



American Institute of Fishery Research Biologists

Promoting excellence in fishery science

Website: www.iattc.org/aifrb/

... BRIEFS ...

VOL. 33, NO. 1

JANUARY, FEBRUARY 2004

Outstanding Achievement Awards 2003

Rothchild receives award for individual accomplishment



The recipient of the AIFRB Outstanding Achievement Award (Individual) for 2003 was Brian J. Rothschild, Dean, Graduate School of Marine Sciences and Technology at the University of Massachusetts. Dr. Rothschild has worked in fisheries for one-half century. He began his career conducting ice-

fishing surveys in the winter of 1953-1954 for the New Jersey Division of Fish and Game. He worked his way through Rutgers University as a student in wildlife conservation and management.

His achievements have been truly outstanding. He has published over one hundred papers and chapters in books. He has edited eight books and is the author of "Dynamics of Marine Fish Populations" published by Harvard University Press (1986). His own research is considered seminal. He is one of the most cited fishery scientists in North America. His work on stochastic processes and operation research, recruitment theory, and biological physical processes are widely cited. His paper "Small-scale turbulence and plankton contact rates" (written with T. R. Osborn, 1988, *J. Plank. Res.*) is a citation classic and has resulted in several hundred research papers advancing the Rothschild-Osborn theory.

He has been the acknowledged leader in bringing together the study of ocean physics, biological oceanography, and recruitment research. His work involved the founding of important international programs in linking ocean physics and fish population dynamics. He formulated the concept of GLOBEC and was the first Chairman of the international GLOBEC Scientific Committee. He was responsible for GLOBEC becoming part of the core program of the International Geosphere Biosphere Program (IGBP). He was instrumental in founding a number of other national and international programs such as the ICES Cod and

Climate Program and the French National Program on Determination of Recruitment.

He has been involved in forwarding the fishery scientific and management agenda globally and has represented the U.S. at many international meetings. He was responsible for developing the scientific management of ICCAT. He worked with others to develop global fishery management policy and planning at FAO, and he has served on many national committees, including chairing the National Academy of Sciences Fisheries Committee.

His service to education has also been outstanding. As Dean of the Graduate School of Marine Sciences and Technology at the University of Massachusetts, he has developed a new and innovative program in oceanography and resource management. His graduate students have had outstanding careers. His PhD student Bill Fox has been the recipient of the AIFRB Outstanding Achievement Award. His PhD student Gary Sakagawa is a past President of the AIFRB.

Brian's book, "Dynamics of Marine Fish Populations," was the first to comprehensively address the abundance of fish populations in historical, life-history and modeling contexts. His approach shed critical new insights into the density-dependent processes of recruitment, growth, and reproduction of fish populations.

Dr. Rothschild's early career work in Hawaii for Jack Marr at the Bureau of Commercial Fisheries, commenced after his doctoral and post-doctoral studies at Cornell, where he was a student of Ed Raney and Doug Robson. His field studies on the population dynamics of alewife in Cayuga Lake, New York, smelt in Maine and summer flounder at Beaufort with Earl Deubler at the University of North Carolina and strong training in biometrics and fisheries theory were fundamental to his research success in Hawaii on the biology of Pacific tunas. His first significant contributions to fishery science delineated the cross-Pacific migrations of skipjack and albacore. This work was important from both biological and fisheries exploitation standpoints and was done during the five years that he was Chief of the Skipjack-Yellowfin Tuna Ecology Program. The skipjack publication was the first work demonstrating

the migration patterns of these tunas, and thus, constituted a critical component of effective stock management. Between 1965 and 1970, he published nine papers on skipjack and albacore, as well as analyses of the Japanese long line fleet in the Central Pacific, tuna abundance in the Indian Ocean, and oceanic tuna resources of the Pacific.

His next significant publications concerned the application of systems analysis and linear programming to fisheries management. This work occurred during his tenure as Associate Professor, then Professor in the College of Fisheries at the University of Washington, Seattle, and following appointments as Deputy Director at the newly organized NOAA Northwest Fisheries Center in Seattle, and Director of the NOAA Southwest Fisheries Center in La Jolla. He tackled the problems of high-sea salmon management innovatively with these tools, at the beginning of the computer quantitative age in 1971. He continued to find fruitful applications through the 1970s, 1980s, and 1990s in general strategic approaches to fisheries management, including complex multiple species fisheries and the design of fishery management systems. While at La Jolla, Rothschild's tuna studies shifted to eastern Pacific yellowfin migrations and Atlantic bluefin migrations. During this time he became Chairman of the Standing Committee on Research and Statistics of the International Commission for the Conservation of Atlantic Tunas (ICCAT), a post to which he was elected for two terms, from 1973 to 1976. His 1974 paper on migration and mortality of Atlantic bluefin tuna, co-authored Frank Mather, Gerry Paulik and Bill Lenarz, was highly significant to the interpretation of Atlantic bluefin stock structure and the issues of international management at the time of its publication and has remained important up to the present. In 1976, he received the NMFS Outstanding Publication Award for the 1974 paper, "An examination of the yield-per-recruit basis for a minimum size regulation for Atlantic yellowfin tuna, *Thunnus albacores*," co-authored with Bill Lenarz, Bill Fox, and Gary Sakagawa. In 1986, he was the invited keynote speaker at the ICCAT Conference on the International Skipjack Year Program, an acknowledgement of his important contributions to skipjack biology and ecology. His topic "Tuna research in the 1980s" reflected his continuing expertise on tunas. A decade earlier, he and A. Suda of Japan co-authored the authoritative "Population dynamics of tuna" in John Gulland's classic, "Fish Population Dynamics."

His senior policy appointments at the national level in NOAA and his stewardship of the implementation of the extended fisheries jurisdiction policy of the U.S. and the 1976 Fisheries Conservation and management Act expanded his contributions to public policy and global fisheries. In 1983, he edited "Global Fisheries: Perspectives for the 1980s," bringing together internationally recognized experts to produce a classic in fisheries policy perspectives—the global outlook in the extended jurisdiction framework of the 1980s. In 1972, he had edited "World Fisheries Policy: Multidisciplinary Views". For students of fisheries these

two volumes provide valuable insights into marine fisheries policy during an important decade from the experts who shaped it. Rothschild's own contributions to those books (1972) "The Need for Analysis in the Development of United States Fisheries Policy" and (1983) "Achievement of Fisheries Management Goals in the 1980s" provide a detailed description of successful fishery management systems in various policy contexts.

Throughout his career, he has published papers that address statistical problems in fisheries estimation procedures and provided guidance or solutions for practicing biologists. These are important because inappropriate or biased procedures lead to biased estimates that can have serious economic and social ramifications in applied fisheries work. These papers include effects of gear competition on catch-per-unit effort estimates (1967), use of concentration indices (1972), the use of linear programming techniques for stock-and-recruitment relationships (1985), source of errors in recruitment-spawning stock estimation (1989), impact of variable natural mortality rates on estimates of recruitment from virtual population analysis (1992), and use of times-series techniques in fisheries population assessment (1995, 1996). His work on the crab, oyster and finfish fisheries (such as striped bass) of Chesapeake Bay and on scallop and groundfish fisheries of the Northwest Atlantic is characterized by the development of innovative sampling techniques and population estimation procedures. This work, such as the development of FISHMAP, a sampling expert system for fish stock assessment in Chesapeake Bay, is described in many technical reports to sponsoring organizations. His chapter, "Fishing Effort" in John Gulland's 1977 "Fish Population Dynamics" is a classic for students of fishery science. In 1996, he co-edited and authored three chapters of the CRC handbook, "Stock Assessment: Quantitative Methods and Applications for Small-Scale Fisheries," a resource oriented to the problems faced by fishery managers in less-developed countries.

