

# AQUANEWS

Volume 29, No. 7

July 2005



**SECRETARY**

MARSHA FREEDMAN

**TREASURER**

PAUL GALEAZZI JR.

**DIRECTORS**

MARSHA FREEDMAN

PAUL GALEAZZI JR.

JERRY GHERARDI

STEVE IMPROTE

LES PARKER

**DIVE COORDINATOR**

MIKE HATALA

**PUBLICITY**

JEFFREY HOROWITZ

Ever wonder where all that water goes during a rainfall or when the snow melts?

As the water drains off the land it often picks up pollutants like motor oil, fertilizer, nutrients, sediment, salt and sand, pet waste, and trash. Sometimes the stormwater will enter a storm drain, that metal grate along the road, and flow through stormwater sewer pipes to a waterbody like Long Island Sound. This polluted stormwater is often called non point source pollution because it does not originate from a single source, but has many sources. The Long Island Sound Study has identified nonpoint source pollution and stormwater runoff, as a significant problem in the Long Island Sound watershed. The US Environmental Protection Agency, through state programs, required many municipalities and construction site operators to apply for stormwater permits that require them to implement best management practices that reduce stormwater contamination. Generally known as a Phase II stormwater permit program, state environmental agencies in Connecticut and New York are responsible for their implementation.

So, what can individuals do to curb polluted stormwater from entering Long Island Sound? Here are a few simple steps: don't apply fertilizer before a rainstorm; clean up pet waste; have your car cleaned at the car wash; and properly dispose of your trash

For more information on stormwater and to download a copy of the new *How to*

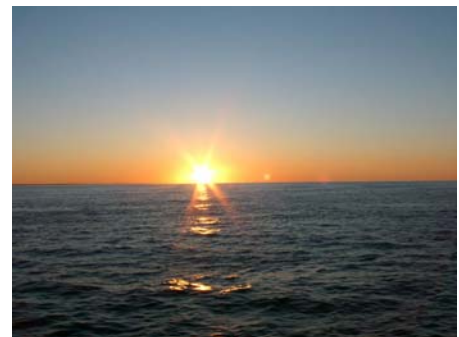
*Curb Pollution Guide* visit the new section of the Long Island Sound website

[www.longislandsoundstudy.net/runoff](http://www.longislandsoundstudy.net/runoff).

For more information on stormwater permitting programs visit New York's [www.dec.state.ny.us/website/dow/mainpage.htm](http://www.dec.state.ny.us/website/dow/mainpage.htm), or Connecticut's

[www.dep.state.ct.us/wtr/stormwater/strmwtrman.htm](http://www.dep.state.ct.us/wtr/stormwater/strmwtrman.htm), and the US Environmental Protection Agency's

[http://cfpub1.epa.gov/npdes/home.cfm?program\\_id=6](http://cfpub1.epa.gov/npdes/home.cfm?program_id=6)



## AQUANEWS

THE OFFICIAL PUBLICATION  
OF THE ROCKLAND  
AQUANAUTS ORGANIZATION.  
WRITTEN CONTRIBUTIONS &  
PHOTOGRAPHS ARE ALWAYS  
WELCOMED & ENCOURAGED.  
SUBMIT MATERIALS FOR  
PUBLICATION BY THE 19TH OF  
THE MONTH

### CONTRIBUTING EDITORS

PETER BEIN  
ALLAN BLOCK  
MELISSA BOGEN  
MAX ESTROFF  
PAUL GALEAZZI, JR  
JERRY GHERARDI  
STEVE IMPROTE  
LES PARKER

### NEWSLETTER COORDINATOR

PAUL A. GALEAZZI

### CHANGE OF ADDRESS

TO CHANGE MAILING  
ADDRESS, PHONE NUMBER  
OR E-MAIL, PLEASE NOTIFY:  
JERRY GHERARDI

## \*There is NO July 2005 Meeting\*

### South African Sets World Scuba Diving Depth Record By Justin Nyberg

**June 13, 2005** On June 10, Nuno Gomes, a 52-year-old civil engineer from South Africa, descended to a depth of 1,044 feet in the Red Sea, deeper than any scuba diver has ever gone before, according to reports by the Cyber Diver News Network and South African newspapers.

“That’s getting way down there,” said Hal Watts, president of the Professional Scuba Association International. “Even for a professional diver that is really, really deep.”

The previous depth record was held by British dive instructor Mark Ellyatt, who reached 1,026 feet off the coast of Thailand in 2003.

Gomes could not be reached for comment.

Deep water scuba diving is a dangerous sport practiced by a small group of technical divers. Only seven divers have ever been below 820 feet—fewer than have walked on the moon.

Breathing a special mix of oxygen, nitrogen, and helium known as trimix, divers endure crushing pressure and marathon decompression periods to prevent the buildup of dangerous gases in the body.

