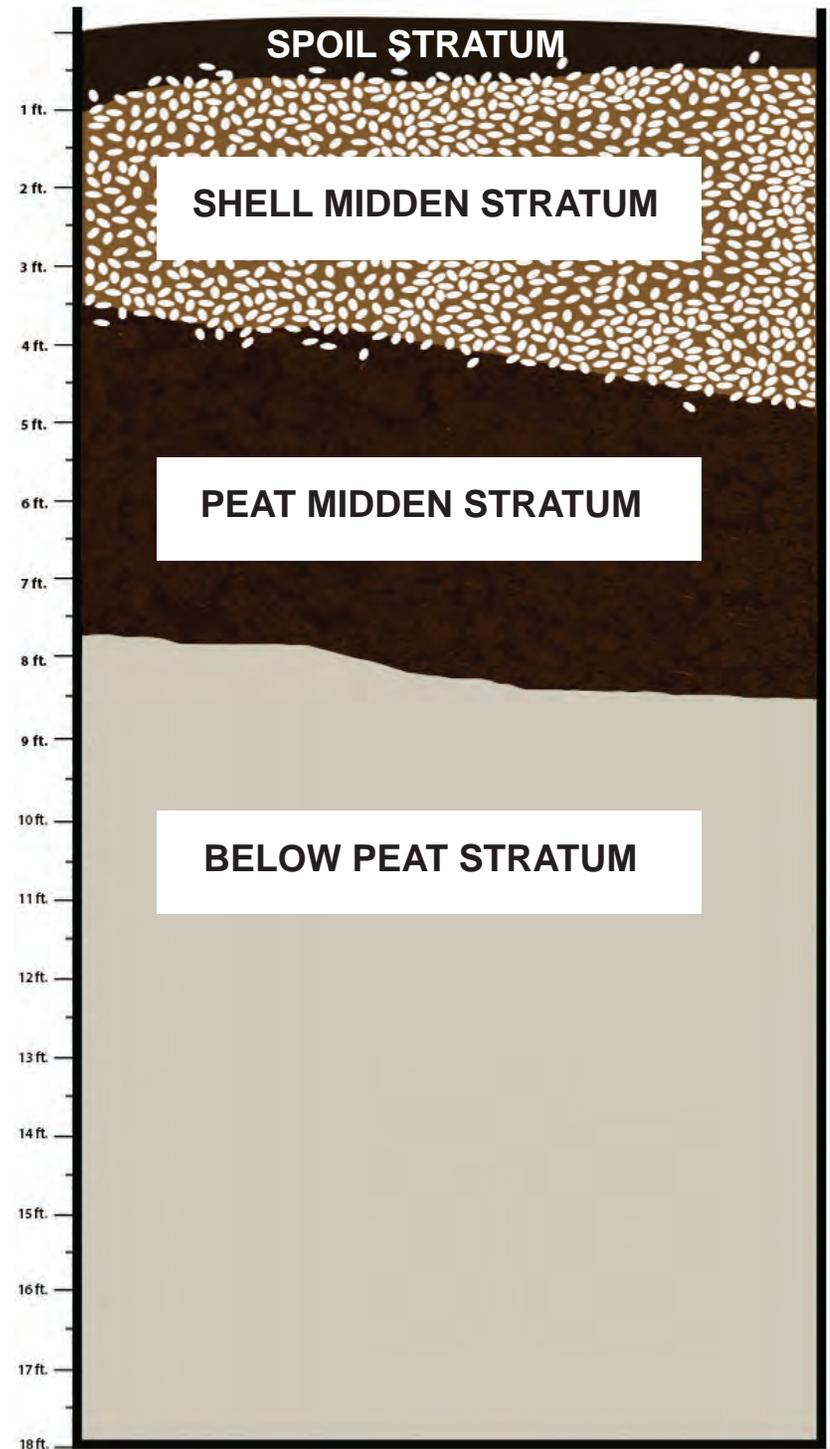


Explore the Site

When archaeologists excavate a site, they may find different layers of dirt and shell as they dig down. Archaeologists call these layers strata (stratum, singular). They try to link each stratum to a time period or activity at the site. Because people continued to dump dirt and shell on the Bayou Jasmine site as they lived there, the oldest strata are at the bottom. The most recent activity should be at the top of the site, but Bayou Jasmine is different. Explore the top spoil stratum to learn why.

