



UNIVERSITY OF
FLORIDA

EXTENSION

Institute of Food and Agricultural Sciences



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AT THE WATERS EDGE

Miami-Dade County
Florida Sea Grant



August – September 2005

Upcoming Events

August 13, 2005
National Marina Day
Crandon Marina, Key Biscayne
9am-12pm, Sea Grant Exhibit

September 17
International Coastal Cleanup
9am-12pm
<http://coastalcleanup.org>

September 24
National Estuary Day
<http://estuaries.gov>

September 24
3rd Annual South Dade E- Fair
Harris Field, Homestead (Take
U.S. 1 to 312th St.) by Sweet Vine,
Inc. and FIU-HCET
11am-4pm

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20th Annual Coastal Cleanup



This year marks the 20th anniversary of the International Beach Cleanup! In that time, the event has grown from a local event at one beach in Texas to the largest event of its kind. Join us on **September 17th** to mark this special year with your support. Our impressive network of Cleanup Coordinators is standing by to help you make a difference for our oceans and waterways.

Last year, more than 80 volunteers in Miami-Dade County removed over 1,000 pounds of debris. Common items collected were cigarette butts and plastic bags and other plastic products. Join others in making a difference in our environment. Register for the cleanup at <http://coastalcleanup.org>

Big Sweep Cleanup



On July 16, volunteers from Hands on Miami participated in a beach cleanup along Hobie Beach, in Key Biscayne.

Volunteers filled trash bags with glass bottles, aluminum cans, cigarette butts, pieces fishing line, bottle tops, and plastic bags.

According to the Ocean Conservancy, about 70% of litter found in the environment comes from land-based sources such as beachgoers, storm drains, and illegal dumping. By gathering data as well as trash during a cleanup, may determine the sources of the debris problem and the impacts it has to the environment.



Bring Non-natives into Your Classroom!

Are we suggesting you let invasive plants and animals run loose in your classroom?

No way! We want you to come to a teacher workshop to learn how to implement invasive species activities into your middle/high school classroom or informal education facility. You will also experience hands-on demonstrations and participate in field work which can be adapted for students in the classroom.

The class will provide you with an overview of the invasive species issue in Florida and you will receive resources that can be used in your classroom. In addition, each educator will receive a \$50 stipend for attending.

Florida Sea Grant, UF/IFAS Cooperative Extension in Miami-Dade County and NOAA National Marine Fisheries Science Center will be your hosts and instructors. The training will be held at the UM Marine Science School (RSMAS) located on Virginia Key on Saturday October 22, 8:30am-4:00pm.

Dress comfortable for outdoor activity. Bring a packed lunch, closed toed-shoes, sunscreen, hat, and bug repellent.

Please register with Sea Grant by calling (305) 421-4017.

Seafood Specialties

Crab Foldovers



- 1 pkg. crescent dinner rolls
- 1 small onion, chopped
- 1 small green pepper, chopped
- 1 small Pkg. cream cheese
- 1 Tbs. milk
- 1 cup stone crab meat
- 1/4 tsp. season salt

Mix all ingredients except crescent rolls. Pinch two crescent rolls together down the center. Place 1/4 of mixture in center of roll. Wet edges of roll and fold over. Press edges with fork. Place on cookie sheet and brush tops with milk. Sprinkle with season salt. Bake at 350 degrees for 30 minutes or until brown.

Shrimp Toast



- 1/2 lb. shrimp
- 6 squares of sliced bread
- 4 water chestnuts
- 1 egg
- 1 tsp. Sugar
- 1 tsp. cornstarch
- dash of soy sauce,
- Worcestershire sauce, and
- garlic powder.

Peel, de-vein, and chop shrimp with water chestnuts. Add remaining ingredients (cornstarch last). Spread on quartered bread. Fry shrimp side down in peanut oil.

Source: MAP/Sea Grant Editorial '78

Invasive Snails Spreading Across Florida



The channeled apple snail (*Pomacea canaliculata*) is native to South America and is spreading across Florida. It was believed to be introduced by the aquarium trade. Possibly, the snails could have been spread from people who eat them for food or may have been dispersed by boats and large birds. These snails produce clusters up to 1,000 pink eggs. They can be seen as on docks, seawalls, trees, and plant stems.

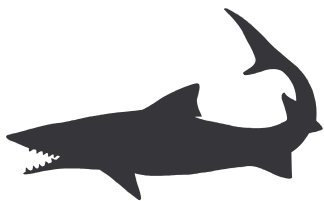
Compared to the eggs of native apple snails, *Pomacea paludosa*, those of the non-native snail are smaller, pinker, and more abundant. These invasive snails eat all types of aquatic plants, thus would have an impact on the food chain. They can grow into the size of a softball and are thought to have few predators in Florida. Alligators, large land turtles and a few birds might be a predator, but may not have a large effect on the population.

