

Florida Aquaculture

2007 hurricane prediction

The Colorado State University team of Philip Klotzbach and William Gray have revised their forecast for the 2007 hurricane season.

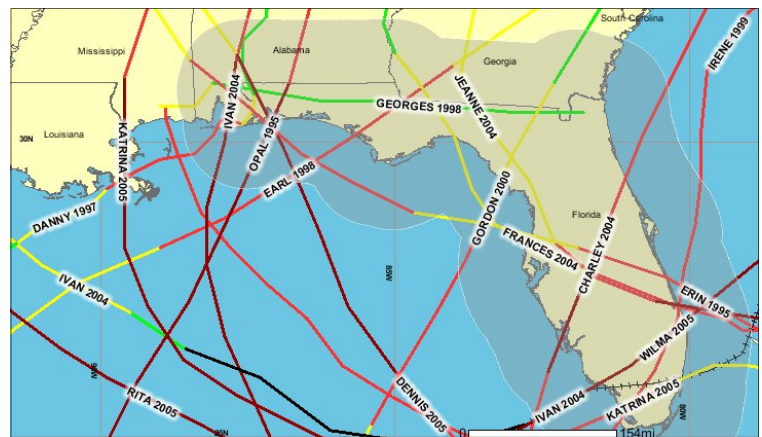
They now predict the Atlantic hurricane season will be much more active than the average 1950-2000 seasons. They estimate that 2007 will have about 9 hurricanes (average is 5.9), 17 named storms (average is 9.6), 85 named storm days (average is 49.1), 40 hurricane days (average is 24.5), 5 intense (Category 3-4-5) hurricanes (average is 2.3) and 11 intense hurricane days (average is 5.0). The probability of U.S. major hurricane landfall is estimated to be about 140 percent of the long-period average.

The estimated probability

ties for at least one major (Category 3-4-5) hurricane landfall on each of the following coastal areas are:

- 1) Entire U.S. coastline - 74% (average for last century is 52%).
- 2) U.S. East Coast Including Peninsula Florida - 50% (average for last century is 31%).
- 3) Gulf Coast from the Florida Panhandle westward to Brownsville - 49% (average for last century is 30%).
- 4) Above-average major hurricane landfall risk in the Caribbean.

They expect increased hurricane activity due to the rapid dissipation of El Niño which has occurred over the past couple of months. They expect either neutral or weak-to-



Florida category 1-2-3-4-5 hurricanes 1995-2005. Map courtesy NOAA Coastal Services Center.

moderate La Niña conditions to be present during the upcoming hurricane season. Tropical and North Atlantic sea surface temperatures will remain well above their long-period averages.

This forecast as well as past forecasts and verifications are available at <http://hurricane.atmos.colostate.edu/Forecasts/>.

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Prepare for hurricane season!

Hurricane season starts June 1st and ends November 30th. Dig out your emergency contact lists, restock your hurricane box with food and water for three days, check your

emergency tools and supplies, and talk to family and friends about evacuation plans and communications.

Visit <http://www.doh.state.fl.us/> for an emergency

preparedness guide or <http://www.floridaaquaculture.com/publications/Hurricanes.pdf> for a hurricane technical bulletin.

Triploid grass carp use in open waters examined

The Florida Department of Environmental Protection has funded a risk analysis to examine the stocking of triploid (sterile) grass carp in open waters of Florida to control hydrilla.

At least three biotypes of hydrilla in 20 water bodies throughout Central Florida (e.g., Kissimmee Chain of Lakes, Lake Istokpoga, Polk County lakes, and other water bodies) have developed resistance to fluridone, a herbicide widely and commonly used in Florida to control hydrilla. These lakes and other fluridone resistant hydrilla



impacted water bodies are "open" in the sense that preventive controls for escape of stocked triploid grass carp would be impossible (i.e., stocked fish will leave the target water body).

The Department of Environmental Protection has requested that triploid grass carp in open waters be allowed, a reversal of current Florida Fish and Wildlife Conservation Commission resource management policy.

Scott Hardin (Florida Fish and Wildlife Conservation Commission), Vince Mudrak (U.S. Fish and Wildlife Service), John Cassani (Lee County Hyacinth Control District), and Paul Zajicek (Division of Aquaculture) are managing a multi-stakeholder risk analysis.

An initial expert workshop will describe current and past grass carp management practices, triploid grass carp biology, grass carp ecological effects, and triploid grass carp management practices for the aquatic plant biological control and becoming familiar with the risk analysis methodology. A second expert workshop will complete the risk analysis.

For additional information, contact Paul Zajicek, 850-488-4033 or zajicep@doacs.state.fl.us.

Aquaculture/Aquatic Preserve exhibit installed on Pine Island

The Lee County Parks and Recreation Department provided the site for an aquaculture and Aquatic Preserve education exhibit at the Pine Island Commercial Marina (formerly the Lee County Fishermen's Cooperative).

The exhibit features three panels that describe the environmentally compatible nature of clam farming, the value and importance of estuaries and Aquatic Preserves, and asks recreational boaters to respect working clam farmers and their equipment. Similar kiosks have been installed on the shores of Alligator Harbor in Franklin County, at the Jorgensen Boat Ramp in Brevard

County, and at the Ainger Boat Ramp in Charlotte County.