When researchers dig at a site, they can see the strata in the wall of the excavation. They carefully measure and draw a map of the layers. This map, called a profile, records the strata and helps tell the story of the site from the first activities to the last. Archaeologists label strata from the top to the bottom, which is the way they excavate. However, if you want to learn about this site from beginning to end, you would explore the profile starting at the bottom.

Take your choice, as you get to know more about the history of Bayou Jasmine. Read about the strata to learn more about the site.



Spoil Stratum

In the 1950s, and again in the 1970s, highway construction crews used a dredge to dig a canal at the edge of the site. They dumped the dredged soil on top of the site. In some areas, the dredge reached from the top of the site all the way to the bottom strata. Artifacts from all layers ended up on the surface when the digging was finished. The dredged muck, called spoil, became the top layer at the site. It was a mix of dark soil with lots of roots, bits of shell and greenish clay.

The dark clay overlying the shell floor in this photo is spoil left over from dredging. The trowel in the photo is pointing to the north. Archaeologists often use a trowel pointing north in their excavation photos so they can orient themselves when looking at the picture later. Credit: LSU Museum of Natural Science.

Many artifacts were in this layer. The bits of cord came from the spoil stratum, but originally they may have been at the bottom of the site. [Late Archaic](#)-style cooking balls also were in the spoil. Out of their original context, these artifacts lost some of their scientific value. On the other hand, archaeologists may never be able to dig to the bottom of the site because it is under water. These artifacts gave them a better idea of what they could expect to find if they could reach the oldest, deepest strata.



Shell Midden Stratum

A 3-foot-thick clam shell **midden** was just beneath the spoil layer, and above a layer called the peat midden. People ate a lot of clams to form the shell layer! The top part was made of black clay and whole and crushed shell. It had a range of artifacts, with some dating from A.D. 1200 to A.D. 1400, during the **Mississippi period**. However, the dredge disturbed some of this upper area, so older and newer materials were mixed. Archaeologists found prehistoric pottery pieces as well as a large, fired musket ball. A hunter may have fired the musket ball sometime between about 1720 and 1860. It is the only artifact at the site from the time after Europeans arrived in Louisiana.

The middle and lower parts of the stratum were not disturbed. Archaeologists found the remains of two fire pits that had pottery and charcoal in them. At the bottom of the layer, archaeologists found more pottery pieces, stone artifacts and bone tools. They also recovered many animal bones that show what meat people were eating. Fish bones were the most common, but they also found alligator bones, turtle bones, raccoon bones and waterfowl bones. The middle and lower parts of this stratum were from about 400 B.C., during the **Early Woodland period**.



(Top) A Rangia cuneata shell. The shell measures about 1 1/2 inches in length. Credit: R. Christopher Goodwin and Associates.

