Although land at the confluence of the Rock and Pecatonica rivers had been used by Native Americans for at least 8,000 years, this particular stretch of shoreline was the focus of Middle Woodland and Late Woodland food procurement.

During the Middle Woodland Period, settlements in the Midwest tended to concentrate in broad river valleys. Burials were placed in mounds on nearby bluffs, possibly serving as territorial markers. Sites were occupied for longer periods of time during the year and by greater numbers of people than in preceding periods. Subsistence activities focused on harvesting the abundant seed plants of the floodplain as well as raising some native domesticated plants. Deer, fish, shellfish, and a variety of small mammals and birds were also important food resources.

The best information on Middle Woodland (5500 BC to 600 AD) in the Midwest comes from the regions along the Ohio, Mississippi, and Illinois Rivers in Ohio and Illinois. Along the lower Illinois River, Middle Woodland settlements consisted of a number of different types including regional centers, small villages, small seasonal camps, and ritual sites (earthenworks and burial mounds). Stylized artifacts, often made from long distance trade materials, suggest a widespread economic network. However, much less is known about Middle Woodland in Northern Illinois. This shellfish processing area (Shell Midden A or SMA) is one of only a few Middle Woodland food processing sites explored.

During the Late Woodland (600 AD to 1000 AD), the trade of long distance materials came to an end, ritual activities became less complex, and settlement patterns changed. Throughout the Midwest, Late Woodland was a period of population growth and territorial expansion. Settlements were no longer restricted to broad river valleys but included upland settings as well. Late Woodland settlements consisted of small seasonal villages and support camps. Hunting, fishing, gathering wild plants, and growing some native grains and tubers remained important food resources; however, cultivating corn became increasingly important.

Although there are probably many shell middens or processing areas along the Rock and Pecatonica rivers only SMA has been studied in detail. From 1997 through 2003, archaeologists collected information from this area that is rapidly eroding into the river. Archaeologists, field school students and volunteers have documented the rate of erosion, collected artifacts along the shoreline, cleared and drawn profiles of the bank and excavated 11 square meters to a depth of over 1.5 meters below the current ground surface. These activities showed successive of overlapping shell deposits left by Middle Woodland people who harvested shellfish from the river and processed them along the bank. During the Late Woodland, this same area was used primarily for hunting, trapping, and fishing.

Ceramics recovered from excavations at SMA are from the Middle and Late Woodland periods. These ceramics represent several vessels that were left in place after breaking while processing freshwater mussels by steaming or boiling. A radiocarbon date from a shell layer (Zone 7) was dated to AD 210. Madison Ware Late Woodland ceramics were collected from shell layers above the Middle Woodland deposits. A radiocarbon date of AD 980 was recovered for the Late Woodland use of SMA.

The most abundant material recovered from the riverbank is fauna, primarily mussel shell. The additional presence of turtle and fish, as well as bird and mammal within the dense shell zones, indicates that the area was used as a general food-processing area for all species present in a river environment.