“Record scuba diving is like mountain climbing or speed racing. These are people who want to go to the limits,” Watts said. “The deeper you go, if an accident occurs, you just can’t run back up.”

Rising to the surface too fast causes bubbles to form in the bloodstream, leading to a potentially fatal condition known as decompression sickness, or “the bends.”

It took Gomes just 20 minutes to reach his ultimate depth, but the slow rise to the surface took 12 hours because of the decompression stops he had to make.

It was his second attempt at reclaiming the record, which he’d previously held from 1996 to 2001. According to *The Mercury*, a South African newspaper, last July Gomes reached 889 feet but had to abort the descent due to equipment failure.

Gomes also holds the record for the deepest cave dive, reaching the bottom of South Africa’s 927-foot Boesmangat Cave in 1996, also known as Bushman’s Hole. Gomes nearly failed to return to the surface after getting stuck in the silt at the bottom.

[http://outside.away.com/outside/news/20050613\\_1.html](http://outside.away.com/outside/news/20050613_1.html)

Rockland Aquanauts Organization Inc.  
Mission Statement:

**To provide, promote, and advance environmental protection, care, and voluntary clean-up of waterways by any and all lawful means; to promote the importance and care in every manner possible by environmental awareness and otherwise; to purchase, print, publish, and circulate literature to promote the importance and care of the waterways and the work of the Corporation. To perform all acts the Corporation may deem appropriate or advisable in such operation; to establish, provide, and voluntary clean-up waterways, to encourage, support and subsidize the cleaning and protection from pollution.**

## NY Plans Horseshoe Crab Survey By Robyn Burgess

The horseshoe crab has been around for millions of years but has recently been thrown into the spotlight along the Atlantic Coast. Concern is growing over the horseshoe crab's declining population and the impact this has on migrating shorebird species, such as the ruddy turnstone and redknot, which depend on horseshoe crab eggs as food for their long migration. In Delaware Bay, the epicenter of concern, the shorebird-horseshoe crab interactions are well documented. During the spawning season, millions of eggs and birds can be found along the beaches of Delaware Bay. Currently, there are information gaps regarding the status of the species and existence of interactions in New York State.

In response to growing concerns, The New York State Department of Environmental Conservation (NYSDEC) has recently lowered its Atlantic States Marine Fisheries Commission mandated quota from 366,272 crabs per year to 150,000. Horseshoe crabs are harvested as bait for the commercial eel and conch fisheries as well as for biomedical purposes. NYSDEC monitors its quota closely to ensure that it will not be exceeded. The department looks forward to meeting with the industry this year in order to discuss the status of the fishery and how to best regulate catch.

In the upcoming years NYSDEC plans on surveying horseshoe crab spawning to more thoroughly understand the New York population. In conjunction with Cornell Cooperative Extension and with funds from State Wildlife Grant, the survey will help determine where and how many horseshoe crabs spawn in Long Island Sound.

If you are interested in volunteering for this survey please contact Robyn Burgess at (631) 444-0441 or Matt Sclafani at (631) 854-5544.

### **Head to Camden for underwater Adventure**

Friday, May 27, 2005

Adventure Aquarium has reopened on the Camden Waterfront after nine months and a \$40 million expansion project.

Formerly the New Jersey State Aquarium, the attraction is open daily from 9:30 a.m. to 5 p.m., including holidays. However, in conjunction with a waterfront block party this weekend, the aquarium will be open until 7 p.m. on Saturday and Sunday.

Featured exhibits include the West African River Experience, where visitors find two hippos and 1,000 fish, a 550,000-gallon shark tank with a 40-foot walk-through tunnel, and many hands-on exhibits.

The old portion of the aquarium has been renovated and includes plenty of Caribbean fish and a huge tank with schools of fish, rays and three blue fin tunas.

Tickets are \$16.95 for adults, and \$13.95 for senior citizens and kids ages 2 to 12. Advance reservations are available by calling (800) 616-5297 or at [www.adventureaquarium.com](http://www.adventureaquarium.com).

On the Net:

Marine Mammal Conservancy: <http://www.marinemammalconservancy.org>

NOAA Marine Fisheries: <http://www.nmfs.noaa.gov/>

## Oceans of fun in Camden

**The newly reopened aquarium features creatures from around the world with fins, legs and wings.**

By Hannah Davis , Inquirer Staff Writer

A sloth rustling in the trees, hippos swimming merrily in the river, and the sound of the waterfall crashing in the background.

Are those the sounds of a faraway land?

Nope, it's the soundtrack of Adventure Aquarium, on the Camden waterfront, now the home to more than 6,000 furry, scaly and feathery creatures in addition to some unusual aquatic wildlife.