The Division expresses special thanks to Mr. Joe DeBacker, Lee County Parks and Recreation Department, for his interest, assistance, and support to install the exhibit.

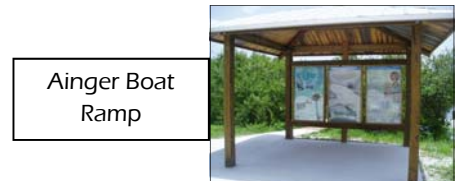
Funding for the kiosks was provided in part by the Florida Coastal Management Program, Florida Department of Environmental Protection, by the Coastal Zone Management Act of 1972, as amended, Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.



New aquaculture and Aquatic Preserve educational exhibit at the Pine Island Commercial Marina.



Alligator Harbor



Ainger Boat Ramp



Jorgensen Boat Ramp

Aquaculture Educational Resource guide available

The Division of Aquaculture has released the *Aquaculture Resource Guide for Educators*, as part of a project partially funded by Florida Agriculture in the Classroom's 2006 Volunteer Grant. This condensed guide is packed full of information for K-12 teachers to provide the groundwork for developing school aquaculture programs. Almost 2,000 copies have been mailed to Florida middle and high schools, and an electronic version can be found on the Division of Aquaculture's website: <http://www.FloridaAquaculture.com>. Please

share this resource with interested educators.

Also, look for an additional aquaculture education resource in Spring 2008, in the form of a CD-ROM, also funded by Florida Agriculture in the Classroom. This CD will include the *Aquaculture Resource Guide for Educators*, PowerPoint presentations on the basic concepts



of aquaculture and Florida's aquaculture industry, examples of existing school aquaculture programs, and lists of additional resources and websites.

For information concerning Florida Agriculture in the Classroom, Inc. visit <http://www.flagintheclassroom.com/>.

FWC changes non-native species rule

The Florida Fish and Wildlife Conservation Commission (FWC) repealed Chapter 68A-23.008, Introduction of Non-Native Aquatic Species, Florida Administrative Code, and moved the provisions to Chapter 68-5, Non-Native Species, Florida Administrative Code. The new chapter becomes effective in June.

The amended rule renames the "restricted" species category to "conditional" species. This category describes certain conditions under

which formerly "restricted" species could be possessed. The conditions do not differ from the prior rule, but Floridians will not be able to possess conditional species unless they are associated with a research institution, legitimate public exhibitor, or hold an Aquaculture Certificate of Registration with written authorization to possess conditional species.

A new conditional species has been added, red-eared slider tur-

tles, and for those people not currently culturing *Lates* spp., these fish can only be cultured in an indoor facility and shall not be taken on a fee or for-hire basis using hook and line or rod and reel.

Prohibited marine animal species that were in Chapter 370.081, Florida Statutes, are now included in the prohibited species portion of the rule.

For additional information contact Scott Hardin, FWC-Invasive Species Coordinator, 850-410-0656 ext. 17257 or scott.hardin@myfwc.com.

Marine ornamental trade pathway examined

The Florida Fish and Wildlife Conservation Commission provided funds to complete a risk analysis relative to the marine ornamental trade.

This analysis will answer a highly ranked Florida Comprehensive Wildlife Conservation Strategy action item: "Conduct a risk assessment on all commercially available exotic marine and estuarine animals in Florida's pet trade." A risk analysis methodology will be used to assess risk and identify risk mitigation strategies through the review of pertinent literature and convocation of knowledgeable stakeholders.

Scott Hardin (Florida Fish and Wildlife Conservation Commission), Craig Watson (UF-Tropical Aquaculture Laboratory), and Paul Zajicek (Division of Aquaculture) are managing the analysis.

Knowledgeable stakeholders from state or federal agencies; national or state universities; commercial aquaculturists; marine ornamental fish import, wholesale and retail busi-



nesses; and marine hobby aquarists will participate in two intensive workshops. An initial expert workshop will have objectives of describing the marine pet species pathway (i.e., commercial and private transportation, handling and holding practices) and becoming familiar with

the risk analysis methodology. A second expert workshop will complete the pathway risk analysis.

For additional information, contact Paul Zajicek, 850-488-4033 or zajicep@doacs.state.fl.us.

Charles H. Bronson
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**Benefiting commercial aquaculture,
Conserving natural resources**

DACS-P-00082



**3rd International Sustainable
Marine Fish Culture Conference**
Harbor Branch Oceanographic Institution
Fort Pierce, Florida
October 15 - 17, 2007

This conference will bring together researchers, industry and other stakeholders to identify economically feasible and environmentally sustainable opportunities to commercially farm marine fish. Specific objectives are to identify constraints in the production of marine fish for food and stock enhancement, define infrastructure and research needs, and construct a framework of significant research and development opportunities that can be translated into commercial reality. Conference activities begin at 4pm October 15. Abstract deadline is July 13, 2007. Please visit the conference website at www.sustainableaquaculture.org for more information.

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