Learning with Objects Series

### NATIVE AMERICANS TRANSPORTATION • CONSERVATION

## The Canoe

CHAPTERS OF ARKANSAS HISTORY • A PUBLICATION OF HISTORIC ARKANSAS MUSEUM

fisherman on the Saline River, near Benton, Arkansas, noticed a buried log one summer day in 1999. But the closer he looked, the more he decided it was more than a log. In fact it was an ancient canoe, dug out of a log.

He found experts to research its history and preserve it, and in 2003 the wooden canoe went on display in an exhibit at Historic Arkansas Museum.

This issue of Chapters in Arkansas History has two canoe stories. The first is historical fiction. Charley Sandage, the author, let his imagination take him back hundreds of years to wonder how a 23-foot dug out canoe came to be buried in a river bank.

You will know, as you read it, what part is fiction, like the boat owner's name.
But the story has plenty of real history woven into it, like trading in salt loaves and sleeping on bear skins.

After you've read both stories, let your imagination take you back to when this canoe was buried. What would your story be?

## Ti Yume ah, the Thunderstorm and the Canoe

### Chapter One

A high, narrow bank jutted into the river just below the big bend. It made a fine little cove on its lower side. The lone paddler swung the big canoe into the sandy base of the bank and scrambled to pull its nose out of the

water. He heaved the anchor stone out of the boat and it fell with a plop.

Ti Yume ah lived a ways up the river, but he knew this landing and the nearby village. It was his first stop on a journey of several days. He had a cargo of fine dart points in the canoe and he would take on several baskets of salt loaves at this place.

Three days downstream, he would trade these goods to the people from the eastern lowlands. The points and the salt loaves would bring a high price in furs, decorated pots, or anything else the lowlanders might have to offer.

### **Chapter Two**

The plan was to stay overnight and load the salt loaves and leave early in the morning. Someone from this village would go with Ti Yume ah. For tonight, he would stay as a guest of the salt makers.

He was surprised to find that he was very sleepy soon after finishing supper and talking with his hosts for an hour or so. They showed him to a fine bearskin robe where he would sleep. As he drifted off, Ti Yume ah heard thunder in the distance. "Doesn't sound like a problem," he thought. "I'll wake up if it gets close."

But he didn't wake up in time. Not long before dawn a booming clap of thunder made him sit straight up.

Springing from his bed, he realized that rain was pounding the walls of (continued on page 4)







## Preserving the Canoe

The moist mud of a Saline River bank protected a buried canoe for nine hundred years. The moment it was exposed to air, the ancient craft was in danger of rotting away.

It was a race against time that began centuries ago, when Native Americans who lived in the area built the canoe. These people were probably just beginning to live in the way the Caddo lived when Europeans first came to the country. They were learning to farm and to trade salt, stone hunting points, and furs. The twenty-three foot canoe may have been used to carry trade goods.

The builders started with a section of a large yellow pine tree. They burned away some of the trunk to hollow it out, then used stone scraping tools to finish that job and to shape the ends, sides, and bottom. Then they probably rubbed the inside space smooth using sand and water.

### How long ago is 900 years?

Nobody knows how the canoe got buried in the mud of the riverbank, but it was there for a very long time. It may have been in the Saline River mud when William the Norman conquered England.

It was there when the Incas ruled part of South America. It lay hidden while the ideas of Confucius were spreading in Asia. It waited while states first formed in Africa. When De Soto passed nearby around the year 1543, the canoe had been hidden for nearly five hundred years.

### "Log" was 2200-pound boat

Charles Greene, a Benton fisherman, passed the "log" at the edge of the river many times without stopping to

look at it closely. In the summer of 1999, with the river unusually low, he looked again. It was not a log at all.



The yellow pine canoe floats one last time on the Saline River. Next stop, the bottom of a pond.

He called museums, looking for someone who could tell him what he had found. They agreed that it seemed to be a very old boat. When samples from the wood were tested it was clear that Mr. Greene had found an ancient canoe.

Ten men finally got together to free the 2200-pound boat from the bank and load it onto a trailer. The canoe was deliberately sunk in a pond. It would be safe underwater, protected from exposure to air until somebody was ready to start work on preserving it.

That "somebody" turned out to be Andy Zawacki, Conservator at

In 1983, another Native American canoe was found in the Saline River. Archeologists could tell that it was crafted with metal instruments. This made them say it was made after Europeans had come to Arkansas. Why did they say that?

## Would you have seen it?



To the right of the man in the picture, look along the edge where the water meets the river bank. There's a shiny black line. It was hard to see in real life and it's hard to see here — but that shiny line is the edge of the canoe.



Historic Arkansas Museum in Little Rock. His work on the pre-historic treasure began in December of 2001.

### Trip from pond to tank was risky.

The first task was to move the canoe to a tank at the Museum. Two prob-



After 15 months in a tank of chemicals, the 900-yearold canoe went on display for eight months at the Historic Arkansas Museum.

lems had to be solved. First the boat was floated onto a trailer that was backed into the pond. A special frame cradled the fragile craft so it wouldn't collapse from its own weight.

Second, a plastic wrap covered the wood to keep it from drying out during the trip to Little Rock. A forklift finally lowered the precious cargo into the tank where it would be safe once again.

