the shell-cracker

FLORIDA CHAPTER OF THE AMERICAN FISHERIES SOCIETY

http://www.sdafs.org/flafs

July, 2003

Summer is upon us with its promise of new projects and the chance to get our feet wet in the field. I myself hope to be on the opposite side of the world mucking around in equatorial tide pools by the time you read this. These times are opportunities to learn new techniques, see new habitats and take a fresh look at the world. For my part, I look forward to summer sojourns as a chance to escape the demands of the office and classroom. But truth be told, my rush to break out is motivated by reasons more deep-seated than diversion alone…above all I look forward to spending time with my students. Few things in life make me happier than sharing what little I know with students and interns in the field. Strange as it seems to me, my views on this subject are not especially common. Some of my colleagues, for example, have no time for students. They see their role, so they tell me, not as a mentor, but as scientific superheroes wrestling truth and enlightenment from chaos (I have this mental picture of them, like Archimedes, shouting 'Eureka!' every time they run an experiment). I am often caught off guard by this type of scientific hubris. The fact is most science doesn't open up new worlds of investigation; rather it illuminates small dark places in the larger scheme of things. Indeed it's easier to be a legendary actor or sports figure than a legendary scientist. Ever hear of Babe Ruth or Charlie Chaplin? My guess would be that most of you weren't even alive when they were around but you certainly recognize their names. Now can you name the scientists who won the Nobel Prize in Physiology last year[1], or the only ecologist to ever win[2] the Prize? Just a hunch, but I'll wager that most of you didn't have the correct answers at hand. The take-home message here is that despite optimistic self-assessments of our own importance, our scientific achievements are destined to be soon forgotten regardless of the honors they may have accrued. So, if our immortality is not guaranteed by our scientific achievements, how then is one to leave a legacy of accomplishment behind? I would argue that our students are our only lasting investment in the future. To be sure, they are more work than any experiment that we ever have or ever will do, and we can never be assured of good results. Some will go on to make us proud and some will disappoint us terribly, but all will leave their mark on us as surely as we have marked them. Much of what they become is because of or in spite of our influence, and each will take a little piece of us with them when they leave. As fisheries scientists we, more than most, are aware of our own history and our place in it. Our academic families are a rich tapestry of names like Louis Agassiz, David Starr Jordan, F. E.J. Fry and Carl Hubbs. The world remembers these biologists not because they were better researchers than their contemporaries (often they weren't), but because they were great teachers who left behind a multitude of well-trained students to carry on their traditions and ideas. By agreeing to take on a new graduate student, assistant or intern, we help them grow as intellectuals and they assure us that our own efforts are put to the best possible use. In the end we will be remembered not for the things we do, but the people we helped along the way; a little something to consider wherever your summer travels take you.

All the Best, Wayne A. Bennett
President FL AFS

[1]Brenner, Horvitz, and Sulston; [2]Nikolass Tinbergan, 1973

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Upcoming Events

Aug. 10-14, 2003 – 133rd Annual Meeting of the American Fisheries Society, Quebec City, Quebec.

Aug. 20–23, 2003 - AFS Early Life History Section 27th Annual Larval Fish Conference, Santa Cruz, CA.

Sept. 10-13, 2003 - 93rd Annual Meeting of the International Association of Fish and Wildlife Agencies: Celebrating the Leopold Legacy, Madison, WI.

Sept. 10-14, 2003 - Estuaries on the Edge: Convergence of Ocean, Land and Culture, Seattle, WA.

Oct. 11-15, 2003 - Annual Conference of the Southeastern Association of Fish and Wildlife Agencies, Mobile, AL.

Oct. 30-31, 2003 - Ecosystems: Restoration and Creation, Tampa, FL.

Nov. 5-7, 2003 - 23rd International Symposium of the North American Lake Management Society, Manshantucket, CT.

Nov. 7-9, 2003 - 3rd Annual American Fisheries Student Colloquium, Morgantown, WV.