In 1988, while Professor at the University of Maryland's Center for Environmental and Estuarine Studies in Solomons, MD, Rothschild and Tom Osborn of Johns Hopkins University published "Small-scale turbulence and plankton contact rates." This paper revolutionized ideas about zooplankton production, linking for the first time the dynamics of physical scales and biological rates. The importance of this paper can be assessed by the number of papers in which it has been cited. According to the Science Citations Search, as of May 2003, the paper received 268 citations in refereed literature (about 10 or 15 citations is "good"). Rothschild furthered the theory linking physics and biology in the ocean and its importance in understanding ocean productivity as editor and contributor to the 1988 650-page book, "Toward a Theory on Biological-Physical Interactions in the World Ocean." He followed his chapter, "Biodynamics of the sea: the ecology of high dimensionality systems" with publications collaborating this theme, including food-signal theory

(1991), application of stochastic geometry to plankton ecology (1992), and physical forcing effects on nutrient microclouds (1999). Since 1996, Rothschild has served on the editorial board of the prestigious John Wiley & Sons series "The Sea: Ideas and Observations on Progress in the Study of the Seas." In 2002 and 2003, Rothschild has been a co-editor with Jim McCarthy and Allan Robinson on Volumes 12 and 13. His 2002 chapter, "Population Dynamics and Physical Forcing," is the state-of-the-art reference for this topic, extending ideas presented in many of his previous papers concerning fish stock fluctuations and the environment. This approach offers the possibility of a physically-based axiomatic formulation of ocean productivity, bringing biological oceanography into the rigorous framework needed for the future of multidisciplinary ocean studies. His 2003 chapter for Volume 13, "Multiple Scales in Time and Space," integrates and extends the current thinking on how physical and biological processes interact within and across spatial and temporal scales of the ocean.

Throughout his career, Rothschild has served the fishery profession at local, state, national and international levels within professional societies and organizations and in public service roles. Rothschild has served in many positions in BCF, NMFS, and NOAA. He was Deputy Director of the Northwest Fisheries Center, the Director of the Southwest Fisheries Center, Director of the Office of Policy and Planning in NMFS Washington, and Senior Policy Advisor to the Administrator of NOAA. During his stint in Washington, he had the direct responsibility for implementing the Fishery Conservation and Management Act of 1976. This included establishing the administrative framework for the eight regional Fishery Management Councils. At the beginning of his career in Hawaii, he was Local and State Chairman of the American Fisheries Society. In 1987, he was an organizer and convener of the session, "Tomorrow's Models-Today's Data," and was appointed to a three year term as a Lecturer in the AFS Lecture Program. He has remained an active member of the AFS. Rothschild has served on editorial boards of the American Society of Ichthyologists and Herpetologists (1964-1968), Fishery Bulletin (1970-1975), Marine Resources Economics (1984-1987) and the series "The Sea" (1994-present).

Rothschild's service on national organizations encompassing fisheries issues include the Ocean Studies Board (OSB) of the National Academy of Sciences (NAS) and the National Research Council (NRC). He was Chair of the Fisheries Committee OSB/NAS (1992-1994 and 1983-1985), and Chair of the Human Effects Workshop (1983-1994), he was a member of the Ocean Studies Board (1991-1996), Board on Ocean Sciences and Policy (1983-1984) and Ocean Sciences Board (1981-1984), Ocean Policy Committee (1974-?) and Committee on Oceanography (1972). In his most recent tenure as Fisheries Committee Chair, the Committee published reports advising the government on fishery management. He also served on the NRC Ad Hoc Panel of the Committee on Global Change,

and co-authored the Panel's 1990 report, "Biogeochemical Dynamics in the Ocean." He participated in the 1988 Global Change Workshop. In 1977, he was a member of the Post-IDOE Planning Steering Committee of the Ocean Science Board.

Rothschild has served on fisheries-related working groups, committees and panels of many international organizations. These include the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Food and Agricultural Organization (FAO) of the United Nations, the United Nations Development Program on Fisheries Resources (UNDP), the International Council for the Exploration of the Sea (ICES), the North Atlantic Treaty Organization (NATO), the International Standing Committee on Oceanic Research (SCOR), and the Global Ocean Ecosystems Dynamics Research and Monitoring program (GLOBEC). His work with ICCAT as the Chairman of the Standing Committee on Research and Statistics for four years was noted above. In addition, he was the Convener of the Tuna Population Dynamics Working Group (1973).

He has many associations with FAO. As a tuna expert, he served on two Working Groups of the Panel of Experts for Facilitation of Tuna Research: Tuna Taxonomy and Tuna Tagging in the Pacific and Indian oceans from 1962 to 1968, and on the Working Party on Tuna Stock Assessment for the Atlantic and Indian Oceans in 1972. During this time, he was also a member of the Panel Experts on the economics of the Peruvian Anchovetta Fishery (1971). In 1981, he and John Gulland convened the international workshop on the Scientific Basis for the Management of Penaeid Shrimp. Their editorial efforts resulted in the first book on the subject, "Penaeid Shrimp: Their Biology and Management," which was published in 1984 and became a unique resource concerning these highly valuable fisheries. Rothschild has been associated with several aspects of fisheries development for FAO or UNDP. These efforts concerned the development of fisheries resources of Korea (1968), a review of the Egyptian high seas trawl fleet (1975), the development of fisheries policy for Namibia (1980), and the development of the plan for FAO's Indian Ocean Program (1971). Further, he was a Convener of the Symposium on Economic and Social Aspects of Fishery Development sponsored by the Indo-Pacific Fisheries Council (1975). In 1987, he chaired the Fisheries Committee, Workshop on the development, management and utilization of marine resources in Indonesia's deep waters. He also chaired two FAO Working Parties for the Advisory Committee on Marine Resources Research (ACMRR): Scientific Basis of Determining Management Measures (1979-1980) and Principles for Fisheries Management in the New Ocean Regime (1982-1983).

He has had a long association with the International Council for the Exploration of the Sea, the oldest organization in the North Atlantic concerned with fishery issues. Beginning in 1984, he has participated in the Annual Science Conferences held at the September Statutory Meetings, and in ICES Symposia and Working Groups.

Since 1997, he has been a member of the Resource Management Committee and Multispecies Assessment Working Group. At the 1989 annual ICES meeting, Rothschild drafted the proposal for a subgroup of the Demersal Committee to study cod stock fluctuations. In 1991, ICES officially adopted the program as “Cod and Climate Change” and Rothschild chaired the Steering Group for the Cod and Climate Change. In 1994, the program’s first symposium was published as a ICES Marine Science Symposia Number 198, underlining the programs scientific importance. With the now precarious states of many cod fisheries, this program is a critical component of international research efforts to understand the causes of cod declines in the north Atlantic.

Brian formulated the GLOBEC concept and was first chairman of its scientific committee. GLOBEC’s overall goal includes, “understanding the structure and functioning of the global ocean ecosystem, and its major subsystems. He was the Chairman of the first organizing meeting for GLOBEC held in La Jolla in 1987, at which he presented the paper, “Biological Oceanography in the Next Two Decades. In 1988, he chaired the Global Ecosystems Dynamics Workshop and from 1988 on made many presentations to the scientific community in the U.S. and abroad that developed collaboration with the initiative. He was Principal Investigator of the GLOBEC Planning Grant awarded by NSF from 1990-1992. In 1991, he co-authored “Theory and Modeling in GLOBEC: a First Step,” as member of the Working Group on Theory and Modeling. From 1991 to 1995, he was Chairman of the Scientific Steering Committee and remained a member up to 1999. He was an organizer of the U.S. GLOBEC Steering Committee in 1993, from which the U.S. program emerged. He was an organizer of International Scientific Steering Committee and served as its Chairman beginning in 1994.

From 1992 to 1996, Rothschild was Secretary of the Scientific Committee on Oceanic Research (SCOR) and from 1996 to 1998, he served as a Co-opted Member of the Executive Committee. SCOR, founded in 1957 by the International Council for Science (ICSU), promotes international cooperation in oceanography via large-scale research projects, working groups and advisory and planning bodies.

In addition to the above activities, Rothschild was a co-convener with Claus Rooth of the fish Ecology III Workshop (1982). He was an organizer of Southern Ocean Working Group meeting (1993), the Numerical Modeling Working Group meeting (1993), the PDPV Working Group meeting (1993) and the Sampling and Observation Working Group (1993). He has also served on International Scientific Organizing Committee for the 28th International Liege Colloquium on Ocean Hydrodynamics (1995). His work with U.S. Agency for International Development concerned artisanal fisheries in 16 less-developed countries. This 6-year program matched technical needs with U.S. expertise; one of the results was the publication of a CRC Handbook on fishery stock assessment, along with training and

exchange programs.

Rothschild has also served fisheries as in many program reviews over his career. He has served as Advisor to the American Section, International North Pacific Fisheries Commission; the U.S. Delegation, Indo-Pacific Fisheries Council; the U.S. Delegation, ICCAT; U.S. Commissioners, IATTC; Indian Ocean Fishery Commission; and to NOAA concerning National Marine Fisheries stock assessments. In 1968, he was a member of the Team to develop cooperation between the U.S. and Ryukyu Islands on Fisheries. In 1987, he reviewed the research program of the Inter-American Tropical Tuna Commission. In 1991, he chaired the Review Panel for the Benguela Current Program of the Union of South Africa. During most of 1984, he was affiliated with the Project National de Recherché du Recrutement, a fisheries project of IFREMER, France. He also served as an expert for the U.S. Justice Department concerning the Exxon Valdez oil spill (1989), and later as a peer reviewer for the State of Alaska Department of Natural Resources on the oil spill restoration efforts (1994). From 1998 to the present, he has been a member of the Permanent Scientific Advisory Board for the Institute of Marine Science of Portugal.