Having just reopened Wednesday, Adventure Aquarium offers visitors a quick trip around the globe, with a chance to experience the flora and fauna of the Caribbean, Africa and South America as well as the exotic world found under the sea.

"Our goal is to unveil a whole new aquarium," says Greg Charbeneau, executive director of the renamed Adventure Aquarium, where 86,000 square feet of space was added. The center's \$53 million renovation and expansion was funded by new operators Steiner & Associates, who took over privatization plans when the New Jersey State Aquarium was temporarily shuttered in 2004.

Visitors will start their journey at Irazu Falls, a 20-foot waterfall that cascades into a pool that is the home for ducks and freshwater fish found in South America.

Then, the voyage leads to the Caribbean. Here you will have the chance to see reef environments, caves and even a shipwreck. After that, you're led out to a section called the Ocean Realm, which gives the illusion of a never-ending deep blue sea. One of the highlights will be blue-fin tuna - the only other U.S. aquarium to house this fish is the Monterey Bay Aquarium in California.

While in the Ocean Realm, visitors will have the chance to witness a scuba diver feed the deep-sea animals, including the tuna and sea turtles. There also will be other sorts of dive shows visitors can watch.

From here, guests will decide their next destination. They can get an up-close look at mysterious undersea creatures in the Jules Verne Gallery, or head outside to a group of harbor and gray seals and a colony of 21 African penguins.

Visitors can wander through a scene straight from *The Lion King* at the West African River Experience. This second-floor exhibition features two female hippopotamuses (named Button and Genny), as well as crocodiles, porcupines, turtles, and more than 20 species of African birds in a free-flight aviary.

"Our bird collection is unique," says Charbeneau, explaining that the breeds come from South and Central America and West Africa.

The tour takes you from the bank of the river, where the birds sit in trees, to a glass-enclosed lagoon, where you can watch the hippos as they swim around the tank.

Another big-ticket attraction is the Shark Realm. This 40-foot-long tunnel is suspended within a 550,000-gallon tank, allowing the sharks, two Australian saw fish, and some stingrays to swim above, below, and beside you. If that's not close enough, you can swim with the sharks (if you're older than 12) for \$115. This program allows you to snorkel the perimeter of the shark tank and enter the stingray lagoon.

Visitors have the chance to enter the Creature Lab, where they can interact with the animals. At the Cool Pool, fish lovers will have a chance to touch crabs, sea stars, and other crawly things. There is also a large coral reef scene that youngsters can climb on.

In July, the aquarium will add a 164-person-capacity 4-D Theater, Charbeneau says. It will show 3-D films, with the fourth dimension being the immersion of the audience into the movie - while viewers watch, the theater itself will move, enhancing the experience.

This weekend's reopening includes a free block party on Saturday and Sunday on the Camden waterfront. Featuring free entertainment, prizes, activities and food, the celebration is open to the public - even visitors who don't purchase tickets to the aquarium. Festivities including face-painting, juggling and science demonstrations, will run from noon to 4 p.m. both days.

Ocean Off Hawaii Filled With Wreckage  
April 23, 2005 8:09 AM EDT

HONOLULU - From junked trucks to World War II submarines, vast fields of far-flung wreckage exist beneath the blue-green ocean off Hawaii.

"It's like an obstacle course under water, especially at Pearl Harbor," said John Smith, science program director at the Hawaii Undersea Research Laboratory. "Finding the more interesting artifacts is a real challenge."

A World War II-era Japanese submarine scuttled by the U.S. Navy is the laboratory's latest significant find among thousands of wrecks, most from the past two centuries.

The ship is one of two I-400 Sensuikan Toku class subs captured in the Pacific a week after Japan surrendered in 1945. Both subs were deliberately sunk by the U.S. when Russian scientists demanded access to them. The 400-foot-long hulks were the largest built before the nuclear ballistic missile subs of the 1960s.

In 2002, the waters off Oahu also yielded a Japanese midget submarine that was hit an hour before Japan's aerial attack on Pearl Harbor in 1941.

"These are incredibly valuable archaeological sites," said John Wiltshire, acting director of the Hawaii Undersea Research Laboratory. "Sometimes in the marine environment, you can preserve things you can't preserve on land." The value of Hawaii's undersea wreckage is historical rather than monetary. Hawaii's shipping boom began in the 1800s, well after piracy's heyday in the late 1600s to mid 1700s.

Most cargo ships navigating the island chain in the 19th century carried goods that would have disintegrated by now, such as sugar, lumber, phosphates, sandalwood and furs, said Rick Rogers, who has written several books on Hawaii's shipwrecks.

Treasure hunters scouring the Hawaiian ocean bottom for doubloons or pieces of eight are more likely to find submarines, old whaling and merchant ships, fishing boats or 20th-century recreational craft and land vehicles.

