

**Boating and Waterways**

from

**STEM**



to

**STERN**

**Management in Florida**



UNIVERSITY OF  
FLORIDA  
IFAS EXTENSION

UF LAW  
LEVIN COLLEGE OF LAW



**November 1-3, 2006**

**Hilton Cocoa Beach Oceanfront, FL**

**Program and Presentations**

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**Session Title: Environmental Perspectives on Boating and  
Waterway Management in Florida**

**Friday, November 3, 2006 – 8:35am**

***“Boating Impacts to Seagrass Meadows  
and Seagrass Residents”***

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## **Boating Impacts to Seagrass Meadows and Seagrass Residents**

by

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Boating impacts to Florida's shallow seagrass meadows and their resident and transient animals include direct damage due to boat propeller and jet drive scouring and removal of seagrass plants ("prop scarring"), groundings resulting in both scarring (dredging) and filling by displaced sediment, and anchoring damage (Sargent et al. 1995) (Figure 1). Boating impacts to important fish and wildlife resources dependant on shallow seagrass habitats include loss as well as degradation of habitat and water quality, loss of food resources, and disturbance due to noise, wave action, and human activity.

The authors have been involved with attempts to document these impacts, educate boaters, and improve navigation to avoid and manage boating impacts to seagrasses in Florida for over 25 years. Our efforts and those of others include the Wilderness Society chapter in the Florida Keys in the late 1980's and early 1990's (thanks to efforts by Ross Burnaman,) and the publication and circulation of recommendations for implementation of a "Four Point Plan." This plan emphasized:

1. Improved education for boaters
2. Improved systems of navigation markers including "gated [paired] markers" to safely and easily guide boaters through navigation channels.
3. Establishment of closed or "limited access areas" for boats (i.e. no-motor, idle speed, pole and troll zones, etc.)
4. Increased enforcement of on-the-water rules and regulations and laws designed to protect Florida's submerged lands and resources

With the publication of "*Scarring of Florida's Seagrasses: Assessment and Management Options*" by the Florida Department of Environmental Protection in 1995 (C. Kruer as a coauthor) and the documentation of 173,960 acres of boat damaged seagrass meadows in Florida, with 64,100 acres of moderate and severe damage, we were hopeful that the four point plan would be embraced and implemented, seagrasses protected, and the amount of damage reduced.

As seen however in Figure 2, although the entire Sargent et al. study has not been repeated (as it certainly needs to be) even as 11 years have passed, the restudy of the Charlotte Harbor system by the Florida Fish and Wildlife Institute has shown not a decline in seagrass damage, but an overall increase of 38% in all degrees of scarring, and an astounding 613% increase in severe prop scar damage! And in the Florida Keys, where these impacts are also believed to have increased in recent years, a recent study of boat impacts (scarring and groundings) in the Lignumvitae Key Submerged Land Management Area, reflects a dramatic increase in the area of seagrass damage, from a total of about 90 acres in 1994 to over 500 acres in 2005 (Engeman, et al. 2006, paper in review). This is after 10 years of focused efforts to protect and restore seagrasses in this small area of the Keys. .

We think those in charge of natural resource management and protection of the public's submerged lands in Florida should be embarrassed by these figures. They reflect a total disregard, in our opinion, for the need well established 11 years ago to act THEN to protect the marine benthic resources of Florida. While damage to coral reefs have and continue to receive most of the attention, continuing impacts to seagrass meadows, algal reefs, live bottoms in estuaries and other important benthic habitats like tidal creeks in mangrove forests and tidal marshes go virtually unnoticed and disregarded.

We were asked to summarize our position as long-term scientists and conservation advocates working on boating impacts in Florida and the need to protect benthic resources other than coral reefs from vessel damage. It is quite simple: (a) boating impacts from the 1 million registered boats in Florida are severe and increasing; (b) not nearly enough is being done by those in charge of natural resource management in Florida to recognize and document the issues, and act to protect these vital marine resources; (c) talk is cheap, and plentiful among resource managers, direct action is, however, rare and usually too little too late. We have participated in countless meetings, working groups, stakeholder groups, brainstorming sessions, priority establishment sessions, etc. regarding these issues over the last 25 years. We have also testified as fact and expert witnesses for the Department of Justice in those rare cases prosecuted by the Federal government over blatant seagrass damage by vessels in Federal parks, refuges, and sanctuaries. We have, however, seen no or little active enforcement of the authority of the State of Florida to protect these critically important marine benthic resources that are under its ownership and stewardship.

We are now participating as stakeholders on the Seagrass Vessel Damage Working Group organized by the Florida Fish and Wildlife Conservation Commission and the Florida Department of Environmental Protection. A recent meeting of this group was held in Tallahassee on August 15, 2006. We continue to be hopeful that boaters and fisherman and birdwatchers and conservationists can jointly recognize that these levels of damage to shallow seagrasses are unsustainable and jeopardize the very essence of their pleasant experiences on the water. We believe that it is absolutely necessary to get serious about marine habitat protection as it relates to boating activity, and to secure this aspect of the coastal economy of the state. We ask you to join us in this fight to protect the underappreciated and unloved underwater forests of Florida's coast.