Rothschild has continued to be actively involved in local and regional fisheries management. He served on the Steering Committee of Northeast Fisheries Management Task Force (1980-1982). He was member of the Maryland Oyster Roundtable, the Blue Crab Advisory Board of the Maryland Dept. of Natural Resources, the Chesapeake Bay Stock Assessment Committee, and the Mid-Atlantic Fisheries Management Council during his tenure at the University of Maryland. Rothschild has been a key player in Massachusetts and New England fisheries. In 1997, he was appointed Co-chair of the Massachusetts Fisheries Recovery Commission by former Governor William Weld. Since 1998, he has been a member of the New Bedford Fisheries Task Force, and a member of the Research Steering Committee and the Scientific and Statistical Committee of the New England Fishery Management Council. His perspective of good science as a prerequisite to good management has led to clarification of many issues and succeeded in bringing them into the appropriate science and policy arenas for solution.

Rothschild has been the major advisor of students during his academic tenures at the University of Washington and at the University of Maryland. His doctoral students at University of Washington include William Fox, former Director of the National Marine Fisheries Service, NOAA and Gil Robinson, Head of the National Parks Service, Union of South Africa. At the University of Maryland, he supervised doctoral and master’s candidates from Canada, Japan, China, and Taiwan. He has served as external examiner on doctoral committees at the University of Bergen, Norway, Dalhousie University, Canada and the University of British Columbia. Also, he has supervised many post-doctoral students from abroad, including Dr. Qisheng Tang, now Professor and Director General of the Yellow Sea Fisheries Research

Institute in Northeast China Fisheries, and Dr. Phillippe Gouletquer, an oyster specialist of IFREMER.

Another aspect of Rothschild's contributions to students are his many invited lectures and seminars. These include the Columbus O'Donnell Iselin II Lecture at Harvard University entitled "Fishery Management and Variability in Fish Population" (1983), and the Jane Globus Lecture at Baruch College, New York, entitled "Fisheries policies for the 1980s" (1983).

He was elected a Fellow of the American Institute of Research Fisheries Biologists in recognition of his contributions to fishery science. In 1965, he was elected a Fellow of the American Association for the Advancement of Science.

Rothschild has also contributed to student training through his several long-term adjunct and shorter visiting faculty positions. He was Visiting Professor at the Institut für Meereskunde at the University of Kiel, Germany (1984-1985), Visiting Scientist in the Biology Department at Woods Hole Oceanographic Institution (1986-1987), and Visiting Scholar in the Department of Earth and Planetary Physics, Harvard University (1994). While a chief scientist at the Bureau of Commercial Fisheries in Hawaii, he was an Affiliate Graduate Faculty member and Lecturer in Zoology at the University of Hawaii from 1963-1969. At La Jolla, while Director of the NMFS Southwest Fisheries Center, he was an Adjunct Professor of Oceanography at Scripps Institution of Oceanography (1974-1976). From 1975 to 1978, he served on the Advisory Council, Institute of Marine Resources, at the University of California. From 1986 to

1989, he was Principal Research Scientist at the Chesapeake Bay Institute, Maryland. Presently, he is an Adjunct Professor and Senior Fellow at the Rosenstiel School of Marine Science and Atmospheric Science, University of Miami (since 1981). Since 1998, he has also been an Adjunct Professor in the Department of Natural Resources Conservation at the University of Massachusetts Amherst.

Presently at University of Massachusetts Dartmouth, he has instituted an exchange program with the University of the Azores, and is pursuing the establishment of a Fisheries Institute. The latter is a collaborative effort between the State of Massachusetts, NOAA, and University of Massachusetts Dartmouth to insure that the highest research standards are brought to bear on management of the valuable northeast fisheries through training of students and upgrading of skills of working professionals. Further, his success at University of Massachusetts Dartmouth to create the Graduate School of Marine Sciences and Technology, which received accreditation by the Massachusetts Board of Higher Education to award doctoral and masters degrees, emphasizes his commitment to higher education and to giving students access to a broad range of learning opportunities to engender their success.

Since 1999, he has been Governor of the Board of 2000, the Consortium for Oceanographic Research and Education, Inc. and also been a member of its Research Committee since 2000.

Submitted by: Vaughan C. Anthony

Abridged by Editor (and even in abridgement the document and career remain awesome and intimidating)

Ecotoxicology Research Team Northwest Fisheries Science Center Group Award 2003

The Northwest Fisheries Science Center's (NWFSC) Ecotoxicology Research Team has been studying contaminants for over 30 years. Over this period of time, this team has continued to conduct the highest quality of research, which has led to hundreds of contributions in well regarded scientific journals, including *Aquatic Toxicology*, *Environmental Science and Technology*, *Environmental Toxicology and Chemistry*, *Environmental Health Perspectives*, *Journal of Aquatic Animal Health*, *Marine Biology*, and *Transactions of the American Fisheries Society*. In 1998, the paper "Increased Susceptibility of Juvenile Chinook Salmon from a Contaminated Estuary to *Vibrio anguillarum*" received the American Fisheries Society's "Most Significant Paper" award in the journal *Transactions of the American Fisheries Society*. The NWFSC's Ecotoxicology Research Team has also published many technical memoranda that are widely used throughout the fishery science community in assessing the impacts and remediation possibilities of contaminants in the marine environment. In many cases, published research from this team on analytical techniques, sublethal effects of toxic chemicals, and quantitative relationships between contaminant exposure and biological effects has set the precedent for other research in specific areas, such as the biological effects of oil-related compounds, contaminant effects on outmigrant juvenile salmon, and the impacts of pesticides on fish. The Ecotoxicology Research Team has made it a priority to work across disciplines, such as biology, chemistry, fish physiology and math, to improve its contributions to the fishery profession.

Since its inception, the NWFSC's Ecotoxicology Research Team has valued its role as a public servant. Sharing knowledge and explaining research results to partner institutions, and affected communities, etc., has always been a priority for this team. For example, during the 1989 *Exxon Valdez* oil spill in Alaska, the NWFSC's Ecotoxicology Team provided critical information to fishermen and Alaska natives about the fate and effects of petroleum on fish and shellfish; real-time analyses allowed a vitally important halibut fishery to continue in the aftermath of the spill, the willingness to share information in a timely manner helped fishermen and Alaska natives better understand what was happening to the fish and whether or not it was safe to harvest

and eat them. As a result of this work, a former Ecotoxicology Team scientist recently edited a book entitled, "Evaluating and Communicating Subsistence Seafood Safety in a Cross-Cultural Context: Lessons Learned from the *Exxon Valdez* Oil Spill." This book received the Society of Technical Communication's 2000 Excellence Award.

The NWFSC's Ecotoxicology Team has also made educating the next generation of scientists a priority. Over the last several decades, this team has developed a strong cooperative relationship with local universities team members, served on graduate committees around the U.S. and in Europe. Several team scientists serve as adjunct faculty members. Team scientists also provide opportunities for undergraduate and graduate students to work and learn at the Center, and willingly give presentations to local K thru 12 schools.

In addition to its other activities, the Ecotoxicology Team has also provided technical guidance and assistance to other scientists and managers, both nationally and internationally, addressing various contaminant issues. For example, team scientists have participated in panels to advise former member countries of the Soviet Union, worked with scientists in the middle east following the Persian Gulf oil spill, advised a committee of the European Union in establishing a standard reference material for the analysis of fish bile for metabolites of petroleum-related compounds, and served as panelists on the intergovernmental committee on contaminants in the Great Lakes.

