whom have concluded that only remnant runs of wild Pacific salmon will survive unless people make major changes in the way they live. Connaughton said extensive work has been done to restore freshwater habitat and make hydroelectric dams less lethal, and it is time to focus on reducing the harm caused by salmon harvests and hatcheries. "We cannot improperly hatch and we cannot carelessly catch our way back to salmon recovery," Connaughton told the scientists. "I tend toward optimism. The fact that 350 people are in this room and 150 more wanted to be here is the best condition for success."

Connaughton, the top environmental adviser to President Bush, outlined the new policy at the Salmon 2100 Conference, where 350 scientists from government agencies, universities, Indian tribes and conservation groups gathered to consider new ways to prevent the extinction of wild salmon over the coming century. The Salmon 2100 report, produced by a group of 33 scientists and policy analysts, concludes that too many people using too much energy and natural resources make it inevitable that wild Pacific salmon will be reduced to remnant runs without a major overhaul in the way people live.

Current salmon runs are 5 percent of historical levels, said Robert Lackey, a fisheries scientist for the Environmental

Protection Agency and chairman of the conference. Wild runs disappeared from Europe, most of Asia and the Northeast as populations grew. Human population in the Northwest and British Columbia is likely to increase from 15 million to 65 million over the next century. Lackey said Connaughton's proposals did not address the four primary drivers of wild salmon declines - a market economy that gives salmon short shrift, rapid population growth, increasing demand for clean water, and human lifestyle choices that ignore the needs of fish.

Glen Spain of the Pacific Coast Federation of Fishermen's Associations, which represents California commercial fishermen, said sport, commercial and tribal fishing account for only 5 percent of human-caused salmon deaths in the Columbia Basin, while hydroelectric dams account for 80 percent. "The fundamental issue is what gives the biggest bang for the buck in salmon restoration," Spain said. "What the administration is doing is pointing the finger at the victims of salmon declines - that is, the fishing-dependent communities whose economy is being devastated. "Hatcheries were intended to replace habitat behind dams," Spain added. "If they close all the hatcheries, we want some dams down, too."

Jack Williams, the chief scientist for Trout Unlimited and former fisheries chief for the Bureau of Land Management, said Connaughton's proposals were "clearly inadequate." Just as NOAA Fisheries will be examining individual hatcheries, the agency should examine individual dams to see if their economic benefits outweigh the harm they cause salmon, Williams said. Connaughton said the administration has a strong commitment to the hydroelectric dams, which contribute to the economic vitality of the region. He added the Bush administration focus on harvest and hatcheries grew out of a commitment to end overfishing in all the nation's oceans and efforts to renew the basic fisheries law of the land, the Magnuson-Stevens Fisheries Conservation Act. He said it was incongruous to allow people to eat endangered salmon when shrimp fisheries in the Gulf of Mexico were shut down against the possibility of killing sea turtles.

The administration would work to reduce harvests of wild salmon through the Pacific Fishery Management Council, which sets West Coast ocean salmon fishing seasons; 2008 negotiations with Canada on a treaty to regulate fishing on U.S. fish in Canadian waters; and Oregon and Washington's joint regulation of the Columbia River, he said. "Our goal is to minimize, and where possible eliminate, the harvest of naturally spawning fish that provide the foundation for recovery," Connaughton said in an interview. "I need to underline a strong commitment to the defense of tribal trust and treaty rights to harvest fish in all the usual and accustomed places." Connaughton said he did not want to predict how far harvest limits might be taken.

Scientists have long blamed hatcheries for producing salmon that dilute the gene pool, spread disease, and compete for food and habitat, while being less fit to survive in the wild. Connaughton said NOAA Fisheries would be reviewing the 180 hatcheries in the Columbia Basin over the next 12 months, shutting down those that harm salmon and helping others that contribute to recovery.

*Submitted by: Bob Lackey*

# **International Symposium on Deep-Sea Corals**

## **Research and Management of Coral Areas in South Atlantic Region Included**

"The widespread existence of large, complex coral reef ecosystems in the colder and deeper parts of the world's oceans has been one of the most remarkable discoveries in marine science in the last decade," stated Dr. Stefan Hain, with the United Nations Environmental Program's Coral Reef Unit, in Cambridge, United Kingdom. "Emerging results show magnificent reefs surprisingly similar to their warm-water counterparts, but also evidence that these cold-water reefs are impacted and threatened by increased human activities, particularly bottom fisheries, on continental shelves and seamounts."

Sharing a common interest in the study and protection of these coral area, over 250 deep-sea coral researchers and managers from 30 different countries gathered at the University of Miami's Rosenstiel School of Marine and Atmospheric Science in early December to participate in the 3rd Annual Symposium on Deep-Sea Corals. Scientists presented papers on topics ranging from distribution of hard corals off of India and the geology of coral mounds found in the cold waters offshore of Ireland and Denmark, to deep-sea coral ageing in New Zealand and growth monitoring in the Sea of Japan.

