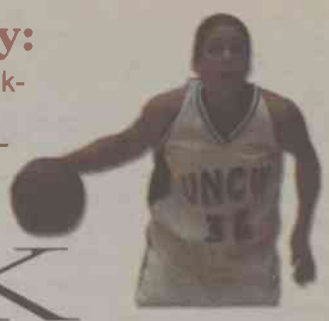
Oh Christmas Tree:
The world's largest Christmas tree is in Wilmington/See Page 7

Women win tourney:
Basketball squad shuts down weekend opponents/See Page 13



the Seahawk

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Dying coral studied

SARAH BRODERS
ASSISTANT NEWS EDITOR

Aquarius, the undersea research laboratory directed by UNCW's Center for Marine Science, is quiet after completing its last mission of the year.

The Aquanauts, who participated in the mission, walked away with knowledge that may bring scientists a step closer to understanding the true cause of coral bleaching.

Coral bleaching is a phenomenon in which the algae that color and inhabit the coral's tissues die, leaving behind the white calcium carbonate skeleton. The algae leave the coral or die when they are stressed due to things such as warmer water temperatures.

Courtesy of NOAA.gov

Coral bleaching can alter these wild, tropical colors.

"Coral reef scientists want to learn as much as possible about these events because they threaten reefs periodically worldwide," said chief investigator for the mission Mark Patterson, associate professor at the College of William and Mary's Virginia Institute of Marine Science.

According to the VIMS press release, "Small-scale variations in bleaching across a reef, where one coral may bleach while another just meters away remains healthy, suggest that other factors such as current flow and oxygen levels may also play a role."

To study small-scale bleaching events, Patterson and his team measured the oxygen availability in the bottom two meters of the reef. Patterson also investigated whether local currents and waves have an influence on the speed and extent of bleaching in communities of coral.

"If there is a connection between water motion and how fast bleaching can occur during a bleaching event, this might allow us to better predict which reefs are most at risk, and it may help us fine-tune efforts at reef restoration and reef management," Patterson said.

After 10 days of careful measurements and data analysis, the team found that there was a connection.

"It did appear that the speed of water motion over the coral colonies was affecting how fast bleaching occurred within a single colony, with polyps, the feeding units of the coral, bleaching faster in the high-

SEE CORAL BLEACH, PAGE 2

Lorrie Laliberte/ The Seahawk

Thomas Lankford begins to dissect the sturgeon found in the Cape Fear River at the CMS lab. He is a professor in the biology department at UNCW.

Sturgeon may reveal clues

LORRIE LALIBERTE
NEWS EDITOR

The Cape Fear River is home to a very unusual and imperiled fish known as the Atlantic sturgeon. After a large female was found floating in the Cape Fear River in July, the UNCW Center for Marine Sciences performed a dissection on Nov. 20 to find out the life history of the fish.

The Atlantic sturgeon was once a rich source of caviar. A female can produce 20-30 pounds of the eggs. Market price is $100-$200 per pound, so one fish could bring in $2,000-$3,000, not counting the money from the meat and skin. To help protect the fish from over-fishing, the sturgeon fishing industry was closed.

The fish was found to have about eight pounds of eggs in her ovaries, but they were not fully developed. Thomas Lankford, assistant professor of biological sciences at UNCW, estimated that since the sturgeon weighed about 180 pounds, it would have contained approximately 36 pounds of eggs if the ovaries were completely developed.

Matt Mciver, a research technician with the Center for Marine Science, found the fish dead in the water when he went out to take water quality measurements in July. He immediately recognized this as a significant find and brought it to CMS.

The fish suffered a wound that completely severed her tail fin. If she was whole, Lankford estimated she would be 7 1/2 feet long. He said that due to the way the wound looked, it was probably inflicted by a ship propeller.

Since sturgeons can live 60 to 80 years, they are good indicators of the health of the water they inhabit. Lankford will be investigating to see if the fish accumulated toxins in her system. The toxins can be used to determine the number of pollutants that have gotten into the river during the fish's life, which he estimates was 20 to 25 years.

When Lankford and Mike Williams, his lead technician, opened up the fish, they took samples of all the organs to send to a lab in Florida that will analyze the samples. Lankford said the genetic information retrieved from muscle tissue could be key.

"[That information will help us] deduce whether this fish was a member of the Cape Fear River

SEE STURGEON, PAGE 2

Inside This Issue

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