February 23-25, 2004 - Annual Meeting of the Florida Chapter AFS, Brooksville, FL.

May 2-6, 2004 – 4th World Fisheries Congress, Vancouver, British Columbia.

Did we miss an event?

Email your event information to kimberly.tugend@fwc.state.fl.us for inclusion in the next issue!

Also, check out our Parent Society's calendar at http://www.fisheries.org/Calendar.shtml

Feature Article

Dolphin-who?

Richard McBride
FWC - Florida Marine Research Institute

Yes, this article is about the fish, not the mammal. Confusion about this common name – dolphin – has persisted for decades. To begin at the beginning, Carl von Linné (Linnaeus) named this species *Coryphaena hippurus* back in 1758. This is an important fishery species in tropical and temperate waters worldwide, where it is known by many different names: dorado (Cuba), delfin, doradilla, llampuga, lampuga, austriaco, dorado común (various regions of Mexico), Toohyaku (Japan), and mahimahi (Hawaii and most continental U.S. restaurants).

According to the book, '*Common and Scientific Names of Fishes from the United States and Canada*', the official common name for *C. hippurus* is dolphin (American Fisheries Society Special Publication 20; www.fisheries.org). However, this popular appellation often leads to confusion about which species one is talking about: the fish or the mammal. This confusion regarding our scaly – *versus* our just-slightly-hairy – brethren with fins should soon come to an end. An updated, but still-unpublished '*Names of Fishes*' book will change the common name of this species from dolphin to dolphinfish. In fact, 'dolphinfish' has already appeared in recent fishery assessments and in the most recent edition of '*Fishes of the Gulf of Maine*' (www.sipress.si.edu). Certainly this new common name will clear up the public's confusion over one of Florida's most important living marine resources.

Dolphinfish are BIG for Florida's fishing economy. They are caught along all of Florida's coastlines, although landings are concentrated in the southeastern part of the state. Fishing for dolphinfish can be an offshore adventure, typically occurring in the Gulf Stream system or on the other side of this "river in the ocean." Despite this need to go offshore to find them, the Marine Recreational Fisheries Statistics Survey (MRFSS) data show that dolphinfish are the number-one species targeted by Florida Atlantic coast anglers, making the dolphinfish sport-fishery arguably one of the most valuable fisheries to the state of Florida. About 90% of the dolphinfish landed in Florida are by recreational anglers. Florida's commercial dolphinfish landings add an additional value of 1.5-2.0 million US$ in dockside sales annually. Since 1986, a total (recreational and commercial) of 5-17 million pounds of dolphinfish are landed annually in Florida.

Looking beyond the fishery numbers, dolphinfish are a very popular offshore gamefish because of their brilliant hues, their fierce fighting ability once hooked, their excellent table fare, and their large size. The International Game Fish Association (www.igfa.org) world record dolphinfish is 39.6 kg (88 lbs.) caught near Exuma, Bahamas. According to Doug Blodgett, the IGFA Record Keeper, even heavier fish are occasionally reported but these have not been weighed on certified scales. The largest dolphinfish, typically males, tend to be more solitary. If you are targeting these big bulls, be prepared to burn lots of fuel. On the other hand, schools of smaller dolphinfish congregate beneath any object floating in the water such as wood or mats of *Sargassum* weed.

Because dolphinfish are so large, their short life cycle is remarkable. Most dolphinfish live only a year or two, and their maximum age is only 4 years old. Dolphinfish grow to more than 1 meter (40 inches), or over half of their maximum size, in their first year! These fantastic growth rates have been replicated under aquaculture conditions in North Carolina, Florida, and Hawaii. In the wild, dolphinfish are voracious carnivores, typically swallowing whole

flyingfish, mackerels, jacks, leatherjackets and occasionally other dolphinfish. Dolphinfish are also extremely fecund. They are capable of spawning during their first year of growth, at about 0.5 m (20 inches) fork length (FL), and individuals may reproduce several times during a single spawning season. Peak spawning in Florida occurs from December through May although reproductively active females have been observed during all months of the year.