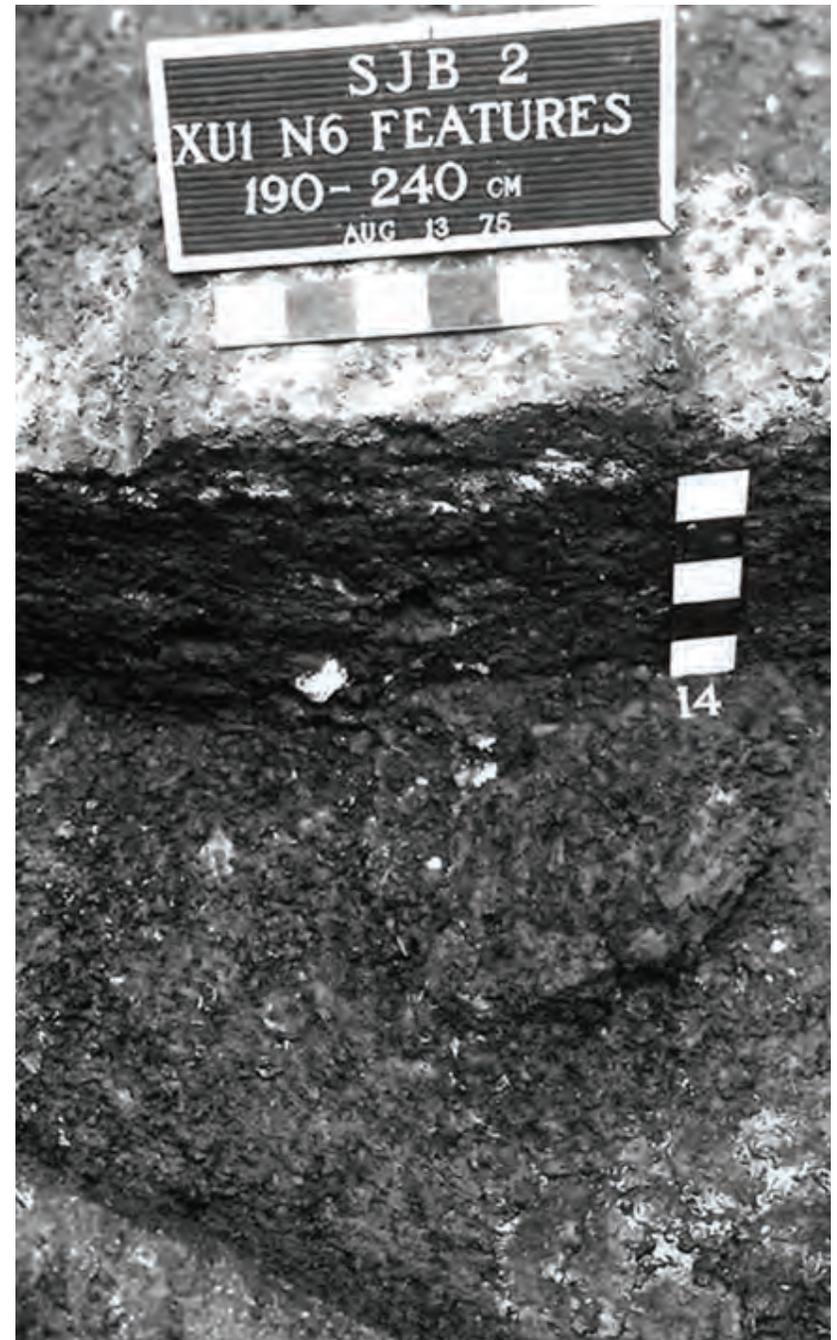
(Bottom) This image provides a detailed look at the densely packed Rangia cuneata shells in the shell midden stratum. Credit: LSU Museum of Natural Science.

Peat Midden Stratum

A peat [midden](#) stratum that was 5.5 feet thick lay below the shell midden. This lower layer had a lot of wet, organic debris, called peat, and very little shell. The shell stratum was right on top of the peat stratum, but there was a gap of time between these two layers. During the gap, people rarely used the site, and a massive tree grew on the surface. Archaeologists found its roots in the lower, peat stratum. No trace of the tree was in the shell midden stratum above. This shows that the tree was gone by the time people began creating the shell midden.

The peat stratum dated between 800 B.C. and 600 B.C., during the [Early Woodland period](#). At that time, the site was on high ground next to the bayou, and people used it as a fishing camp. Archaeologists unearthed many artifacts and animal bones in the peat stratum. They found layers of ash, fire pits and [postholes](#). Within the ash layers, they discovered dark circular stains, pieces of burnt split cane and pottery. These likely were the cooking areas. The cane could have been from mats that people used to wrap food for cooking, similar to the way people in Latin America wrap tamales in corn husks or banana leaves today.

Archaeologists also found human [coprolites](#) and a flat, clay floor with at least 12 [postholes](#) in it. This probably was a living area, where people cleaned and smoked the fish they caught. They may have cut off the heads and some other parts to make a fish soup to eat while they dried the fillets over fires. The large number of fire pits and artifacts show that people used this location many times over a long period.



Detail of the peat stratum at the site. The signboard at the top identifies the site, excavation unit number, depth, and other details. Credit: LSU Museum of Natural Science.

Below Peat Stratum

Archaeologists knew there were more layers beneath the peat, based on a series of soil cores from the site. However, they could not reach these deeper strata before the field season ended. In spite of the difficulties of working at the site, the crew reached a depth of more than 9 feet, most of it below the water table!

(Right) A mobile coring machine was able to reach the bottom of the site 18 feet below the ground surface. Soil cores allow archaeologists to see what the layers of soil look like in a single, undisturbed column. Credit: LSU Museum of Natural Science.

(Below) Researchers working at the site had more things to worry about than water seeping through the walls of the cofferdams. They also had to look out for snakes that would sometimes fall into their excavation units! Credit: LSU Museum of Natural Science.