The broad range of papers presented during the symposium emphasized the international distribution of deep-sea corals and their need for protection. Closer to home, scientists and managers discussed deep-sea coral distributions in Aleutian Islands off of Alaska, precious corals of the Hawaiian Archipelago, New England seamounts, and the deep water corals of the Gulf of Mexico and South Atlantic region.

## **Deep Water Corals in the South Atlantic Region**

"Deep water corals occur abundantly along the continental slope of the southeastern U.S.," explained Dr. Steve Ross with the University of North Carolina at Wilmington's Center for Marine Science. From 2000 - 2004 scientists surveyed deepwater coral communities between North Carolina and east-central Florida. Using the submersible, *Johnson Sea-Link* from Harbor Branch Oceanographic Institution (HBOI), researchers conducted deep water dives, recording video data on fish and habitat distributions.

They found that in some areas deep water corals form significant mounds, while in other areas they contribute substantial structure to existing bottom habitats. John Reed, Chief Scientist with HBOI has been instrumental in documenting deep water reefs in both the southeastern U.S. and Gulf of Mexico, including the Oculina Bank off the east central coast of Florida. Spanning 300 square miles, the Oculina Bank has been designated a Habitat Area of Particular Concern (HAPC) by the South Atlantic Fishery Management Council, prohibiting the use of damaging fishing gear in the area. The Council has developed an Evaluation Plan for the Oculina HAPC, and Council staff presented a poster during the symposium, highlighting recent outreach activities through partnerships with NOAA's Undersea Research Center, NOAA Fisheries, and HBOI.

Recent survey work by both Ross and Reed presented to the South Atlantic Fishery Management Council led to the proposed designation of six deep water coral Habitat Areas of Particular Concern in 2005. These areas will be included in the Council's Fishery Ecosystem Plan and Comprehensive Amendment.

Roger Pugliese, Senior Staff Biologist with the Council gave an oral presentation on deepwater corals in the U.S. Southeast, their conservation and management. His presentation, a collaboration with Environmental Defense, summarized the Council's evolution to an ecosystem-based management approach. He addressed the six proposed deep water coral HAPCs, development of a deepwater coral research and monitoring plan, and acknowledged the partnerships critical to the management process. Tina Udouj, with the Florida Fish and Wildlife Conservation Commission, made a presentation on the development and capabilities of the Council's Habitat and Ecosystem website <http://map.mapwise.com/safmc/default.aspx> and the Internet Map Server accessible from the site, both developed in cooperation with FWRI.

"A major take away from the symposium is that the South Atlantic Council, through a network of regional partnerships is on course to conserve some of the most extensive and virtually pristine deepwater coral systems in the world," state Pugliese.

The Council's Ecosystem-based Management Committee will discuss these and other topics during its upcoming meeting February 28 in Jekyll Island, Georgia.

*A team of over 20 scientists are currently involved in the development of the Council's South Atlantic Deep Water Coral Research and Monitoring Plan. The plan will provide guidance on priority needs to support management of deepwater coral resources and enhance coordination among researchers in the region. A workshop for the team was scheduled March 9-10, 2006, at the Florida Fish and Wildlife Research Institute, St. Petersburg, FL. For more information, contact Roger Pugliese at [roger.pugliese@safmc.net](mailto:roger.pugliese@safmc.net) or Myra Brouwer at [myra.brouwer@safmc.net](mailto:myra.brouwer@safmc.net).*

*From: The South Atlantic Update, Winter 2006*

## **VA Seafood Industry, plagued by rays, decides if you can't beat 'em, eat 'em**

**Officials promoting voracious cownose ray cuisine to Asian market**

By Scott Harper

Cownose rays look and act like stingrays, their kite-shaped bodies gliding along the bottom of the Chesapeake Bay, gobbling oysters and clams like seafood lovers at an all-you-can-eat buffet. Once considered graceful visitors to the Bay, cownose rays have become such a problem for a struggling oyster industry that Virginia officials now want to turn the tables on the winged creatures and start eating them - in part to curb their numbers in state waters.

The Virginia Marine Products Board recently dispatched a trade mission to South Korea to determine whether Asian palates and wallets might support a new commercial fishery for rays harvested from the Bay. To test local appetites, the state board gave away barbecued ray wings, labeled as "Chesapeake rays," last summer at the Hampton Bay Days festival. The board is also assisting in a study at the Virginia Institute of Marine Science of possible markets and future uses of cownose rays and their fleshy body parts. "I'm very excited about rays and this project," said John Maxwell, a certified chef and culinary teacher at J. Sargeant Reynolds Community College in Richmond. Maxwell traveled to South Korea as part of the trade mission and prepared experimental ray dishes for guests at a Thanksgiving feast. He said the reaction was fabulous. One of the most popular techniques, Maxwell said, was marinating wing-cut fillets in olive oil, wine vinegar, oregano and lime juice, then grilling them. "It's very easy to work with and has no fishy taste at all," he said. "I refer to it as a sea-going meat. It's really more like beef than fish" and contains little fat.

