

UNC Scientist Uses Massive Tackle To Fish For Gulf Stream Information

BY DAVID WILLIAMSON
UNC News Bureau

When Dr. John Bane goes fishing in the Gulf Stream, he doesn't fool around.

He uses floats that are five feet in diameter and provide 2,000 pounds of buoyancy. For sinkers, he uses 10 railroad car wheels welded together and weighing four tons. And his lines—5,000-pound test steel cables—stretch two to three miles long.

But Bane, an oceanographer at the University of North Carolina at Chapel Hill, isn't fishing for whales or sea monsters. He's fishing for information.

The 38-year-old scientist wants to learn as much as he can about the Gulf Stream, that massive lazy snake of water that glides up the Atlantic seaboard from Florida to Massachusetts before disappearing into the North Atlantic.

What he discovers should help other scientists not

only understand better how ocean currents behave, but might also enable meteorologists to predict weather in the region more successfully.

A year ago last winter, he and his colleagues dropped five of the massive mooring lines in the Gulf Stream between Cape Hatteras, N.C., and Cape Henry, Va. Each of the lines held four scientific instruments designed to measure the strength and direction of the current, water temperature and pressure.

This spring they returned to the mooring sites aboard the University of Rhode Island's research vessel Endeavor to inspect their "catch". But with seas running 18 to 20 feet "most of the time," he said, and gusts of 60 knots adding to sustained winds of 40 knots, recovering the instruments wasn't easy.

"Some days it was so rough we couldn't work at all," Bane said. "Fortunately, it got up to 50 degrees sometimes because of the warmth of the Gulf Stream."

To the scientists' satisfaction, all of the electronic equipment had survived more than a year in the Gulf Stream.

"We were delighted," he said. "The monitors worked in that hostile environment recording all the data we wanted every hour for 12 months."

Bane and his colleagues are now analyzing their newly acquired information with computers to recreate what happened in the Gulf Stream during 1984. Included in the analysis will be additional data gathered by satellites, flights over the Gulf Stream and instruments known as inverted echo sounders that sit on the bottom of the sea sending up sound waves to ships.

The result should be "the most comprehensive study ever done of that part of the ocean," Bane said.

A two-year, \$755,000 research contract from the U.S. Office of Naval Research is paying for the project. "The Navy wants to learn more about how the Gulf

Stream affects sounds passing through the water," he said. "It feels this information will improve its ability to monitor the position of foreign vessels."

But Bane said his own interest is 100 percent scientific.

The area he is studying is where the Gulf Stream leaves the continental shelf and begins flowing northeastward into the deep ocean.

He hopes to explain, among other things, the massive circular currents or rings—some as big as 300 miles across—that the Gulf Stream spawns as it breaks up in the North Atlantic.

"Ultimately, we want to understand the entire ocean atmospheric system—how the sea and the air and the land interact with one another and how they work together to change the weather and each other."

ASCS Committee Cites Need For Sound 1985 Farm Bill

"We need sound farm policy that helps North Carolina farmers but also has fiscal restraint," according to Marshall W. Grant, chairman of the State Agricultural Stabilization and Conservation Committee. Grant reiterated the Reagan Administration's farm bill goals at the close of the committee meeting in Raleigh last week.

New legislation is needed to replace the four-year law which expires at the end of this month.

Grant's comments on behalf of the State ASC Committee closely followed the resumption of the farm bill debate by the Congress in

Washington last week, and the committee's 'conference' with Secretary of Agriculture John Block. "We just 'met' with Secretary Block by telephone, and as his representatives on federal farm policy here in the state the committee wanted to pass on some of what was discussed," Grant said.

"Our major objectives are the same as when the legislative process began earlier this year," Grant said. Three objectives are central to the Administration philosophy.

"First, we must become more competitive in world markets. Reducing price and income support

levels is essential, so that we send a clear signal to our competitors that we are serious about regaining lost export markets. We must no longer hold the price umbrella for the world," Grant said.

"Second, we are committed to a policy of compassion for farmers. That means we want to spend enough money to carry our producers a transition period as we work toward a reduction in farmer dependence on government.

"And, third, we recognize the need to reduce the federal deficit. So, we believe the new farm bill should adhere to the Congress' spending

limitation. That will mean less and less annual Federal outlays for farm programs."

He also itemized some things being proposed as part of the new farm bill that the state committee agreed were unacceptable.

"Marketing loans with unlimited budget exposure are not acceptable. The cost could be tremendous with a program that would allow farmers to take out loans at one price and pay them of at the market price.

"We oppose freezing target prices. This would encourage more agricultural production than we need, because of the guaranteed price.

"We also oppose the proposed dairy diversion program. We've already tried that, and it doesn't work. The cost to government would be high. The cost to consumers would be high. And, it would get the government deeper into the dairy business with inequities in the dairy industry as a result.

"And, finally," Grant said, "We oppose a simple extension of the present farm legislation. Why keep programs that price farmers out of world markets at a tremendous cost to taxpayers?"

Seminar Explores Constitution

"Framework For Freedom: 200 Years Of The American Constitution" is the topic of the next humanities seminar at the Brunswick County Agricultural Extension Service office, said Mary Russ, home economics extension agent.

The series will be held Thursdays, Oct. 3, 10, 17 and 24, at 7 p.m.

Tinsley Yarbrough, professor of political science at East Carolina University, will conduct the seminar.

Yarbrough's lectures will address what Mrs. Russ called "the most fascinating ingredients of our constitutional heritage," including how the constitution was formed, what it says and why it has endured.

Yarbrough will lead the first and fourth sessions in person, withdrawing during the middle two weeks to encourage discussion of the topics among seminar participants. These two sessions will each begin with a videotape presentation.

These will feature interviews with such constitutional authorities as Archibald Cox, Harvard law professor; Barbara Jordan, former congresswoman; Sarah McClendon, Washington journalist; and Dr. Hope Franklin, historian. Topics such as civil rights, voting procedures,

Federalism versus states' rights and checks and balances will be discussed and debated.

The seminar is sponsored by the N.C. Agricultural Extension Service and the School of Humanities and Social Sciences at N.C. State University. It is co-sponsored by the Brunswick County Agricultural Extension Service, with partial funding by the National Endowment for the Humanities.

The deadline for registration is Tuesday, Oct. 1. To register, call the extension service, 253-4425.



STAFF PHOTO BY SUSAN USHER

Under The High Rise

This boat looks like its headed under the curving sweep of the new Holden Beach Bridge under construction. Actually, it was stopped for refueling at Captain Pete's Marina.

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(Refreshments served in day & evening sessions. Lunch included in 1 day sessions.)

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