



Research Into Prop Scar Recovery, It's For the Birds!

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Just when you thought you had heard everything, now scientists believe bird poop is a good thing. Researchers in the Florida Keys are investigating the potential benefits of seabird droppings on the growth of seagrasses. "For years people have noticed how dense seagrasses grow around channel markers," said Pat Wells, Manager of Lignumvitae Key State Botanical Site. "We are now trying to scientifically investigate the benefits of nutrients provided by those perching and nesting waterfowl to recovery of damaged seagrass habitat."

The research is connected to a serious environmental problem in coastal marine waters, prop dredging of seagrass beds. Lignumvitae Key State Botanical Site, the Florida Keys Environmental Restoration Trust Fund of the Florida Audubon Society and the National Ocean Service have teamed together to investigate whether the addition of nitrogen and phosphorous to waters above seagrass scars aids in damage recovery. Dr. Jud Kenworthy with NOS has spearheaded the investigation of two methods of adding nutrients. The first type involves injecting a nutrient solution into the area of the prop scar. The second method is quite simple and natural. Stakes are placed within the scar, extending above the water to provide a roosting site for seabirds, and then nature takes its course.

Results so far indicate the injection method does not assist in seagrass recovery. However, the use of bird stakes improved recovery time to around 3 years. Use of stakes in addition to transplanting seagrass in damaged areas decreased recovery time to as little as 1 * years.

Seagrasses typically take a long time to recover when damaged or cut. The actual recovery time is different for the 7 species of seagrass found in the Florida Keys and depends on the type of growth of each species, the degree of damage, water quality conditions and sediment characteristics. Turtle grass, a common species locally, may take anywhere from 3 to 6 or even 10 years to fully recover. "We have discovered that when a prop scar is deeper than about 10 inches recovery takes much longer," noted Pat Wells. "In those cases, fill material is needed to bring the area back to the level of the adjacent grasses so that they may expand into the damaged area."

"This project has taught us a lot about seagrass recovery," stated Pat McNeese, Manager of the Florida Keys Environmental Restoration Trust Fund. "The damaged area we worked in began as a twin prop scar. Over time, the scar eroded into a large blowhole. The first phase of our project involved adding fill material to the site coupled with the stake placement. The second phase will involve transplanting seagrasses to test for further increases in recovery rates."

Funded in part by a grant from the U.S. Environmental Protection Agency to the Florida Keys Environmental Restoration Trust Fund, the results will aid resource managers around the state. While Monroe County ranks first in amount of seagrass lost due to propeller damage, other areas around Florida's coast have experienced dramatic losses as well. Tampa Bay has lost 80% of its original seagrass due to many reasons including prop scarring. Sarasota Bay and Indian River have lost 30% each.

The information from this study will aid resource managers in repairing damaged areas, in turn protecting vital coastal habitats and those commercial and recreational industries dependent on them. Latest figures show that seagrass habitats support a \$53.5 million commercial fishing industry including blue crab, shrimp, spiny lobster, yellowtail snapper, Gray snapper and stone crab.

March is seagrass awareness month in Monroe County. To find out more about seagrass habitats and events associated with Seagrass Awareness Month, contact Susan White at the Florida Keys National Wildlife Refuges, 305-872-2239.

For more information on this research, contact the Florida Bay Education Project at 305-852-3592. Additional information on a variety of topics is available from the University of Florida/Monroe County Cooperative Extension Service, 5100 College Road, Stock Island or call at 292-4501; fax = 292-4415; email monroe@mail.ifas.ufl.edu or visit our web site <http://monroe.ifas.ufl.edu>. Our services are free and available to all without regard to race, color, sex, or national origin. #####