Biologists at the Florida Marine Research Institute (www.floridamarine.org) have been recently investigating the life cycle of dolphinfish, and you may have encountered them at fishing tournaments where they have collected valuable samples for such research. This research was supported by Sportfish Restoration Funds (federalaid.fws.gov/sfr/fasfr.html) awarded to the Florida Fish and Wildlife Conservation Commission (www.floridaconservation.org). Results from this study show that egg output of dolphinfish increases rapidly in relation to female size. For example, last April (2002) we collected a 1.2 m (47 inch) FL female at the Beau Franklin tournament in Port Canaveral that had over 600,000 eggs ready to spawn! One new outcome of this recent research at FMRI concerns dolphinfish's size at maturity, which will be estimated based on hundreds of histological preparations of gonad tissue. Minimum-size limits are typically set in relation to size at maturity to promote egg output for maintaining a living (=renewable) marine resource. This size at maturity data will be of interest to anglers and managers alike, because both parties have expressed concern about the lack of a minimum size limit for recreational dolphinfish catches.

Presently there is no minimum size limit on recreational catches, although a recent draft of the dolphinfish *Fishery Management Plan* proposes a recreational fish size limit comparable to the existing commercial fish size limit along with both recreational and commercial catch limits (see winter 2003 newsletter at www.safmc.net). Anglers encountered in marinas and on the web are talking about a 24" minimum-size limit and about lowering the bag limit from 10 to 5 fish. Considering that dolphinfish can grow so fast, a minimum size limit may help improve the fillet size for the average fish harvested. For example, if a 20" fish is released in late summer, it may be 10" longer in only a couple of months. If too many small fish are taken then this leads to a condition called growth overfishing. Did you say that you don't believe that you will have a chance to catch that fish again in the open ocean? Well, consider that data from Mote Marine Lab (www.mote.org) indicates that a remarkably high percentage (5%) of dolphinfish tagged and released in the open ocean were recaptured! The unusually fast growth rate of dolphinfish and the high turnover (=short age) of dolphinfish populations should make them less susceptible to over-fishing than other longer-lived, slower maturing species. But this is not a free pass to anglers for unchecked fishing pressure. In terms of dolphinfish fishing, the frenzy of fishing on a large group of 'schoolies' is an outstanding memory for many offshore anglers, but it is precisely this situation that is the Achilles' heel of the dolphinfish fishery. If these schoolies are 'peanut' sizes, then unrestrained fishing effort can lead to growth overfishing. In fact, this behavior makes this species vulnerable to overfishing, because these 'schoolies' will typically stay close to a fishing vessel if at least one fish is kept in the water. It does appear that many of Florida's sport anglers are ready for the proposed regulations; this should be good for dolphinfish and the fishery.

If you would like to contact Rich McBride, he can be reached via email at Richard.McBride@fwc.state.fl.us.

Like to Write??

The Shell-Cracker staff is actively seeking individuals to write feature articles for upcoming issues. *Articles should address a current fisheries issue, program or research.* For more information or submission of articles, contact:

Kim Tugend
kimberly.tugend@fwc.state.fl.us.

Symposium Topic Announced!

The topic for next year's Florida Chapter meeting which is to be held February 23-35, 2004 has been announced by President-elect Mike Allen.

Improving Recreational Fisheries with Bag Limits and Size Limits: Effective Fisheries Management in Florida?

Marine and freshwater fisheries management strategies have changed greatly over the last 15-20 years. Prior to the late 1980's, simple harvest restrictions were used to manage most of Florida's recreational fisheries (e.g., statewide size limits and liberal bag limits). In response to increased fishing effort, diverse harvest restrictions have been implemented including species-specific bag limits, size limits, and fishing seasons. The Florida Chapter of the American Fisheries Society will be hosting a symposium to assess the effectiveness of the state's harvest restrictions. Topics will include:

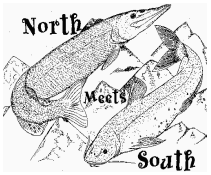
- How do stock assessment methods differ between marine and freshwater fisheries managers? What can we learn from each other?
- Have fish population parameters such as abundance, growth, mortality, recruitment, and population size structure changed in response to changes in harvest restrictions?
- Have harvest restrictions reduced the extent of overfishing in Florida?
- What factors influence the success/failure of a harvest restriction?
- From the recreational angler perspective, how should regulations be used in marine and freshwater systems?