The NWFSC's Ecotoxicology Team has made many valuable contributions to fisheries management in the Pacific Northwest, the nation, and the world. Two key examples include:

1. In the 1970s, scientists thought that point sources, like factories and oil refineries, were the major sources of contaminants in streams, rivers, and coastal waters. Throughout the nation, there was much concern about oil and gas development and the potential impacts that oil and industrial chemicals might have on fish and other marine species. At that time, scientists knew practically nothing about how, or whether, contaminants got into fish, and what impacts they might have. Center scientists conducted research to answer some critical questions about oil and its impacts on fish. Ecotoxicology researchers provided comprehensive data establishing that fish do not accumulate hydrocarbons in their bodies, but process them in their livers for removal. They also found that the liver can change a small amount of polycyclic aromatic hydrocarbons (PAHs) to a more toxic form that can cause disease in the liver and other organs. These studies on mechanisms led to the development and refinement of techniques to measure hydrocarbon metabolites in bile and damage to DNA in wild fish. The ability to effectively measure exposure to PAHs and initial effects related to chemical carcinogenesis in wild fish paved the way to a full understanding of the cause and effect relationship between PAH exposure and lesions in wild fish. This research made an important

contribution to fisheries science-it opened up a whole new field of research on the effects of petroleum and petroleum-related compounds on fish. It also led to the development of a new analytical technology to rapidly assess exposure of fish to oil-related compounds. This research and new technology had a significant impact on the nation's response to environmental incidents, such as the *Exxon Valdez* and North Cape oil spills. It allowed for a "real-time" assessment of seafood quality and also served as a monitoring tool to test whether conditions had improved. Scientifically, this new technology was incredibly valuable; it is now used around the world and has become a standard method of the European Union, and has led to the development of other rapid assessment techniques for screening tissues for PCBs, and organochlorine, and sediments for PAHs.

2. Ecotoxicology scientists began to apply their rapid assessment technique (described above) to better understand the impacts of contaminants on fish. Though their research, team scientists showed that certain tumors in fish are caused by exposure to chemical contaminants in their environment. This research led to the start of a national coastal monitoring program to monitor contaminants and their effects on fish. Through this monitoring program, scientists sampled hundreds of sites around the nation. This program helped the fisheries science community, as well as decision-makers around the nation, understand the scope of marine and coastal pollution, which helped lead to restoration of many polluted sites. The combination of this monitoring data and the research on cause and effect has made liver lesions in certain marine fish a very useful management tool to assess status and trends in environmental contamination by PAHs and to measure the effectiveness of remediation actions. The approach pioneered by the Ecotoxicology Research Team is used by state and other agencies to monitor the health of marine environments, assess biological injury from specific pollution events, and to monitor the effectiveness of restoration actions. Further, the information from over a decade of monitoring focused field studies were synthesized and published in the peer-reviewed journal, *Aquatic Conservation: Marine and Freshwater Ecosystems*, to document thresholds for carcinogenic and reproductive effects in wild fish exposed to sediment associated PAHs. This was groundbreaking because the thresholds were established entirely from data on wild fish and their direct exposure history and did not rely on bioassay information, which is one step removed from what organisms actually experience in the environment.

The NWFSC's Ecotoxicology Program is continuing its forward-thinking research. While team scientists are continuing their research on industrial chemicals and chemicals in urban runoff, they have also begun to focus on the impacts of agricultural runoff on fish populations. Moreover, the studies now include critical questions of how to integrate sublethal effects on critical physiological processes into assessment of population effects. Physical degradation of habitat is a critical issue for fisheries management. Degradation of chemical habitat quality is

also very important. Having a common currency to evaluate effects of impacts to both physical and chemical habitat quality will be important in conserving and restoring at-risk fish populations. These studies are at the forefront of fisheries science addressing anthropogenic effects and will help management agencies to critically determine the impacts of degraded water quality on fish.

Nominations NEEDED for 2004 Awards — It's never too early to submit nominations to Dick Schaefer, Linda Jones, or the Editor of *Briefs*.

Capital District Elects District Director and Secretary Treasurer

The members of the Capital District have completed their first ever election for a District Director and Secretary-Treasurer. Results of the recent vote were certified by AIFRB Secretary Allen Shimada on February 2, 2004. The Capital Districts officers for 2004-2005 are:

District Director Dr. Frank M. Panek

U.S. Geological Survey
National Fish Health Research Laboratory
11649 Leetown Road
Kearneysville, WV 25430
(304) 724-4430
frank_panek@usgs.gov

Secretary-Treasurer Dr. Shawn K. Alam

Minerals Management Service
Environment Division
381 Elden Street
Mail Stop 4042
Herndon, VA 20170
(703) 787-1690
Shawn.Alam@mms.gov

No Atkins Diet for Northern California District

Multi-ethnic venues spur attendance at two events

The Northern California District held its Winter Season Banquet on Saturday, January 24th, 2004 at the Mandarin Restaurant in Ghirardelli Square, San Francisco. A social hour preceded dinner which included: mandarin lettuce wrap, hot & sour soup, prawns a la Szechwan, Mongolian beef, cashew chicken, sweet & sour pork, mixed vegetable sauté, asparagus with mushrooms, steamed rice, jasmine tea, Mandarin flamed bananas, and fortune cookies.

On Thursday, February 19th at the Gulf of Farallones National Marine Sanctuary following a pizza feast, Lenny Grimaldo, affiliated with the California Department of Water Resources, San Francisco State University, and the Romberg Tiburon Center presented a talk entitled *Restoring the Sacramento-San Joaquin Delta: Can the opportunities meet expectations?*

The AIFRB subsidized the meal cost for students. In order that cost was not a determinant to attendance the District subsidized half of the dinner cost for students, and for any other member that requested.

Submitted by: Tom Keegan and Michelle Barlowe

Losses

Ed Grossman

December 21, 2003

William F. Royce

January 5, 1916 - January 26, 2004

William Francis Royce, Professor Emeritus, University of Washington, passed away peacefully in Seattle of Alzheimer's disease on January 26, 2004, at age 88. A brilliant scientist, Dr. Royce was widely recognized by his peers as an expert in the marine fishery sciences. He was well known nationally and internationally for his academic research and publications, his work with the University of Washington College of



Fisheries, the U.S. Fish and Wildlife and National Marine Fisheries Services, and as a consultant to the United Nations and numerous foreign governments on fishery management issues.

Bill Royce was born in De Bruce, New York in 1916 and completed his education in that state. The son of a trout hatchery manager, he took an early interest in fishery biology and obtained his PhD at Cornell University in 1943 on lake trout reproduction and life history. While undertaking his university studies he worked summers with the hatchery system of the New York Conservation Department and as a biologist with the New York State Biological Survey. He conducted some of the earliest studies of lake trout populations in upper New York State and devised an ingenious underwater camera housing to photograph spawning fish on the lakebeds. In 1942 he

began employment with the U.S. Fish and Wildlife Service in Massachusetts and from 1947 to 1951 he served as Supervisory Fisheries Research biologist in charge of North Atlantic trawl fishery investigations at Woods Hole, focusing on halibut and flounders. He then transferred with his family to Hawaii to become Senior Fisheries Research Biologist with the Pacific Oceanic Fishery Investigations, where he worked on tuna and marlin biology. During his four years in Hawaii he conducted studies of tropical fish populations, making several long research voyages throughout the South Pacific. In 1955 he transferred to Juneau, Alaska where he was Assistant Administrator in charge of research for the regional office of the Fish and Wildlife Service.

In 1958, Royce succeeded founder W.F. Thompson as Director of the University of Washington Fisheries Research Institute (FRI), which was joined with the School of fisheries to form the then College of Fisheries. He successfully directed studies of salmon and the aquatic environment and was instrumental in tracing North Pacific salmon oceanic migrations in connection with the International North Pacific Fisheries Commission research program. He was widely recognized for boldly predicting an enormous 1960 resurgence of the sockeye salmon population in Bristol Bay based on FRI research findings. His advanced warning prevented a greatly excessive spawning escapement in 1960 and helped to revitalize the commercial salmon industry in southwestern Alaska. In January 1967 he was appointed Associate Dean of the College of Fisheries and shortly thereafter took a year's sabbatical to serve as Fisheries Officer with FAO based in Rome, Italy, and to work on publications. In 1972 his seminal work, "Introduction to Fishery Science" was published. Also in 1972, he took leave of absence from the College of Fisheries to serve for two years as Associate Director in Charge of Research for the U.S. National Marine Fisheries Service in Washington, D.C.. He returned to the University of Washington and retired in 1976, continuing to engage in writing and consultant work.

Dr. Royce advised many foreign governments on aquatic environmental problems and fishery development. Working with the Fisheries Department, United Nations Food and Agriculture Organization, he contributed to their programs on fishery development and education in Africa, South America and Asia. He also served as advisor to the U.S. Section, International North Pacific Fisheries Commission.

Dr. Royce was an outspoken champion of the management of important fish populations such as tuna, marlin, flounder, haddock and salmon. Between 1935 and 1994, he wrote over 116 important professional papers, books and other scientific articles on many fishery-related subjects to include biology, research, history, fishing methods, fish population studies, conservation and aquaculture. His several textbooks on fishery science are still in use by many university programs.