Rogers, a former Army salvage diver, believes just one of the few tales of undersea treasure in Hawaii is worth seeking. He has spent 25 years and thousands of dollars searching for two galleons carrying Spain's entire annual cargo of Oriental trade goods, including porcelain, silk and spices.

References to castaways and shipwrecks in Hawaiian legends stoked Rogers' interest in the ships. He believes one went down off Maui in the late 16th century, the other in 1693 off the Big Island's Kona coast.

Finding information on wreck locations takes some work. There are no comprehensive databases or maps of sunken objects, just partial lists, and the Navy limits the release of some locations to prevent looting.

Certain sunken vessels, such as the battleship USS Arizona at Pearl Harbor, are federally protected gravesites and cannot be used for recreational diving.

Diving companies, however, have marked the 10 most well-known wrecks on Oahu with small buoys.

Having so many military vessels underwater could raise concerns about unexploded munitions, but experts say the material is far from the shoreline and popular beaches.

"I've never heard of an instance when anyone has been injured by these old munitions," said Suzette Farnum, who owns Captain Bruce's diving company on Oahu's Waianae coast with her husband. "I'd assume the salt water has kind of trashed them anyway, but you don't want to take that chance by picking them up."

Undersea artifacts in shallower waters can actually benefit the environment, serving as sturdy skeletons for thriving undersea habitats.

The Mahi, a scuttled Navy minesweeper off the Waianae Coast, has grown into a 190-foot artificial reef that is home to corals, leaf scorpion fish, pufferfish, triggerfish, eels and magnificent eagle rays.

The nearby LCU, a 100-foot landing craft utility ship, houses two timid white-tipped reef sharks that flee when divers approach.

"Marine life tends to like these wrecks because there are nooks and crannies to hide in," Wiltshire said.

On the Net:

Hawaii Undersea Research Laboratory: <http://www.soest.hawaii.edu/HURL/>

National Oceanic Atmospheric Administration: <http://www.noaa.gov/>

## Octopuses Observed Avoiding Predators

March 25, 2005 — By Randolph E. Schmid, Associated Press

WASHINGTON — Octopuses, known for using camouflage to avoid predators, have been observed apparently trying to sneak away by walking on two arms while pretending to be a bunch of algae. Two kinds of octopus were seen to use different ways of walking along the sea floor, researchers were reporting in Friday's issue of the journal *Science*.

The movements were discovered by Christine L. Huffard of the University of California, Berkeley, who was studying underwater video camera tapes of the animals.

Berkeley professor Robert J. Full said Huffard was studying octopus movement as part of a robotics project. He said the researchers use examples from nature in designing robots; one project is to build a soft robot.

Octopuses trying to avoid being eaten usually hold still to camouflage themselves. But by walking on two arms, these two types were able to move quickly while using their other arms to disguise themselves.

Two individuals of *O. marginatus* from Indonesia wrapped six arms around themselves, looking like a coconut on the sea floor. They then used the two rear arms to move backward.

In Australia, *O. aculeatus* was seen raising two arms above its head before lifting four more and moving backward on the two remaining arms. The researchers described it as looking like "a clump of algae tiptoeing away."

The researchers believe the octopuses were trying to flee from predators, though they cannot be sure until they have seen more examples of the behavior.

The research was funded by the American Malacological Society and the National Science Foundation.

Source: Associated Press



## Scheduled Dive Dates

Sunday May 22<sup>nd</sup> 9:00 AM Hessian Lake  
**Annual Picnic**

Saturday June 25<sup>th</sup> 9:00 AM Hessian Lake

Saturday July 16<sup>th</sup> 9:00 AM Lake TBA

Sunday August 21<sup>st</sup> 9:00 AM Hessian Lake  
NYSDA Dive

Sunday September 18<sup>th</sup> 9:00 AM Lake Welch

Saturday October 15<sup>th</sup> 10:00 AM Hessian lake  
Oktoberfest

## **ANNUAL MEMBERSHIP FEES ARE DUE**

How good are you about achieving your goals? Are you ready for a new set for New Year's resolutions, because you abandoned the old ones? Did you lose those last five pounds in time for the holidays the way you planned? Have you kept up with your fitness regime? Have you paid your Rockland Aquanaut Annual Membership fees?

Collecting fees is one of the unpleasant necessities of organizational life. Until we find a rich member to support the Aquanauts exclusively, we depend on your annual fees to keep the organization going. A full year will only run you \$42.

Kindly remit your check to:

Paul Galeazzi Jr.



**Rockland Aquanauts  
Post Office Box 387  
New City, NY  
10956**

**July 2005**

Horseshoe Crabs, Camden underwater Adventure, Ocean off Hawaii Filled With Wreckage

**\*\*There is NO July 2005 Meeting\*\***