



## Live Web Weather and Water Quality

The Division and the UF-Department of Fisheries and Aquatic Sciences have installed three of four sets of equipment that are sending weather and water quality data to the Division's web site. Equipment to collect this data has been installed on the Gulf Jackson and Horseshoe High Density Leases near Cedar Key and an Aquaculture Use Zone near Sebastian. A fourth unit will be installed in the Charlotte and Lee Counties region.



Installation of the equipment is an integral component of CLAMMRS: A four-year study by the UF-Department of Fisheries and Aquatic Sciences to develop a farm-raised hard clam production model to identify optimum farming practices and to monitor changes in natural food abundance and quality. Development of production models and an improved understanding of hard clam nutrition and physiological requirements will assist the Division and clam farmers in identifying optimum sites for future aquaculture use zones.

The UF-Department of Fisheries and Aquatic Sciences and the Division will host a



workshop in March to describe the value and practical interpretation of this information. In addition, the Division is seeking farmer comments on how to best present the information on the web site. Please send your comments to [aquaculture\\_web@doacs.state.fl.us](mailto:aquaculture_web@doacs.state.fl.us).

This project has been funded by the U.S. Department of Agriculture through their Initiative for Future Agriculture and Food Systems Program.

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# Sturgeon Research Projects: 2001-02

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The Florida Legislature appropriated \$350,000 for the 2001-02 fiscal year from the Marine Resources Conservation Trust Fund for sturgeon studies. The following are brief descriptions of the projects that were selected by the Florida Fish and Wildlife Conservation Commission:

## **Sturgeon Marine Forensics Testing**

Continuing work to refine forensic techniques to identify commercial sturgeon products and provide rapid, accurate and legally defensible evidence to prevent wild sturgeon poaching. The project will establish the mechanisms and techniques to differentiate farm-raised sturgeon from wild sturgeon and to distinguish different species of sturgeon. Principal Investigator (PI): Karen Metcalf, Department of Agriculture and Consumer Services (DACS), Division of Aquaculture.

## **Identification of Gulf Sturgeon Spawning Habitats in the Yellow and Escambia Rivers**

Continuing project to determine riverine migration patterns and spawning sites of Gulf sturgeon in the Yellow and Escambia Rivers for habitat identification and protection. Information from the marine study component will be used to establish overwintering requirements based on habitat use. PI: Nadine Craft, Florida Department of Environmental Protection, Northwest Florida Aquatic Preserves.

## **Movements, Habitat Preferences, Growth Rates, and Survival of Hatchery-Reared Sub-Adult Gulf of Mexico Sturgeon in Two Reaches of Hillsborough River, Florida**

Continuing study of survival, growth, health, real-time movement, habitat preferences, and preferred environmental conditions of hatchery-reared Gulf sturgeon released in the tidal and freshwater reaches of the Hillsborough River. Information will be gathered on the suitability of the river for supporting sub-adult Gulf sturgeon. PIs: Carole Neidig and Ken Leber, Mote Marine Laboratory, Center for Fisheries Enhancement.

## **A Petition to Delist a Distinct Vertebrate Population Segment of the Shortnose Sturgeon, *Acipenser brevirostrum*, for Commercial Culture and Sale in Florida**

Develop a petition to the United States Department of Commerce to delist a distinct population segment of the shortnose sturgeon (domesticated broodstock currently maintained in federal and state propagation facilities) for the purposes of commercial production and sale in

Florida. PI: R. Sherman Wilhelm, DACS, Division of Aquaculture.

## **Acquisition of Non-Native Sturgeon for Development of Rearing Methods**

Establish mechanisms and protocols for acquisition of non-native sturgeon in international markets to help develop the commercial aquaculture industry. Through international brokers the mechanisms for export, import, health certification and other required documentation will be established and the Division will acquire eggs and/or sac fry for potential sturgeon aquaculture species. PI: Kal Knickerbocker, DACS, Division of Aquaculture.