Dr. Royce was a fellow member of numerous professional societies, including American Fisheries Society (AFS), American Institute of Fishery Research Biologists (AIFRB), Biometric Society, American Society of Limnology and Oceanography, International Academy of fishery Scientists, and American Association for the Advancement of Science. He was awarded AFS Honorary Membership for outstanding service to the Society and professional attainments, and in 1987 received the AIFRB Outstanding Achievement Award-Individual, the Institute's highest award to fishery scientists for achievement and the advancement of fishery science.

Bill had a lifelong love of the sea and sailing, and in 1976 sailed his boat *Mermaid II* with his wife Mary and son Jim from Annapolis, Maryland, through the Panama Canal to his Seattle home. He was a skilled craftsman, having remodeled several homes and built numerous items of furniture. His sons recall him as a consummate do-it-yourselfer. He also thoroughly enjoyed tennis, skiing, and bird hunting.

Bill's wife of 55 years Mary Hertzell Savage Royce and grandson Bryan preceded him in death. He is survived by three sons, James and partner Alex, William and his wife Lynda, Andrew and his wife Joyce, and two grandchildren, Matthew and Casey. A remembrance and celebration of his life was held at son Andrew's home in Seattle on January 31, 2004.

Submitted by: Robert Burgner

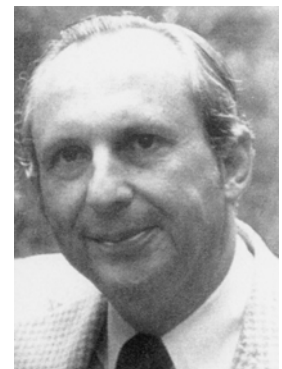
One of Professor Royce's favorite social activities was the fisheries faculty monthly poker game. "I think our maximum bet was 25 cents," Burgner said. "But we played just as hard as if we were playing for big money."

Ralph William Yerger, Sr.

July 31, 1922 – May 11, 2003

Husband, father, grandfather, colleague, friend – the eight decades of Ralph William Yerger's life were filled with living, learning and loving.

One could have guessed his destiny from early on – valedictorian of his Pennsylvania high school class; an eighteen year old who journeyed with three buddies 9,000 miles for 6 ½ weeks to the far west and Mexico at a total personal cost of \$125; distinguished World War II army officer (discharged as captain) in the Battle of the Bulge; his B.S. and M.S. from Penn State; a prestigious PhD in vertebrate Zoology from Cornell University. All these led to Florida State University in the fall of 1950 where he found his real home both professionally and personally.



Professionally he rose in rank from assistant to full professor in the short span of eleven years. During his 38-year teaching career, 10 of his students were awarded doctorates and an additional 19 completed master's degrees – most in ichthyology, the study of fish, his chosen specialty in the Department of Biological Science where he headed Florida State University's Fish Collection for 32 years. In fact one species was named for Ralph. Moreover, he was selected as the first recipient of the Margaret Menzel Teaching Award in Biological Science. Further one of his grateful former students, Gwynn Aiken, endowed the Yerger Lectureship in Biological Science – a permanent testimony to his distinction as a scholar and teacher.

Perhaps the greatest tribute to his teaching was his personal appeal to a young coed, namely Frances Irene Winterle. Her taking his introductory course eventually led to their 1954 June wedding which in turn led to their splendid children – Paula, Rachelle, Loreen and Ralph, Jr. and in turn to four wonderful grandsons Brian, Keegan, Hans and Chase.

The privilege of knowing Ralph well occurred for me when he became my colleague in the College of Arts and Sciences where Ralph served as associate dean or acting dean from 1977-83.

As a person, Ralph was not complex. Some would say he was “matter of fact,” not given to expressing emotions, “a man of few words.” All true and yet, what do you make of that twinkle in his eyes? He did so enjoy life.

Surely this man was organized. Irene recalls the first day of that introductory class, Dr. Yerger walked to the lectern in the classroom, opened his folder of notes, and immediately the bell rang for class to begin. At the end of class, he closed his notes and immediately the bell rang for class dismissal. At Christmas, each of the children's gifts were carefully arranged by father Ralph in predetermined spaces. On Sundays after church, the children recall, there was a regular routine – lunch at a fast food place and then a drive out in the country, the area where Killearn Estates now stands. That was one routine and another was he never raised his voice to children or wife, except when he snored.

When grading papers he was notorious for making a big red X wherever there was a mistake or error. Irene recalls saying something to the effect, “Don't you think that will make your students feel bad?” To which Ralph replied, “I want them to feel bad!”

Ralph (and Irene) was a traveler, for research and pleasure. Besides many of the states, they traveled in 17 other nations. And though the University Club interest group Globetrotters, there were other places they visited as well.

One passion, not to be overlooked, was Ralph's love of eating. During their courtship days Ralph impressed his future wife's mother at Thanksgiving by consuming three helpings of turkey with all the trimmings. They say that the way to a man's heart is through his stomach and for many the way to a woman's heart is through is stomach. A colleague, knowing of his impending marriage and capacity for eating, asked him, “Can she cook?” Ralph replied, “Would I be marrying her if she couldn't?”

As some of you know, after retirement Ralph became interested in genealogy – as he put it “a frustrating and never ending venture.” Bob Short, Ralph's colleague and friend – they both came to FSU in 1950 – tells this story on Ralph. It seems he was lecturing, later in life, on the three effects of the aging process. After declaring that the first thing to go was memory, he paused and paused some more and, lamented, “I've forgotten the other two.”

Memorial contributions may be made to Big Bend Hospice, 1723 Mahan Center Blvd., Tallahassee, FL 32308.

The Ralph Yerger I Knew

By Tom Lewis

I first met Ralph in August of 1969. I had just arrived in Tallahassee from Boston to begin graduate work at FSU and was in cultural and climatic shock! What I remember about that meeting was the bandaged hand. Ralph had been injured by a madtom, a small catfish with venomous pectoral fin spines. Little did he know that he was encountering a new, and perhaps even more painful, mad tom; mad Tom Lewis, the graduate student who wouldn't go away. I was certainly not his first graduate student and I don't believe I was his last, but I was certainly one of his longest. It was Ralph's patience and kind heart that got me through graduate school.

As I struggled and struggled to come up with my topic for my Master's thesis, in desperation, Ralph tried to get me to work on the taxonomy of freshwater gobies from Panama by looking at differences in their teeth! That was what I needed. The thought of working on the teeth of gobies, teeth so small that you had to use a scanning electron microscope to see them, so terrified me that I immediately settled to working on several off-shore species of searobins. For my dissertation, again after an agonizingly long period of time, I picked a topic that Ralph felt was somewhat out of his area of expertise. But he stuck with me and was a tremendous help both in the research and writing, man could he take a blue pen to your manuscript, and more importantly he helped me settle on a committee that would assist me greatly. Ralph demonstrated a fierce loyalty to his graduate students. He stood beside me and may have even saved my career at one point when Hal Beecher and I had the unfortunate experience of destroying two outdoor motors in a two-week period. Others felt we had been careless, and the Department Chair called us in to account for our actions. Ralph went with us and I believe it was his unequivocal support that got Hal and I through this uncomfortable event.

During my many, many, many years as a graduate student under Ralph I came to know him as a warm, caring teacher and mentor. His field trips to West Florida, Alligator Point and Panama City were legendary. The fish populations in these areas are only now beginning to recover from the zealous collecting of his ichthyology students. His comparative anatomy class was the introduction to anatomy for many a future MD, or the catalyst for a new career direction for others. Outside of the classroom we experienced many adventures as well as misadventures in the field while collecting and cataloguing fish in the Apalachicola National Forest and in the Kissimmee River basin. I have seen Ralph walk on water! Although I must give a large part of the credit for his feat to the alligator we managed to infuriate with our seine net. I learned, at the same time, how hard it is to climb and balance in mid air on the long thin pole that was attached to that seine net.

I always had the impression that, although very capable, Ralph was somewhat of a reluctant researcher. His true passion was teaching and working with students, both graduate and undergraduate. It is in this area that he most influenced me. I have spent more than 25 years in education, in large part, because of Ralph. His style of teaching, the animation, the excitement, the attention to detail and research, that was the hallmark of his classes is what I remember and strive to emulate every time I step in front of a class. Through his many graduate students, myself included, Ralph continues to teach and inspire new students. This is the legacy of a great teacher.

