

Sarasota



HERALD-TRIBUNE / MONDAY, SEPTEMBER 25, 2006

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Red tide lures researchers

Scientists hope to unlock secrets of the noxious algae

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SARASOTA -- Rigged with an air-quality testing machine the size of a fanny pack, Martin Sara strolled among bikini-clad sunbathers on Siesta Key Sunday afternoon.

The 82-year old asthmatic wasn't at the beach to improve his tan, but to subject himself to poisons produced by red tide.

Sara is one of about 85 participants in a study that aims to explain how red tide affects people with breathing problems, such as asthma or chronic obstructive pulmonary disease.

One day, the research could help doctors identify when red tide makes their patients sick and could lead to better treatments.

Scientists with Mote Marine Laboratory in Sarasota, Lovelace Respiratory Research Institute of Albuquerque, N.M., and various universities have congregated in the beach parking lot for three days to test people like Sara.

"We want to know how these people are affected when they go into the red tide," said Richard Clark, an epidemiologist with the Florida Department of Health, one of many agencies participating in the research. "The more we learn, the more we can advise people."

The National Institute of Environmental Health Sciences recently funneled \$7.53 million to extend five years of research another five years. The studies focus on red tide, the toxins it emits and its effect on people.

Red tide is a naturally occurring algae that grows into large blooms when ocean conditions are right. The toxins produced by the blooms poison fish and marine mammals and also can irritate the eyes and lungs of people near the water.

A persistent bloom off Siesta Key made the weekend a prime time to gauge human reaction to the foul air.

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Sarasota resident Coke Handgen, left, breathes into a tube after exposure to red tide during a study Sunday in Sarasota. Above, Shannon Osborn, a staff chemist at Mote Marine Laboratory, looks at water samples during the same red tide study on Sunday.



Seth Rodgers, 17, right, rests on Sunday afternoon at Siesta Public Beach in Sarasota next to an air collection station that will test for airborne red tide toxins during a study that has allowed researchers to examine several people suffering from asthma.

Onshore winds Sunday blew the toxins toward the beach, eliciting coughs from people lounging in beach chairs or playing volleyball.

Lifeguards Rick Hinkson and Mateo Duque said a day's worth of exposure gives them headaches and runny noses.

After his hourlong trek along the strand, Sara returned to the beach parking lot. Scientists swabbed the inside of his nose, then directed him into an RV where he breathed into a machine that recorded his lung capacity.

Out on the beach, machines set up by Mote Marine and Lovelace Respiratory Research Institute sucked air into filters that calculated how many red tide particles were present in the air.

Lora Fleming, a professor at the University of Miami's Miller School of Medicine, said research has shown that the toxins have the most dramatic effect on people with asthma or other lung diseases.

Further studies will show if these individuals develop longer-term problems. The studies may also lead to the development of a test that will determine when pneumonia-like symptoms reported by people to their doctors are caused by red tide.

Daniel Baden, director of the Center for Marine Science at the University of North Carolina Wilmington, said the research will also show people how to avoid falling ill from the red tide toxin.

"By the time that decade of analysis is complete, we'll be able to provide answers to the beach-going public and also to provide recommendations," Baden said.