## **Determination of Gulf Sturgeon Offshore, Winter Feeding, Critical Habitat Using Satellite Pop-Up Archival Tagging and Sonic Tagging**

Determine the migration patterns and winter marine habitat of Gulf sturgeon using satellite archival tags including physical and ecological characterization and mapping (e.g., bathymetry, temperature, sediments and potential food source organisms). PI: Randy Edwards, University of South Florida, College of Marine Science and United States Geological Survey, Biological Resources Division.

## **Critical Winter Feeding Areas of Threatened Gulf of Mexico Sturgeon in the Suwannee Estuary and Blackwater Bay, Florida**

Determine if Gulf of Mexico sturgeon reside and forage for a period of time in the near-shore areas of the Suwannee River estuary and Blackwater Bay during the winter months, prior to, and after, their freshwater migration. PIs: Debra J. Murie and Daryl C. Parkyn, University of Florida (UF), Department of Fisheries and Aquatic Sciences.

## **Assessment of the Effectiveness of Florida Aquaculture Best Management Practices (BMPs) for Sturgeon**

Assess locations, farm designs, biosecurity features, water treatments, and similar BMP requirements to minimize direct environmental impacts, and the overall effectiveness of sturgeon BMPs. PIs: Charles E. Cichra and Daniel E. Canfield, UF, Department of Fisheries and Aquatic Sciences.

## **Technology for the Aquaculture and Conservation of Sturgeon in Florida**

This project will continue the monitoring, tagging and sampling of the Suwannee River sturgeon population and provide logistical and technical support for continuing and new sturgeon conservation and aquaculture projects. The project will also develop rearing methods and generate information on the major production factors necessary to purchase commercially and raise Atlantic and one other non-restricted species. PIs: Frank A. Chapman and Douglas E. Colle, UF, Department of Fisheries and Aquatic Sciences.

## Pew Oceans Commission Visits Florida

The Division invited the Pew Oceans Commission to visit Florida to tour marine aquafarms. This fact finding activity was a result of their releasing a report critical of marine aquaculture in the United States and the State of Florida's aquaculture regulatory program.

Ms. Amy Schick, Director of Marine Conservation Policy, visited Southwest Florida for one day. Dan Leonard, Bull Bay Clam Farms, organized a visit to two hard clam nursery facilities in the Englewood-Placida region and hard clam leases in Gasparilla Bay. Marti Campbell, manager of Ocean Dreams, Inc., described live rock culture and hard and soft coral culture in her recirculating system. Craig Watson, Director of the UF-Tropical Aquaculture Laboratory, provided an overview of marine and freshwater ornamental fish production and a tour of the Ruskin-based laboratory. Chris Brooks of the Division's Bartow Office walked Ms. Schick through a Best Management Practices compliance inspection at the laboratory and reviewed regulatory issues related to hard clam production.



The Pew Oceans Commission is an independent group of American leaders conducting a national dialogue on the policies needed to restore and protect living marine resources.



After reviewing the best scientific information available and speaking with people from around the country, the Commission will present formal recommendations to Congress and the nation during December 2002.

At the close of her visit, Ms. Schick commented that the Commission is seeking industry input on their draft marine aquaculture recommendations. The draft recommendations and marine aquaculture report can be found at <http://www.pewoceans.org>.

## Attend a Free Shrimp Culture Workshop

A shrimp culture workshop will be held on Thursday, March 21, 2002 from 9:00 AM to Noon at the Bob Crawford Agriculture Center on 605 East Main Street (SR60) in Bartow, Florida. The workshop is open to the public (no advance registration required). The purposes of the workshop are to: present basic inland shrimp farming techniques, enhance the growth of inland shrimp culture, ensure that the environment does not suffer and assist prospective aquafarmers in making critical business decisions.