#### Science to the rescue

It was time for chemistry to go to work to preserve the canoe. Over the centuries, parts of the wood structure had been eaten away by micro-organisms. Water from the river filled in the empty spaces. If this water should be lost by evaporation, the wood could not hold its shape. The boat would finally fall apart.

# Something to think about.



What if you had been the first one to discover this boat!? What would you have done with it? If Mr. Greene had dug it up in 1999 and taken it to his own backyard, would you have had a chance to see it or read about it? Why?

The job was to replace the water with a chemical that wouldn't evaporate. That chemical is a kind of wax that can dissolve and seep into the wood. It is called polyethylene glycol.

The chemical mix had to be just right. It would depend on how much of the wood's substance was lost. A small sample of the wood was taken from the hull, which is two to three inches thick. The outside of the sample had lost more of its wood substance than the inside, so Andy averaged the information and mixed the chemicals.

The first mix used a form of the chemical that the wood was able to take in. This let the solution spread through the wood and begin to replace the water. The canoe soaked in that mixture for seven months.

Next, another form of the chemical was added. This form has larger molecules that began to harden and make the surface of the wood firm. This change took place over a period of five months.

Who's who? An article in the Benton Courier, in October 1999, names the people who helped bring the canoe out of its mud bed. Members of the recovery crew were Ruben Rankin and Rick Holland, who also took pictures seen on page two, plus discoverer Greene, Guy Moore, Michael Rhodes, Rod Rhodes, Mike Richards, Michael Lutz, Woody Sellers and David Sellars.

Finally, it was time to let the canoe dry out from its chemical bath. With the chemicals making the wood cells stronger, it could sit in the open air again.

It's like a visitor from another planet who needs a special suit to live on earth. This visitor from another time is now ready to live in the twenty-first century.





## Ti Yume ah

(continued from page 1)

the house. Someone outside was yelling that the river was already filling its bank and might overflow. How could he have slept through that much rain?

### Chapter Three

It was early spring and sudden storms were not unusual, but this one was enormous. It had moved in from the northwest, filling the creeks that fed into the river at this place. By the time the storm got here, the river was already running high and swift.

Ti Yume ah ran to his canoe. He had left his fine stone points wrapped in deerskins on the canoe and was afraid they might get washed out of the boat. He never imagined there was any danger of losing the canoe itself. It was firmly tied to the rock anchor, and he was certain it would stay in place.

Contibuting writers:
Charley Sandage, Starr Mitchell
Contributing photographers:
Bill Branch
Ruben Rankin, Rick Holland

Designer:

Jann Greenland of Greenland Creative, Inc.



200 East Third St. Little Rock, AR 72201-1608 (501)324-9351 TDD (501) 324-9811 www.arkansashistory.com



An agency of the Department of Arkansas Heritage

Accredited by the American Association of Museums Historic Arkansas Museum is a historic site museum, interpreting the territorial and early statehood periods of Arkansas, and Arkansas's creative legacy.

The museum opens its doors daily for tours of one of the state's oldest neighborhoods.

For information about field trips to Historic Arkansas, call (501) 324-9351 or e-mail the education staff at: reservations@arkansashistory.com.

Sure enough the canoe was there, its stern whipping furiously from side to side. The bow, tied to the anchor that was now deep below the swirling water, was about to go under. Ti Yume ah never hesitated. It was clear what he had to do.

He would plunge in, grab one of the sharp stone points from the bundle in the canoe and dive. He would use it to cut the canoe loose from its anchor, then grab the canoe and follow it downstream until he could get it landed somewhere safe.

Just as he was about to go in headfirst, the roar of the brown angry current got louder still. Ti Yume ah froze in his tracks for a moment, and then realized what was happening. The narrow bank that stood just upstream from the canoe was collapsing. Within a moment, a wall of mud plunged into the water. The canoe was buried instantly.

### **Chapter Four**

By mid morning, Ti Yume ah and his friends at the village gave up their effort to get to the canoe. The current was down just a little, but the stream still raced by in a thunderous torrent. "The mud must be as deep as a man's height over the canoe," one of the salt makers said. "We just can't get to it now."

Within a few days, his friends agreed, they could try to raise the canoe. They would send word to Ti Yume ah when it was time.

They insisted that he take a good flint knife and a light robe, since the journey back to his village by foot would take more than one day. The wife of his host gave him a small pouch with some venison and a corn meal cake in it. "I thank you all," he said, and by

In the first paragraph of this story, the canoeist "...heaved the anchor stone out of the boat and it fell with a plop." That stone is real. According to a Benton Courier According to a Benton Courier story by Jerry Breeden, "...it was story by Jerry Breeden, "...it was found just a few feet from the canoe...It bears four, smoothly worn markings from being worn markings from being tethered to the end of a hemp rope, tethered to the end of a hemp the probably for decades, before the rope rotted away."

mid-day Ti Yume ah set out toward home.

He followed the banks of the river. The sun was out and the afternoon had turned warm. "How strange," he thought, "this same stream that is now so cruel is also my friend. It is my road for travel and it gives me food and salt and water to drink. Now it leads me back to my village."

Thinking about his canoe, he began to realize that he might never get it back. "When the mud dries, it will harden," he thought. "The canoe is very deeply buried. Perhaps someday, the river will wash the mud away, but that will take a very long time."

"Ah well," he thought. "I can build another canoe."