This will be a half-day session with invited speakers from marine, freshwater, and recreational angler groups. Presenters will describe examples of how changes in harvest influenced Florida's fish populations and fisheries.

Individuals desiring to present research and management results consistent with the symposium topic should submit titles to *Mike Allen, Program Chair, Department of Fisheries and Aquatic Sciences, The University of Florida, 7922 NW 71st Street, Gainesville, FL 32653 (352) 392-9617 ext. 252, msal@ufl.edu.* DUE DATE for submitting symposium titles: Nov. 1, 2003.

Platform presentations will be scheduled for 20 minutes; anticipating a 15-minute presentation followed by a 5-minute question/ answer period. PowerPoint presentations are preferred, however slide presentations (2×2 inch, horizontal orientation) can be accommodated.

3rd Annual AFS Student Colloquium



All students from the Southern and Northeastern Divisions of the American Fisheries Society are welcome to a weekend of talks and socials! This will be a wonderful opportunity for fisheries students to learn more about current research in their field. The meeting will start on Friday with a social in Morgantown. We will have student presentations on Saturday and potentially Sunday at the Westvaco Natural Resources Center. All undergraduate and graduate students are encouraged to present proposed projects, preliminary data, or completed research. For more information, refer to:

http://www.forestry.caf.wvu.edu/wvuafs.

CONGRATULATIONS

The FWC – Florida Marine Research Institute welcomes Courtney Wellington, their first Hutton Scholarship Award Winner.

Courtney Wellington has been chosen as one of the 55 students nationwide to participate in the 2003 Hutton Junior Fisheries Biology Program, an innovative education program developed by the American Fisheries Society (AFS). Courtney is a senior at Dixie M. Hollins High School and has been matched with her mentors Rich McBride and Kathy Guindon-Tisdel through AFS for a summer-long, hands-on experience in fisheries science.

Ms. Wellington will be exposed to a variety of projects within fisheries biology including Project Tampa Bay (release of hatchery red drum into Tampa Bay) and studies on American shad, hogfish, pompano, tarpon, and wahoo.

Courtney (right) looking over the end of the board observing and learning while Ginny Chandler (middle) works up the fish. Dr. Rich McBride (left) is supervising!

The Hutton Program was designed primarily to stimulate interest in the fisheries science profession among minority and women high school students, though all high school sophomores, juniors, and seniors are eligible for the Hutton Program.

In the Hutton's third year, AFS received 192 eligible student applications from across the country and Puerto Rico and selected 55 applicants to receive scholarships and mentorships. The chosen students reflect the diversity of the United States: there are seven African-American students, six Native American students, five Hispanic students, two Asian-American students, one Arab-American student, and one Haitian-American student. Caucasian students make up 60% of the group, and well over half of those students are female.

This summer, Hutton Scholars will be working with their mentors in Puerto Rico and 23 states, including Alabama, Alaska, Arkansas, Arizona, California, Connecticut, Florida (of course), Idaho, Illinois, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, New Jersey, New Mexico, North Carolina, Ohio, South Carolina, Tennessee, Texas, Virginia, and Washington.

AFS received a grant for the 2003 Hutton Program from the National Fish and Wildlife Foundation with financial support provided by the National Oceanic and Atmospheric Administration, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Forest Service. Additional financial support came from the NOAA Fisheries, U.S. Forest Service, Alaska Department of Fish and Game, Progress Energy, and several AFS subunits.