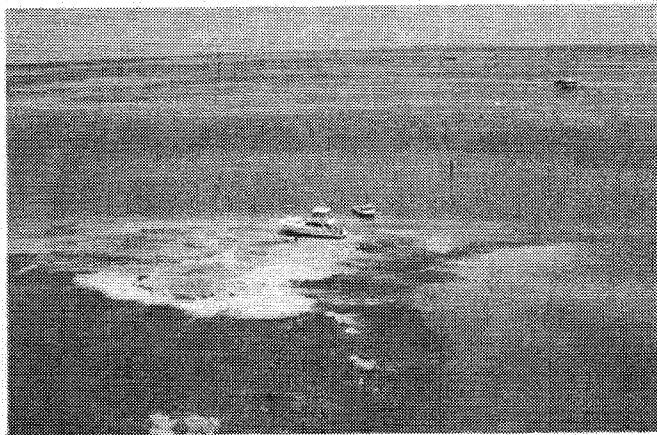


Figure 60. Vessel aground, Biscayne Channel, Biscayne National Park (1998). [Note prop scarring in the seagrass bed. One of the houses of SUTSville is seen at the upper left of the image.] (Photo by Karen Battie, Biscayne National Park.)

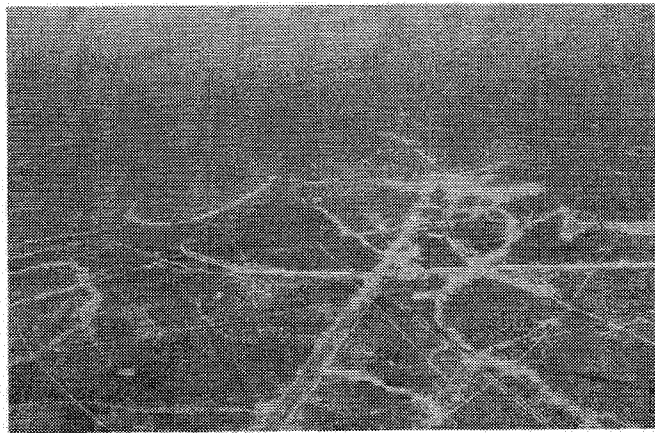


Figure 61. Groundings and prop scars, Featherbed Shoal, Biscayne National Park (1996). (Photo by Karen Battie, Biscayne National Park.)

**Figure 1. Typical boat grounding and prop scars, Biscayne National Park.**

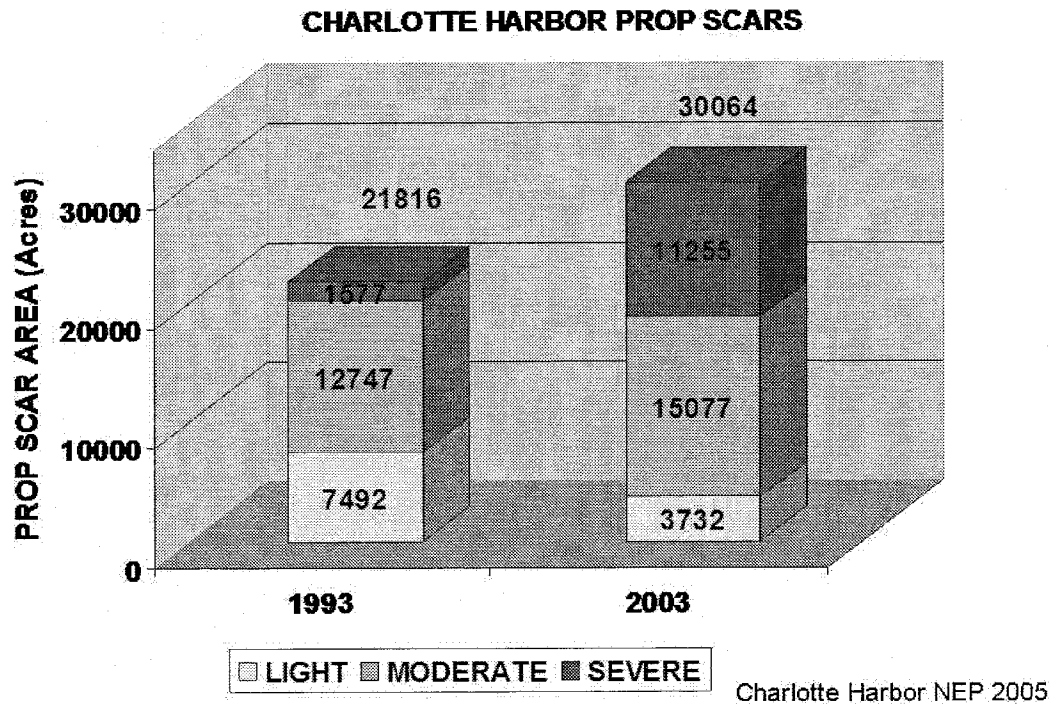


Figure 2. A comparison of the area of prop scars in seagrass habitats of Charlotte Harbor 1993-2003.

#### Literature Cited

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Sargent, F. J, T. J. Leary, D.W. Crewz and C.R. Kruer. 1995. Scarring of Florida's Seagrasses: Assessment and Management Options. Florida Department of Environmental Protection, Florida Marine Research Institute Technical Report TR-1. 37 pp + appends.