WHAT LIES BENEATH

WHEN A DROUGHT REVEALED MORE THAN 100 ANCIENT CANOES
BURIED AT THE BOTTOM OF NEWNAN'S LAKE, IT SPARKED A MYSTERY FULL OF SURPRISES

BY DIANA TONNESSEN

AFTER A SEVERE DROUGHT IN 2000 brings the water levels of Newnan's Lake to historic lows, area residents exploring the lakebed stumbled upon a number of flat, straight pieces of wood embedded in the sand. They notified the state archaeologist in Tallahassee, who told them they had probably found a canoe.

When archaeologists working for the state and the Florida Museum of Natural History came to check out the site, they soon began to realize the magnitude of the find.

Dona Ruhl, one of the museum's archaeologists who was called in to help out with the excavation, recalls, "By the time we got to the twelfth canoe, we started walking the shoreline and we realized how many there really were." What began as a small salvage operation turned into a major excavation.

During the next several months, the archaeologists identified a total of 101 prehistoric dugout canoes.

"It's the largest known find of ancient watercraft in the world," says Darcie MacMahon, head of exhibits at the museum.

Ruhl and other archaeologists who specialize in excavating "wet" sites such as peat bogs and lake bottoms, say that when it comes to wooden

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artifacts, mud and water can be an archaeologist’s best friends — and also their worst enemies. On the one hand, wood tends to dry out and rot when exposed to the elements, which is why prehistoric wooden artifacts rarely survive the ravages of time. But wood that has been submerged in water — or better yet, buried in mud, where it is protected from the drying effects of sun and wind — tends to last longer as water infiltrates the cell walls of dead wood and helps maintain the wood’s structure.

Once the wood is removed from the water, however, it begins to dry out and falls apart.

To prevent this from happening, wood artifacts that have been removed from wet sites must be preserved by immersing them in a chemical solution that gradually replaces the water in the cell walls with a preservative that doesn’t dry out the wood.

If wood has been repeatedly exposed to air and then submerged in water and mud over time, some damage from drying may have already begun. Such was the case with the canoes at Newman’s Lake, where archaeologists hypothesize that fluctuating lake levels over thousands of years left the canoes, at times, exposed and vulnerable, as they were in 2000. As a result, when the archaeologists attempted to excavate one of the canoes by slipping a number of belts under it and lifting it out of the mud, the canoe began to fall apart.

“There was no cellular integrity to the wood,” Ruhl says.

When it became clear that recovering the canoes from the lakebed would do more harm than good, suddenly the researchers found themselves in a race against time. The rains of late August marked the recovery from the drought. Soon the rising lake waters would cover the canoes — and protect them in a way the archaeologists couldn’t.

“We needed to get as much information as we could before the water came up,” Ruhl says. The researchers decided to take wood samples from about 50 of the canoes for radiocarbon dating — before the rising waters reclaimed them.

Radiocarbon dating revealed even more surprises. These canoes were not all from one time period. They ranged anywhere from 500 to 5,000 years old.

“It made us open our eyes to see that this kind of maritime history has been there for such a long period of time,” MacMahon says. “The technique that was used to make dugout canoes 500 years ago was being used 5,000 years ago,” she says. The technique involves using controlled fire and a sharp instrument, such as a piece of chert or a shell, to carefully burn and then carve out the inside of a felled pine or cypress tree.

The researchers still aren’t sure how so many canoes came to be in one place, especially canoes from different time periods. Did the wind blow the canoes to the shoreline? Was Newman’s Lake a manufacturing site for canoes because of its abundant resources? Was it a repository (graveyard) for old, worn out canoes?

The cache of ancient canoes at Newman’s Lake became the inspiration for a new exhibit opening at the museum in November: “Paddling Across America.”

“The Native Americans were far more mobile than we ever gave them credit for,” Ruhl says. Canoes helped spread goods, ideas and people in ways that were far more sophisticated than was once believed. She points to the Maya, who transported salt some 2,000-3,000 miles by canoe.

“We tend to think of the Native Americans as ‘primitive people,’” Ruhl says. “But Gulf coast whelk shells have been found in the Dakotas and the Southwest.”

MacMahon adds, “We think today about driving on the interstate. But if you look at a map of rivers, lakes and waterways across the state — and even the country — it’s easy to see how canoes could facilitate travel and how important rivers and waterways could be.”