



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*.

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.



AIFRB 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

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 Berkeley, 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 (dickschaeff@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.

Each chapter of the book covers a topic traditionally taught in fisheries science courses, from the point of view of the importance of early life stages. The writing style of this well illustrated book is user-friendly and clear, providing a book that will be of great value in the study of this core area.

2002, 125 Illustrations, 352 pages, Paperback, 0 632 056614, \$52.99

Ecological Aquaculture

The Evolution of the Blue Revolution

Barry A. Costa-Pierce (AIFRB Fellow)

This new text focuses on ecological aquaculture, aquaculture ecosystems, and sustainable aquaculture.

The first text relating modern, ecological principles and analytical approaches to aquaculture; In depth analysis of household and village ecosystems and the social ecology of international aquaculture development; Includes detailed discussions of aquaculture farming systems methods used to revise the entire way aquaculture extension is organized and conducted; The author has 20 years' experience in ecological aquaculture research, education, extension and development worldwide.

2002, 150 Illustrations, 320 pages, Hardback, 0 632 049618, \$109.99

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

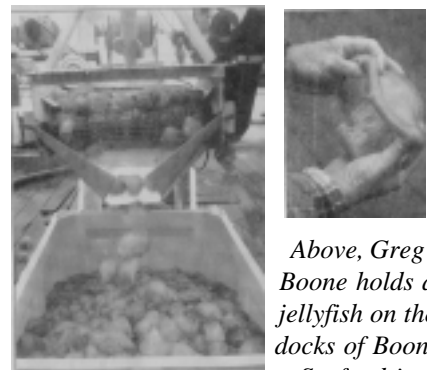
Ed. Note: I am sure other newspapers carry articles on fisheries that Briefs readers would find interesting. Please send them!

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.

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



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.

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 cannonballs’ 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 way 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. Chafee 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.

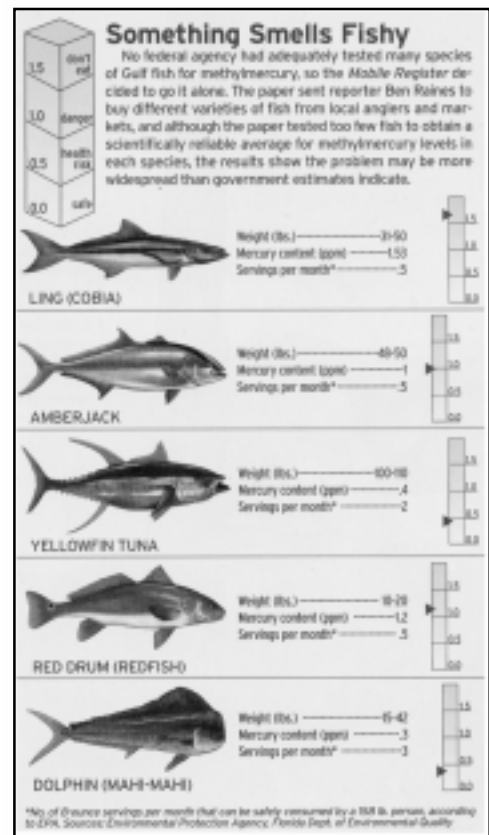
July 22, 2001. Several popular commercial and recreational fish species caught in the Gulf of Mexico – including the restaurant delicacies amberjack, ling, and redfish – may contain so much methylmercury that they should not be sold to the public, according to standards set by FDA. Samples of these and 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-term 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

District Directors

Alaska, Northern

Joseph F. Margraf, Jr.
University of Alaska
P.O. Box 757020
Fairbanks, AK 99775-7020
ffjfm1@uaf.edu

Alaska, Southeast

Bruce Wing
P.O. Box 210265
Auke Bay, AK 99821-0265
bruce.wing@noaa.gov

Arizona - New Mexico

G. Morris Southward
Statistics and Res. Inst.
New Mexico State University
Box 30003 Dept. 3130
Las Cruces, New Mexico 88003-8003
southward@nmsu.edu

California, Northern

Tom Keegan
ECORP Consulting Inc.
2260 Douglas Blvd., Suite 160
Roseville, CA 95661

California, Southern

Raymond R. Wilson
CSULB Biol Sci
1250 N. Bellflower Blvd.
Long Beach, CA 90840
rwilson1@csulb.edu

Capital

Frank M. Panek
National Fish Health Research Laboratory
1705 Leetown Rd.
Kearneysville, WV 25430

Carolinas

Robert L. Dixon
NOAA, 101 Pivers Island Road
Beaufort, NC 28516
robert.dixon@noaa.gov

Florida

Thomas W. Schmidt
USDI Nat'l. Park Service
Everglades Nat'l. Pk., S. Fla. Res. Ctr.
P.O. Box 279
40001 State Rd. 9336
Homestead, FL 33014
tom_schmidt@nps.gov

Great Lakes, South Central

Dora R. Passino-Reader
National Fish. Center
1451 Green Road
Ann Arbor, MI 48105-2897
dora_reader@usgs.gov

Gulf of Mexico, Northeast

Vacant

Keystone

Joseph W. Rachlin
Dean of Nat. & Soc. Sci.
Lehman College of CUNY
250 Bedford Pk. Blvd. W.
Bronx, NY 10468-5189
rachlin@alpha.lehman.cuny.edu

New England

Kevin D. Friedland
Director, UMass/NOAA CMER Program
Blaisdell House
University of Massachusetts
Amherst, MA 01003-0040
friedlandk@forwild.umass.edu

Oregon-SW Washington

Vacant

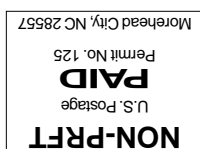
Texas

Lance Robinson
Texas Parks and Wildlife Dept.
Seabrook Marine Lab
Seabrook, TX 77856

Washington, NW

Bruce S. Miller
School of Aqu. & Fishery Sci.
University of Washington
Box 355020
Seattle, WA 98195
bsm@u.washington.edu

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American Institute of Fishery
Research Biologists
c/o Allen Shimada
NMFS, Office of Science and Technology
1315 East West Highway
Silver Spring, MD 20910
Return Service Requested