Schuck Responds to Recruitment Committee Report – What’s in a name?

To: AIFRB Editor

From: Howard A. Schuck

The following responds to *Briefs* of Sept./Oct. 2003 which asks for comments on the Role of AIFRB and also ideas as to attracting new members.

Although as a disciple of Will Thompson I had discussions with him, I have no insight as to his rationale for defining the role of the new institution or for selecting its title “American Institute of Fishery Research Biologists.”

I am not a grammarian, or usually a commentator on how leaders organize or administer the organizations I belong to. But selecting a title for my forthcoming book has forced me to examine the meaning of some important words. As a member of AIFRB, I looked to its title for ideas. Merely changing an organization’s title can lead to and imply a change in role and can also define what types of people are appropriate for membership. The three words of AIFRB (American, institute, and fishery) seem highly appropriate. But the last two words might be considered for change.

One alternative would be to end the title at the word “research” (dropping the term biologists).

A result would be diminution of the perception (which seems implied by the present title) that most or all members are biologists. I doubt that this is true. Dropping the misnomer might make some fishery professionals doing research feel that they need not be a biologist in order to join and participate in the Institute.

The new title could become “American Institute of Fishery Research”, or AIFR.

Pros and cons exist, of course, for any new idea and there are also pros and cons for leaving any situation unchanged. I personally am too far removed from contemporary fisheries activities to be qualified to judge whether this change in orientation would benefit our organization enough to warrant the disruption necessary to make it happen.

Thus I am merely suggesting an idea that perhaps could be evaluated by those more affected.

Howard A. Schuck

Recruitment Committee Chairs Gil Radonski and Marty Golden would appreciate comments from other members. –Ed.

Aron, Daniel Find EDF “Good Fish” List Fishy

Louis Daniel wrote:

We hold the key to setting the record straight.

I received the Nov.-Dec. 2003 AIFRB newsletter and was disappointed to see the article from Environmental Defense “You hold the key to a healthy ocean.” For a sporting or nature magazine to publish this information is understandable, not a newsletter of professional fishery biologists. The article is misleading and continues to misrepresent fact. I was particularly surprised to see an un-cited reference to the Myers and Worm article that has been heavily criticized by our colleagues as flawed. Yet the statement that “commercial fishing has wiped out an estimated 90% of the large predatory fish” lives on in our pages as fact?

The assumption made when reading this article is that Best Choice seafood are those species that are farmed responsibly (how is this defined?) or well managed, while the Worst Choices presumably are not. I disagree with some of the species on the Best Choices list, as several are either not being managed at all or harvest practices result in significant habitat damage. I take great exception, however, to several of the Worst Choices as a fishery biologist for the state of North Carolina and as Chair of the South Atlantic Fishery management Council's Snapper-Grouper committee. Many of the species on the Worst Choice list are well managed and many are either recovering or recovered. For example, the Snapper-Grouper fishery in the south Atlantic is well managed through limited entry, spawning season closures, size limits, bag limits, trip limits, etc. In addition, gear types that have been shown to result in high levels of bycatch or habitat destruction (e.g., fish traps, entanglement nets, and fish trawls) have been prohibited in our Snapper-Grouper Fishery Management Plan amendments for a decade. Few of the snapper and none of the grouper species in the south Atlantic have undergone a peer-reviewed assessment. Based on the best available data, however, the shallow water grouper complex in the south Atlantic is not considered overfished or undergoing overfishing and independent survey data indicate upwards trends in abundance and size. What justification exists for a blanket listing of snapper and grouper on this list? And how about tilefish, shark, and skate? What species? While there are some species (e.g., golden tilefish, dusky shark, barndoor skate) that may indeed be overfished in many locations, we have no assessments on most of these grouped species and have no clue as to their current status.

These lists unjustifiably affect an already ailing fishing industry that receives enough negative press as it is and the questions raised above should be answered before being published as fact in a professional newsletter whose mission is to promote sound fisheries science.

Ed. – Bill Aron, in a briefer statement, concurred with Louis. I explained to Bill that as I perceive the modern arena of fishery management, I see major environmental groups, because of their political acumen and huge memberships, as likely to influence fishery issues as much or more than science. Thus it is important for fishery professionals to be aware of the efforts and “thinking” of environmental groups. The EDF list was published in Briefs with full attribution as to source so that AIFRB members, my audience, could make their own decisions as to the legitimacy of the document. Mere publication of material in our non-peer reviewed newsletter hardly constitutes a stamp of approval by fishery science. I will conclude by stating that Louis Daniel’s portrayal of the state of the snapper-grouper (actually about 70 species of about 10 families) resource would be regarded by many as overly rosy.

Recent or Upcoming Meetings of Note

55th Annual Meeting

American Institute of Biological Sciences

March 16-18, 2004

Westin Grand Hotel, Washington, D.C.

Invasive Species: The Search For Solutions

*6th International Congress
on the Biology of Fish*

This meeting will be held August 1-5, 2004 in Manaus, Brazil. Titles and a short abstract should have been submitted by March 10, 2004. Take advantage of this once-in-a-lifetime opportunity to see the heart of the Amazon and catch up on the latest advances in fish biology. Complete travel packages from the USA start at less than \$1000 U.S. for airfare, hotel, and all meals. Student travel grants are also available. All the details can be found on the Congress web site at: www.fishbiologycongress.com.br

Don MacKinlay

Chair, Fish Biology Congress

C/o Habitat & Enhancement Branch

Fisheries & Oceans Canada

Suite 200 – 401 Burrard Street

Vancouver, BC V6C 3S4 Canada

(604) 666-3520; Fax (604) 666-0417

mackinlayd@pac.dfo-mpo.gc.ca

EPA Money Available for Florida Keys National Marine Sanctuary

Available: “Announcement of Opportunity for Federal Funding” associated with the Water Quality Protection Program (WQPP) for the Florida Keys National Marine Sanctuary. The announcement describes the funding opportunities that the U.S. Environmental Protection Agency (EPA), Region 4 is offering to continue the long-term status and trends monitoring projects (water quality, coral reef, and seagrass), data management program, and special studies program established by Region 4.

The Florida Keys National Marine Sanctuary was created with the signing of Public Law 101-605, The Florida Keys National Marine Sanctuary and Protection Act of 1990. The 1990 Act directed EPA and the State of Florida, in consultation with the National Oceanic and Atmospheric Administration, to develop a WQPP for the Sanctuary. The National Marine Sanctuaries Program Amendments Act of 1992 requires that EPA and the State of Florida implement the WQPP. In addition, the monitoring projects and special studies included in the announcement support EPA’s 2003 Strategic Plan, Goal 4: “Healthy Communities and Ecosystems – Protect, sustain, or restore the health of people, communities, and ecosystems using integrated and

comprehensive approaches and partnerships.”

Funds for the monitoring projects and data management are anticipated to be about \$1,090,000 for FY 2005 activities. Funds for special studies are anticipated to be about \$200,000 for FY 2005 through FY 2006. All federal funds will be awarded under the authority of Section 104(b)(3) of the Clean Water Act, which authorizes federal assistance agreements for conducting or promoting the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys and studies relating to the causes, effects, extent, prevention, reduction, and elimination of pollution. Final decisions on the amount of each award will be dependent on sufficient funding in EPA’s annual appropriations and the amount of funds made available to the Region 4 South Florida Geographic Initiative and the WQPP.

Federal assistance agreements for the monitoring and data management projects will be awarded for two years, FY 2005 and FY 2006, with the project and budget periods beginning on October 1, 2004 and ending on September 30, 2006. Federal assistance agreements for the special studies projects will be awarded for FY 2005 with the project and budget periods beginning on October 1, 2004. However, special studies may cover one or two years and therefore, the project and budget periods may end on September 30, 2005, or September 30, 2006.

If you have questions or require additional information, please contact Mr. Fred McManus at (404) 562-9385, email at mcmamus.fred@epa.gov; or Dr. Bill Kruczynski at (305) 743-0537/(850) 934-9298, email at kruczynski.bill@epa.gov. The subject announcement and associated attachments have been posted on the Region 4 Website at www.epa.gov/region4/water/nep/nepindex.html.

Ed.- unfortunately this announcement arrived too late for our Nov.-Dec. issue. Deadline for preproposals was February 25, 2004.

