



**UMASS
BOSTON**

THE FIELD JOURNAL

JULY 2007 VOLUME II, ISSUE I

THIS MONTH AT THE FIELD STATION

- ❖ ADOPT-A-POND STUDY RESUMES WATER SAMPLING
- ❖ GROUNDWATER MONITORING IDENTIFIES LIKELY POINT SOURCES OF EXCESS NUTRIENTS
- ❖ SENSOR BUOYS INSTALLED IN HARBOR
- ❖ INTERNS FROM THE BOYS & GIRLS CLUB LEND A HAND
- ❖ PEST HOUSE POND STUDY PINPOINTS INPUTS
- ❖ GRADUATE VOLUNTEER BEGINS FRESHWATER FISH SURVEY



NFS Staff Recovers Torpedo Rays

Staff members at the Field Station were called to examine two sea creatures in June, both identified as torpedo rays and both weighing close to record amounts.

The first torpedo ray, also known as an electric ray (*Torpedo nobiliana*), was pulled from the Madaket shoreline by Harbormaster Chris Vanderwolk in mid-June, where it

had tried to beach itself before it ultimately died. The ray was taken back to the Field Station, where staff and

The torpedo ray can deliver shocks of up to 220 V.

volunteers were able to clean it and perform a necropsy, or animal autopsy.

The torpedo ray is a

cartilaginous fish that stuns its prey with an electric shock while hovering above it.

Little was known about the creature initially, as its nearly four-foot length and impressive 98 lb weight suggested it was too large to be a little skate (*Raja erinacea*), common to the island. The initial

See **RAYS** on p. 2

A Summer of Sequels:

Researchers continue projects started in 2006

As summer rolls on, Field Station researchers are resuming projects started last summer, and in some cases even earlier, to continue looking for trends.

Raven Comery has

returned from Ontario, Canada to collect further data at Tom Nevers Pond as part of her ongoing Adopt-A-Pond study. Last year's data indicated unusually high levels of phosphate, a

nutrient responsible for algae blooms in freshwater. So far, her data suggests diminished but still high levels. Her analysis last year set baseline records for the pond's water

See **SUMMER** on p. 2

UMass Boston
Nantucket Field
Station /
Grace Grossman
Environmental Center

180 Polpis Road
Nantucket, MA 02554

Open 7 days a week



FIELD STATION STAFF EXAMINES 2 RAYS

RAYS from p. 1

necropsy revealed that it was female, with two unusual looking organs, particularly heavy and large. Field Station researchers have identified these as the electrical organs, which can deliver shocks of up to 220 Volts.

Vanderwalk found a

second ray in Madaket just one week later, and again called the Field Station. A staff member and a volunteer with the Marine Mammal Stranding Team went out and performed an on-site necropsy, taking additional photos and critical

measurements. This ray was considerably larger; five feet long and 122 lbs.

The photographs and measurements were sent to the New England Aquarium, as well as to several area ray experts. The extracted organs are in cold storage at the Field Station, pending further investigation.

Researchers Continue Studies from Last Summer

SUMMER from p. 1

quality, and she will continue to evaluate the pond's health throughout July.

The Field Station staff is hard at work monitoring various piezometers around the island this summer, most of which they installed last year. In addition, they are installing new piezometers to test groundwater

quality in Hummock Pond and in other areas of interest. These simple wells provide access to water 15 feet beneath the ground and give scientists a look at the quality of groundwater near houses and ponds.

Jim O'Connell of the Woods Hole Oceanographic Institute paid the Field Station a visit

in June to teach another group of volunteers how to complete a beach profile. The group, which was from Brockton High School in Massachusetts, surveyed Codfish Park beach in 'Sconset. The quarterly beach profiles are part of a large-scale effort to record and track changes in beach topography each year.

ABOUT THE FIELD STATION...

The University of Massachusetts Boston's Nantucket Field Station (NFS) includes a 107-acre field site with laboratory facilities, residence space, maintenance shop, and offices on Nantucket Harbor in the Quaise portion of the island.

The Field Station is open for research, academic work, and field trips throughout the year. The NFS has provided more than 35 years of continuous service as a learning center for environmental education and research.

The Station's mission is education, research, and community service in cooperation with faculty and students of the University of Massachusetts Boston, the people of Nantucket, and other educational and research organizations both on and off Nantucket.

VISIT OUR WEBSITE:

[www.umb.edu/
nantucket](http://www.umb.edu/nantucket)