

RUTGERS in the NEWS

A summary of Rutgers' coverage in the media. *Star-Ledger, NY Times* and *Home News* clipped daily by staff members—other papers several days later. *Provided by the Department of University Relations*

April 12, 2005

TUESDAY, APRIL 12, 2005 ASBURY PARK PRESS

PAGE A17

Flooding helps study of Hudson River

By **KIRK MOORE**
STAFF WRITER

NEW BRUNSWICK — Heavy rains and melting snow in upstate New York have unleashed a gusher of fresh water out of New York Harbor, to the delight of scientists studying how the Hudson River plume affects the ocean ecosystem off New Jersey.

"It's the biggest in 50 years. This is a wonderful event. The floods are terrible for the people living through it, but for scientists, these extreme events are very useful," said Scott Glenn, an oceanographer at the Institute of Marine and Coastal Sciences at Rutgers University.

A two-week experiment led by Rutgers researchers began Sunday with the release of a nontoxic dye into the water off Sandy Hook. The dye rapidly dissipates and is soon invisible to the naked eye, but it can be detected by instruments, allowing scientists to "tag" a particular surge of river water and fol-



Oceanographers Scott Glenn and Liz Creed, at Rutgers University's Institute of Marine and Coastal Sciences in New Brunswick, monitor the progress of a freshwater plume from the Hudson River along the Jersey Shore on Monday.

(STAFF PHOTO: TIM MC CARTHY)

low it along the coast, said Robert Chant of the Rutgers institute.

The river plume creates differences in the salt content of ocean water, and it carries nutrients that can feed microscopic plants, called phytoplankton, that are a basic link in the ocean food chain, scientists say.

Understanding how the river interacts with the ocean and its currents could have practical uses in predicting the effects of

wastewater discharges or how fish congregate along salinity boundaries in the ocean.

"We're getting a tremendous understanding of how the Hudson estuary works," Glenn said.

This spring's experiment, building on work in the two previous years, is helping scientists learn more about a surprisingly powerful and complicated freshwater pattern that can layer waters of different salt content at various depths off the coast. The flow this spring is so powerful it runs along the

beach more than 80 miles to Atlantic City.

"We're seeing this pulsing out of the river on ebb tides — it squirts every six to 12 hours," Glenn said. "This layering and squirting was totally new to us."

Scientists on two large research vessels, the *Cape Hatteras* and *Oceanus*, are at sea tracking the plume and collecting data. Biologists on the project are trying to find out "what's happening to all the plants and animals in that? How does it affect the food chain?" Glenn said.

Specialized wave-reading radar, fixed and drifting buoys, and a robot probe are also being used in the experiment. The probe, a missile-shaped underwater craft called a glider, may be deployed off Seaside Heights today if sea conditions subside, said Rutgers oceanographer Liz Creed.

The glider will cruise a triangular course off the Ocean County coast, using temperature sensors and other instruments to profile the plume's physical characteristics. The experiment is planned to continue through next week with a second dye release.