If you find these invasive snails, please remove the eggs and adults. Place them in a sealed bag and put them in the freezer. Once frozen, put them – still in the bag– into the garbage.

Photo: Applesnail.net



Shark Attacks, Reduce the Risk



Shark attacks are rare. In fact, more people have died from encounters with alligators than from shark attacks in Florida.

However, most attacks occur under certain conditions. Typically, sharks are found inshore of a sandbar or between sandbars, where they are trapped by low tide. Steep drop-offs are a favorable site for sharks and their prey. Almost any large shark, can be a threat to humans. The white shark, tiger shark, and bull shark are the most common species linked to human attacks.

Examples of unprovoked shark attacks are "Hit and Run"- most common, usually occurs in shallow waters or surf zones and probably caused by a mistake in identity; "Bump and bite"- less common, usually in deeper waters involving swimmers or divers. The shark will circle and often bumps prior to the attack; "Sneak"- less common, similar to bump and bite but the shark attacks without warning.

Shark attacks are rare, but should be minimized whenever possible. Try to follow these suggestions:

- ✓Always swim in groups.
- ✓Do not swim too far from shore.
- ✓Avoid swimming at dusk or dawn.
- ✓Try not to wear shiny jewelry.
- ✓Avoid waters that are murky.
- ✓Avoid waters being used by sport or commercial fisherman, and diving seabirds.
- ✓Try not to over splash and do not allow pets in the water.
- ✓Use caution when swimming in between sandbars or near steep drop offs.

Sharks have much more to fear from humans than we have to fear from them. Shark populations are actually decreasing worldwide. In fact, about 100 million sharks a year are killed by over fishing and by-catch.

Sharks play a vital role in the food chain as one of the top predator in the ocean. Their role consists of feeding on sick or dying creatures such as fish or invertebrates. Other favorite foods include seals, whales, and tuna which have few predators.

Source: The International Shark Attack File Website,
<http://www.flmnh.ufl.edu/fish/Sharks/ISAF/ISAF.htm>

Why do Hurricanes Occur?



It has been a busy hurricane season and it's only August. Why have records already been broken and more storms are likely to strike?

Hurricane Emily was the fifth named storm in the Atlantic since the beginning of June. Scientists have been keeping records since 1851 and very few storms have formed so early in the season.

Hurricanes are stronger if they are organized and form early off the coast of Africa, like Hurricanes Dennis and Emily.

Favorable factors such as water temperature can have a significant impact to hurricane formation. When temperatures in the Atlantic Ocean are 2 to 4 degrees warmer than normal that produces ideal conditions to fuel strong hurricanes.

In addition, when a Bermuda high occurs, which is a massive high pressure system that sits over the Atlantic Ocean, it forces hurricanes to move into the Caribbean, Florida and the Gulf of Mexico. Winds over the Atlantic also help steer the storm westward and give it strength and intensity.

Source: ABC World News Tonight, 7/18/05



Oil Spill Pollution



Do you know where the major source of oil pollution in the ocean comes from?

First, oil contains many toxic compounds which may cause lethal or sub-lethal effects to wildlife and plants in the environment. Once these petroleum compounds are released into the sea, they can persist for decades.

Off-shore drilling and accidental tanker spills account for only **24%** of oil spills. Municipal and industrial wastes, urban run-off, ocean dumping contributes **58%** of oil pollution into the sea.

However, the fate of an oil spill is determined by the physical factors such as tides, winds, currents, wave action and water temperature. Together these elements can biodegrade the oil, separate it into patches or diffuse it throughout the water column.

Chemical applications such as sprays or mechanical operations that include booms help to cleanup the oil spills.

Birds, fish, mammals, shellfish, and even small micro organisms are affected by oil. Animals who become smothered or trapped in oil suffer direct lethal effects. Other creatures may experience behavioral, physical, or reproduction abnormalities. As a result, this can lead to changes to the food web. Mangroves, seagrasses, and salt marsh habitats can also become severely damaged by oil spills.



Glossary of Words



Sub-lethal - Involves an effect that does not cause death of the organism.

Invasive species - A species that causes or is likely to cause harm to the economy, environment or human health.

Biodegrade - to decompose a substance by living organisms.

Municipal waste - Unwanted by-products of modern life generated by people living in an urban area.

Booms - Arms used to trap oil after an oil spill.

Food chain - a path of food consumption.

Native species - a species that occurs naturally in an area or habitat. Also called indigenous species

Petroleum - A naturally occurring mixture composed predominantly of hydrocarbons in the gaseous, liquid or solid phase.



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