Co-sponsors of the Hutton Program include the District of Columbia Government/Fish and Wildlife Division, National Association of Biology Teachers, Mississippi-Alabama Sea Grant Consortium, and the University of Arkansas at Pine Bluff.

For more information on the American Fisheries Society and the Hutton Junior Fisheries Biology Program, please visit the Hutton website at www.fisheries.org/Hutton.

ANNOUNCEMENTS

New Online Resources:

- The book *Otolith Removal and Preparation for Microstructural Examination: A Users Manual (1991) by D.H. Secor, J.M. Dean, and E.H. Laban,* is now available online at:

http://cbl.umces.edu/~secor/otolith-manual.html

This includes updates to the 1991 edition that are very useful to scientists active in this research area.

- The book *A Bibliography of the Early Life History of Fishes Volume 1, List of Titles,* which was originally compiled, edited, and published in 1988 by Robert D. Hoyt is available at:

http://scilib.ucsd.edu/sio/indexes/hoyt.html

- The American Fisheries Society (AFS) has announced its newest service – *Fisheries InfoBase. Fisheries InfoBase* adds an additional 10 years (1988-1997) of journal articles to the existing AFS online database (1998-current). AFS Journals Online contains electronic versions of the complete contents of the four AFS journals: Transactions of the American Fisheries Society, North American Journal of Fisheries Management, North American Journal of Aquaculture (formerly the Progressive Fish-Culturist), and Journal of Aquatic Animal Health.

Fisheries InfoBase is available immediately as a separate subscription, running through December 2003. 2003 rates are $15.00 for individual subscribers, and $190.00 for libraries and institutions. (2004 rates will be $25.00 for individuals and $380.00 for libraries and institutions).

New Book Releases:

- *Strategies for Restoring River Ecosystems: Sources of Variability and Uncertainty in Natural and Managed Systems* by Robert C. Wissmar and Peter A. Bisson, editors

- *A Guide to Sampling Freshwater Mussel Populations* by David L. Strayer and David R. Smith, authors.

KNOW SOMEONE WHO IS GRADUATING?

Do you know of a student who has graduated or will be graduating with a degree in a fisheries-related field? We would like to acknowledge all of our 2003 graduates in our October issue of the Shell-Cracker. Please email the following information to kimberly.tugend@fwc.state.fl.us by the deadline, September 30, 2003.

Name and School Affiliation
Degree Level (Undergraduate, M.S., Ph.D.)
Thesis Title, if applicable
Future plans

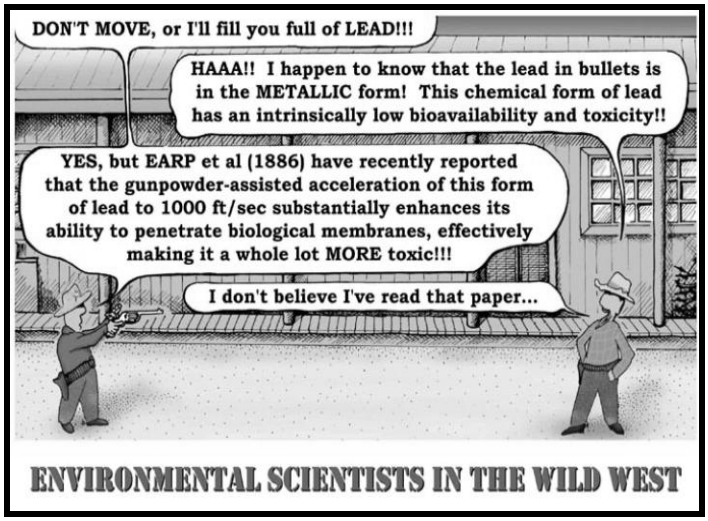
JOB LISTINGS

AFS Job Center Online:
http://www.fisheries.org/jobs.html

ASLO Job Listings:
http://www.aslo.org/jobs.html

Texas A & M University Job Board:
http://wfscnet.tamu.edu/wfscnet/jobs/jobs.htm

USA Jobs - Federal Job Listing:
http://www.usajobs.opm.gov/



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