Scientists are not sure whether there has been an increase in cownose rays in the Bay; population counts have not been conducted. Shellfish growers, though, swear numbers are increasing, mostly because the rays' two biggest predators - sharks and humans - are not around as much to snatch them from the Bay. Several shark species are in decline, and fewer anglers are deploying nets that typically strangle rays.

Nevertheless, the marine animals, each averaging 35 inches in diameter and weighing more than 25 pounds, certainly have become infamous nuisances of late. They were blamed for wrecking the opening of a highly touted Army Corps of Engineers oyster-restoration project in the Great Wicomico River two summers ago. In June 2004, they ate about 1 million disease-resistant

babies set on artificial oyster reefs in the river - a \$78,000 frenzy that caused the Corps to spend another \$500,000 last spring for protective fencing around the reefs.

Responding to more pleas for help from oyster and clam growers, the Virginia Marine Resources Commission in December discussed a request to establish a bounty system for cownose rays. As envisioned, the state would pay anglers to kill rays, thus winnowing their populations and influence on shellfish beds. Scientists and regulators opposed the idea. They said cownose rays are a migratory species that travels from Brazil to New England each year, stopping in the Bay in late spring and summer to give birth to pups. To hunt them in Virginia might have biological consequences that could reverberate for years and across two continents, the experts said. In the end, the commission rejected a bounty program and endorsed additional efforts at starting a commercial fishery for rays. "We need some kind of harvest strategy," said Rob O'Reilly, assistant state director of saltwater fisheries. "We have industry, science and the state working together cooperatively on this, so we want to see how this works."

Launching a new seafood industry is not so easy, though. For one, rays are especially difficult to handle. Their whiplike tails include sharp-edged barbs that can slice an angler's hand or leg in a flash. Plus, the relatively low price for a pound of processed cownose ray - about \$1.99 - has kept anglers from targeting them in the past, according to officials and previous studies.

In 1979, Virginia scientists published a report on rays and their effect on oysters after a devastating season in the Rappahannock River. The study recommended a commercial fishery be developed for rays, but one never took off. The report also suggested a sports fishing derby with prizes for the largest rays, male and female, caught during the tournament. The report said Texas had success with such derbies and noted how anglers in California went on "extermination parties" for bat rays that plagued oyster grounds there.

For his study last year, Bob Fisher, a commercial fishing researcher at VIMS, obtained a special permit from the state to catch cownose rays at the mouth of the Bay and up to three miles offshore. He netted more than 20,000 pounds of rays, experimented with various processing techniques and supplied meat to different markets. Fisher also wants to investigate the use of a ray's liver oil as a health supplement, its cartilages for medicinal purposes and its carcass for fertilizer. As a low-fat meat alternative, Fisher said, "people will eat it; they like it." But, he added, "it's the fishermen who don't want to deal with this species. It's dangerous, and, so far, there's not a lot of money in it for them."

*This article, distributed by the Associated Press, originally ran in the Virginian-Pilot.  
From: Bay Journal, February 2006*

*Ed Note: The cownose ray is also taking the blame for devastating the North Carolina bay scallop resource where the recorded annual catch has dropped from millions of pounds of meat to a mere 80 in 2004-2005. True cause? Ecosystem non-management?*

# **New Species Discovered in Fiji's Great Sea Reef**

## **World Wildlife Fund (WWF) Survey Reveals Vast Collection of Marine Species**

The first comprehensive survey of Fiji's Great Sea Reef, the world's third longest barrier reef, has revealed a staggering array of life, including a new species of reef fish. WWF's 12-day survey expedition recorded a new species of damselfish (*Pomacentrus* sp.), unique mangrove island habitats, several threatened species (green turtles and spinner dolphins among them), as well as marine life not previously recorded in Fiji's waters.

"The Great Sea Reef, locally know as Cakaulevu, is a global treasure," said Kate Newman, director of WWF's Marine Ecoregions program. "Covering more than 77,000 square miles, the reef is home to thousands of marine species - many of which are endemic - and it is a vital fishing ground for local communities." The survey which, WWF conducted with local and international experts and community members, also identified significant threats to the Great Sea Reef, including overfishing and poaching by illegal fishers, poison fishing, sand dredging, and other destructive activities.

Recognizing the reef's global importance, local chiefs launched the first of the country's network of marine protected areas (MPAs) on the Great Sea Reef in November. These MPAs include permanent "tabu zones," where no fishing or harvesting of other marine resources may take place. "The people of Macuata Province are working closely with WWF and the Fiji Locally Managed Marine Areas network to protect this unique marine environment," said Etika Rupeni, a WWF country program manager in Fiji. "Protecting the Great Sea Reef will ensure that one of our greatest assets remains intact and continues to be an important part of the tradition, culture, and livelihood of the people of Fiji.

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