### PROPOSED AGENDA FOR INLAND SHRIMP CULTURE WORKSHOP

- 9:00 Introduction and Department outlook
- 9:15 Aquaculture Certification and BMPs
- 9:30 UF-IFAS Cooperative Extension Service assistance
- 10:00 Economic perspectives
- 10:30 Shrimp culture techniques and consultation
- 11:00 Shrimp pathogens and disease prevention
- 11:30 Capitalization and getting started
- 12:00 Closing remarks
- 12:30 Questions and adjournment

For additional information contact Neil Aymond, 850-488-4033 or [aymondn@doacs.state.fl.us](mailto:aymondn@doacs.state.fl.us).

## Division Hosts NASAC Annual Meeting

During May 28-31 the Division will host the National Association of State Aquaculture Coordinators (NASAC) annual meeting in St. Petersburg. NASAC has played a pivotal role in national issues such as aquatic animal health, EPA's Effluent Limitation Guidelines effort and the recent work by the Atlantic States Marine Fisheries Commission to develop aquaculture guidelines for the Atlantic Coastal States. Each state and several territories (Puerto Rico and Guam) have Aquaculture Coordinators as lead contacts for development of aquaculture policy and interagency coordination. NASAC's annual meeting will consist of an industry tour, presentations on critical national issues and a business meeting to determine the Association's priorities during the coming year. The Division was honored by the Association's selection of Florida as the site for their 2002 meeting.

## UF-Shrimp School Announced for 2002

The University of Florida's Aquatic Food Products Program continues their annual Shrimp School dedicated to improving shrimp product quality and safety. The May 14-15, 2002 school includes sensory indicator training for shrimp decomposition and filth, an update on antibiotics (including chloramphenicol), an overview on FDA's activities related to Salmonella in shrimp farming and processing, FAO's Ecoport—the future in shrimp quality and safety communication, Good Aquaculture Practices (GAP), HACCP/Sanitation and other topics such as sulfites, phosphates and official sampling and laboratory analyses. The course will be limited to 25 registrants with a registration fee of \$295. If you are interested, send a request that includes your name, company, mailing address, telephone and fax numbers and e-mail address to Laura Garrido, Shrimp School Coordinator, Aquatic Food Products Laboratory, University of Florida, P. O. Box 110375, Gainesville, FL 32611-0375, fax number 352-392-8594 or e-mail [lrg@mail.ifas.ufl.edu](mailto:lrg@mail.ifas.ufl.edu).

## Red Tide Information Available

The Division has started a technical bulletin series designed to cover a wide variety of regulatory, policy or technical subjects. The first issue, released in November, described the scope, composition, occurrence and impact of red tide in Florida on the harvest and consumption of shellfish. The second issue, released in January, complimented the first by describing the sequence of events triggered by red tide once it is detected in sufficient concentration to close a shellfish area. A future bulletin will describe the aquaculture submerged sovereign lands lease program. Copies are available free-of-charge. Contact Ceda Rudd, 850-488-4033 or [ruddc@doacs.state.fl.us](mailto:ruddc@doacs.state.fl.us) to request copies.



### *Division of Aquaculture*

The Division of Aquaculture's primary responsibilities include certifying all legitimate aquaculturists through an annual registration, implementing a program of Aquaculture Best Management Practices to meet the State of Florida's environmental goals, managing 1.4 million acres of coastal waters for the harvest or culture of wholesome shellfish, implementing the National Shellfish Sanitation Program through periodic inspection of shellfish processing plants and product, and issuing submerged sovereign land leases for the culture of shellfish or live rock.

The aquaculture and shellfish industry can acquire information through a variety of means. The Division can be contacted by telephone, 850-488-4033 and 488-5471, or fax 850-410-0893. Tallahassee and the seven state offices are open five days a week from 8:00 AM to 5:00 PM. Offices are located in Apalachicola, Bartow, Cedar Key, Murdock, Palm Bay, Panama City and Titusville. Internet users can visit the Division's web site at <http://www.FloridaAquaculture.com> for industry and program information.

Florida Department of Agriculture and  
Consumer Services  
Division of Aquaculture  
1203 Governor's Square Blvd., 5th Floor  
Tallahassee, FL 32301

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