New Tournament Records set during 67th annual Silver Sailfish Derby

January 8-10, 2004

West Palm Beach Fishing Club, West Palm Beach, FL

1. Best first day ever of 3-Day Derby – 155 sailfish releases
2. Best second day of 3-Day Derby – 373 sailfish releases
3. Best single day Derby total ever (Day #2) – 373 sailfish releases
4. Best 3-Day Derby total ever – 636 sailfish releases
5. Best single day total posted by one boat in Derby – *Cookie* with 30 sails Day #2
6. Best tournament total by a Derby boat ever – *Get Lit* with 45 sailfish releases
7. Most individual sailfish releases in 3-Day Derby – Peter Miller of Miami with 26 aboard *Get Lit*.
8. Most ever boats to score double digits in 3-Day Derby – 28 boats caught 10 or more sails during this year’s Derby (just under ½ of the tournament fleet)
9. Most ever individuals to catch at least one sailfish during Derby – 177 anglers
10. Best catch/per boat day average for 3-Day Derby – 3.6 sails per boat day (historical tournament average is 1.5)
11. Best ever single day catch/per boat day average for entire Derby fleet – Day #2 with an incredible 6.3 sails per boat (59 boats fished Day #2)
12. Most ever sailfish released on circle hooks in any tournament held in United States – 636 sailfish releases all on non-offset circle hooks (Tournament approved hooks were: Eagle Claw Laser Sharp L2004EL and Penn International Billfish hook P170)
13. Could be the most ever Atlantic sailfish releases posted by any 3-Day tournament anywhere, anytime (according to Dr. Eric Prince @ NMFS Miami)

Submitted by: John Jolley

White Marlin I:

Lawsuit filed to Protect Atlantic White Marlin from Longline Fishing

January 14, 2004

Popular sport fish threatened with extinction due to agency mismanagement

Washington, D.C. – Two environmental organizations filed suit in Federal District Court today seeking to protect the Atlantic white marlin under the Endangered Species Act (ESA). The suit, filed by the Center for Biological Diversity and Turtle Island Restoration Network was brought against the National Marine Fisheries Service (NMFS), an agency within the Department of Commerce charged with managing fisheries and protecting marine species under the ESA. The lawsuit seeks to overturn a previous determination by NMFS that protecting the white marlin under the ESA was “not warranted.” The agency reached this conclusion despite the findings of its own scientists that current harvest levels are unsustainable and that, even under the most optimistic management scenarios, the species would continue to decline to dangerously low levels. “In rejecting ESA listing for the white marlin, NMFS ignored the science and it ignored the law,” said Brendan Cummings, an attorney with the Center for Biological Diversity. “We’re confident the courts will overturn this unlawful decision.”

The primary threat to the white marlin is commercial fishing, which accounts for over 99% of the reported mortality for the species. Over 90% of this mortality is as bycatch in longline fisheries seeking protection of the white marlin under the ESA. The commercial fisheries that are the primary culprit in the decline of the white marlin are managed by NMFS and the International Commission of the Conservation of Atlantic Tuna (ICCAT). “Longline fishing is not just bad for white marlin, but it is devastating marine biodiversity – wiping out endangered sea turtles, sea birds and marine mammals, all of which are unnecessarily killed by this destructive fishing gear,” said Todd Steiner, Executive Director of the Turtle Island Restoration Network.

According to scientists advising ICCAT, white marlin have been reduced to 6% of their pre-exploitation levels. The species has declined consistently at about 3% each year since the mid-1980s. While the species is impacted by numerous countries’ fishing fleets, because primary spawning and feeding habitats are in U.S. waters, restrictions on longline fishing in these marlin “hot spots” would go a long way towards protecting the species and reversing its decline. “We may not be able to save the South Atlantic white marlin (which would require international agreement), but we can save the North Atlantic population since it spends much of its adult life in U.S. waters” said Mr. Chambers. “Doing so will also help restore healthy populations of North Atlantic blue marlin, swordfish and sailfish since they use the same ‘hot spots’ for spawning and feeding.”

“NMFS has the authority and the obligation to proactively close important marlin spawning and feeding grounds to longline fishing,” said Mr. Cummings. “If NMFS fails to do so, the species will continue to decline and listing under the ESA will be unavoidable.”

A copy of the original petition to list the white marlin under the ESA, as well as additional information of the status of the species can be found at www.BigMarineFish.com.

A copy of complaint filed today in Federal Court can be found at www.biologicaldiversity.org.

The organization filing suit are represented by attorneys Brendan Cummings of the Center for Biological Diversity and Jay Tutchton of the Environmental Law Clinic at the University of Denver, College of Law.

White Marlin II: A Local View

White marlin may land on federal endangered species list

Distinction could affect blue marlin fishing in state

By Patricia Smith, Freedom ENC

Morehead City, NC – Should a judge rule that white marlin must be put on the federal endangered species list, it could affect recreational blue marlin fishing in North Carolina.

But what might happen is still so obscure and likely so far down the road that officials with the Big Rock Blue Marlin Tournament said they will only monitor the situation, for now. “If it looks like it may become a reality then we will come up with a plan,” said Carol Lohr, a Big Rock board member. Currently, white marlin fall under a tournament tag-and-release competition. “I don’t know of anyone that’s killed one in years,” Lohr said.

Two environmental groups, Colorado-based Center for Biological Diversity and California-based Turtle Island Restoration Network, filed suit in federal District Court Jan. 14 against the National Marine Fisheries Service seeking protection of the Atlantic white marlin under the Endangered Species Act. The organizations named the commercial longline fishery, which targets swordfish and tuna, as the primary culprit for the decline since white marlin is an incidental catch in these fisheries. The group claimed that sports fishing is not a serious threat to the species.

NMFS Director Bill Hogarth said that if a judge orders the agency to list white marlin as an endangered species it would have to look closely, not only at the longline fisheries, but at billfish tournaments, as well. The same gear and bait used to catch white marlin is also used to catch blue marlin, sailfish and tuna, he said.

North Carolina does support a small longline fishery, mainly out of Hatteras and Wanchese. In 2002, 54 fishermen on 36 vessels made 572 longline fishing trips that yielded a catch of 2.6 million pounds, according to the N.C. Division of Marine Fisheries.

From: Sun Journal, New Bern, NC, January 28, 2004

International Game Fishing Association (IGFA) View: Fish Conference Fails to Hook Sport Fishers

“Managing our Nations Fisheries Past, Present and Future,” was the first of its kind conference sponsored by the eight U.S. Regional Fisheries Management Councils and NOAA Fisheries. The conference held in Washington, DC, in November unfortunately gave little time to the concerns of recreational anglers who represent the largest part of the U.S. fishing industry.

During the three-day event there were 11 separate sessions held with over 90 panelists. However, there was only one panelist representing the interests of sport fishers. The lone panelist from the sport fishing community was a last-minute addition due to pressure from a sport fishing lobbyist organization. Speakers included politicians, bureaucrats, representatives from the eight regional management councils, scientists, lawyers, representatives and consultants for the commercial fishing industry, university professors, and a few token environmentalists.

When given a chance to speak, the environmentalists brought a fresh breath of reality to an otherwise general message that fish stocks are in pretty good shape and getting better and fishery managers are doing a good job. Many outside of Washington strongly disagree with that message. Each of the eight regional councils made a presentation to the gathering of over 700 conference participants. A considerable amount of emphasis was given to the management of pollock and crab fisheries in the North Pacific. These two fisheries are managed by the North Pacific Fisheries Management Council, and were referred to several times as shining examples of successful fishery management, but attendees saw little relationship between pollock in Alaska and the depleted grouper, snapper, marlin,

shark and other species in the regions to the south.

There was considerable discussion about keeping the already subsidized commercial industry profitable and how to get the message across to the public to eat more seafood. There was no mention of the impact on the recreational fishing industry of fewer fish to catch.

From: International Angler: 66(1) Jan.-Feb. 2004

Nature Strikes Back

Giant sperm whales have figured how to pluck cod from fishing lines

The Associated Press

Anchorage, Alaska – Sperm whales have the largest brain of any animal and some in the Gulf of Alaska are proving it at mealtimes: letting humans do all the work.

Researchers are now investigating what commercial fisherman have long noticed, that whales have learned to pluck sablefish off hooks attached to their longlines. “They somehow just pick them off like grapes,” said fisherman Dick Curran, who has fished the Gulf’s deep waters for decades. “I don’t know how they do it.”

No one knows how the whales have come to target sablefish, also called black cod, whose oily, rich flesh has become a lucrative product in Japanese markets. So a coalition of commercial fishermen and biologists has begun to investigate with about \$200,000 from the North Pacific Research Board. “We don’t want the fishermen to have an economic loss. Plus it’s a biological loss, because we don’t know how many sablefish are being taken,” said whale specialist Jan Straley, a lead investigator in the project.

To harvest black cod, fishermen sink a 2-mile longline with baited hooks every 3 to 6 feet. Each end is anchored to the sea floor along the continental slope and buoyed at the surface. After an 8- to 12- hour “soak,” fishermen haul the line, sometimes harvesting hundreds of sablefish in a single set. Over the past few decades, some of the gulf sperm whales apparently realized that fishermen were bringing this deep food source to the surface, and learned to remove 20- to 30-inch fish from hooks.

From: Sun Journal, New Bern, NC, February 4, 2004

Aleutian Islands Pollock Fishery

In a recent action by the U.S. Congress, the North Pacific Fishery Management Council was directed to apportion quota to the Aleut Corporation for a directed pollock fishery in the Aleutian Islands. The intent of the legislation is to provide for economic development in the community of Adak. The Council approved proceeding with analysis of a set of alternatives related to opening the Aleutian Islands to a pollock fishery. The Council’s intent is that the quota for an AI pollock fishery will not result in exceeding the 2 million mt OY cap in the Behing Sea-Aleutian Islands groundfish fishery. The text of the motion is posted on the Council’s website. NMFS and Council staff will prepare an EA/RIR/IRFA for initial review at the April meeting. At that time the Council intends to release the EA for public review and take final action in June, to allow for a potential 2005 fishery.

The Council also asked its Steller Sea Lion Mitigation Committee to review the current Steller sea lion protection measures in the Aleutian Islands region, and to informally discuss with NMFS the potential issues associated with an Aleutian Islands pollock fishery. As this directed fishery develops, the Congressional action requires 50 percent of the pollock harvest be by vessels less than 60 feet by the year 2012. The Council requested a review of how the geographic closures in the Adak area may affect small vessel operations. Staff contact is Bill Wilson.

From: North Pacific Fishery Management Council, News and Notes, February 2004

Salmon Season Update

The 2003 West Coast salmon fishery was again one of the best seasons in recent history for most sectors, following a very successful 2002 season. Commercial catches were up for all three states (CA, OR, WA) and only slightly lower for the Treaty Indian fishery. Recreational fisheries in Washington and Oregon exhibited greater effort than in 2002, and similar or greater effort than 2001. Chinook catch was down from 2002, but the coho catch was substantially higher. For California recreational fisheries, catch and effort were down in most areas, due primarily to a more northern and offshore distribution of chinook this year. The exception was the Fort Bragg area, where catches were good this year.

TOTALS THROUGH OCTOBER 15	Effort ^a			Chinook Catch			Coho Catch		
	2003	2002	2001	2003	2002	2001	2003	2002	2001
TROLL									
Treaty Indian	281	286	540	34,674	35,997	25,406	8,392	8,145	36,769
Washington Non-Treaty	1,666	1,338	764	55,585	53,819	21,229	8,548	180	4,984
Oregon	10,889	9,483	10,125	290,692	231,720	259,449	6,439	1,500	9,367
California	9,640	17,000	13,900	459,970	388,700	193,100	0	0	0
Total Troll	22,476	28,107	25,329	840,921	708,236	499,184	23,379	9,825	51,120
RECREATIONAL									
Washington	124,139	95,200	126,400	34,260	57,821	22,974	139,453	74,134	168,062
Oregon	142,398	94,536	113,530	39,576	45,307	27,104	113,234	36,102	94,342
California	129,990	206,700	162,600	92,150	179,300	97,800	0	0	0
Total Recreational	396,527	396,436	402,530	165,986	282,428	147,878	252,687	110,236	262,404
PFMC Total	NA	NA	NA	1,036,907	990,664	647,062	276,066	120,061	313,524

^a Treaty troll effort is reported as landings, other troll effort is days fished. Recreational effort is angler trips.

Bycatch Reduction Devices (BRDS) Required in the Shrimp Fishery of The Eastern Gulf of Mexico (Small Entity Compliance Guide)

The National Marine Fisheries Service (NOAA Fisheries) has published a final rule requiring the use of bycatch reduction devices (BRDs) in the Gulf of Mexico shrimp fishery east of 85°30'W. longitude (east of Cape San Blas, Florida). This requirement applies to the exclusive economic zone (EEZ), which includes all waters between 9 and 200 miles off the west coast of Florida.

Beginning February 9, 2004, a NOAA Fisheries certified BRD must be installed in each net rigged for fishing aboard vessels trawling for shrimp in the eastern Gulf of Mexico EEZ. Try nets with a headrope length of 16 feet or less are exempt from this requirement.

A shrimp trawler fishing for royal red shrimp is exempt from the BRD requirement, as are vessels using rigid-frame roller trawls that are 16 feet or less in length.

This requirement would complement existing federal regulations requiring the use of BRDs in the western Gulf of Mexico EEZ (west of Cape San Blas, Florida), as well as Florida regulations that require the use of BRDs in their territorial waters. This compatibility of regulations throughout the Gulf of Mexico will ease enforcement issues.

BRDs approved for use in the eastern Gulf of Mexico EEZ include the "Fisheye," "Gulf Fisheye," "Jones-Davis," "Expanded Mesh" and "Extended Funnel." The "Extended Funnel" BRD is certified for use in Florida territorial waters, along with the "Florida Finfish Excluder" (equivalent to the NOAA Fisheries certified "Gulf Fisheye").

From: Gulf Fishery News, Jan.-Feb. 2004

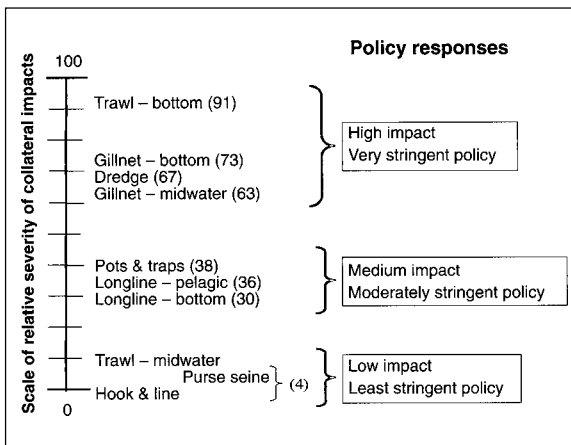
Collateral Damage of Fishing Gear

Figure 6: Scale of relative severity of collateral impacts of ten fishing gears, and possibly policy responses. (Based on responses of fishers, scientists, and managers)

From: Shifting gears: Assessing collateral impacts of fishing methods in U.S. waters.

Chuenpagdee, R.; L. Morgan, S. Maxwell, E. Norse and D. Pauly. *Frontiers in ecology and the environment* 2003: 1(10) 517-524

*Of course, it all depends on where the fishing occurs. Heavy sinkers on the "zero impact" hook and line gear, when dragged through the extremely fragile and slow growing *Oculina* coral colonies of the South Atlantic region are, in aggregate, devastating. —Ed.*



Benson seeks specification of AIFRB Response to growing public involvement in fishery issues

Norm Benson wrote asking if the Institute has a planned response to the growing interest of the press and the public in general in fishery problems, given that the prestigious Wall Street Journal (among many press organizations) as well as National Public Radio and even commercial television news now regularly feature segments on fisheries. Norm has a good point. Would any of our Officers, Directors, or Members prepare for *Briefs* a document suggesting the best means for the Institute to inject its expertise and rationality into the public debate? —Ed.

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

Diana Watters
California Dept. of Fish and Game
350 Harbor Blvd.
Belmont, CA 94002-4018

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

BRIEFS, the newsletter of the American Institute of Fishery Research Biologists, is published six times a year. It is intended to communicate the professional activities and accomplishments of the Institute, its District, and Members; the results of research; the effects of management; unusual biological events; matters affecting the profession; political problems; and other matters of importance to the fishery community. Comments and contributions should be sent to the Editor, Dr. Gene R. Huntsman, 205 Blades Road, Havelock NC 28532, feeshdr@starfishnet.com. Subscription \$30 a year to Institutions and Non-Members. Officers-Richard Schaefer, 6211 Madawaska Rd., Bethesda, MD 20816, dickschaef@aol.com - President; Barbara Warkentine, SUNY-Maritime College, Science Dept., 6 Pennyfield Ave., Fort Schuyler, Bronx, NY 10465-4198, synodus@aol.com - Secretary; Allen Shimada, NMFS, Office of Science and Technology, 1315 East West Highway, Silver Spring, MD 20910, allen.shimada@noaa.gov - Treasurer. ISSN-8755-0075



*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