



Prehistoric Ceramics Of the Mille Lacs Region

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Archaeologists have long known the Mille Lacs region as a preferred living place for people of prehistoric Minnesota. This is due in large part to the abundance and variety of resources made available by the area's unique combination of topography, plant communities, waterways and wildlife. One of these many valuable resources was clay.

Archaeologists have found evidence that pottery was being made from local clay as early as 500 B.C. Over the years, styles of ceramic pots changed, as well as the decorations applied to them. When European explorers came to the area in the 1600s, their Dakota hosts served them meals that were cooked in ceramic pots.

Pottery manufacture is among the first evidence of humans changing one (raw) material into another. For example, a stone spear point is changed from its natural occurrence, but it is still stone. Pottery, on the other hand, is not clay. It has undergone a physical and chemical change and has become a new material, well suited for cooking and storing food. Like pockets, Velcro, automobiles and the computer, this innovation quite likely had an influence on life in its time.

Making Pottery

In prehistoric times, clay was fashioned into pottery vessels using several techniques. A common method was to form a base as a small bowl and add coils to enlarge the vessel. The coils were then pressed, or *welded* together with the fingers and smoothed over. Experimental archaeologist Grant Goltz of Longville



Minnesota has discovered other techniques through his study of ceramic artifacts and by his attempts to replicate the processes used by prehistoric Minnesotans. Grant notes that the conoidal shaped (pointed-based) pots made 2,000 years ago were likely constructed upside-down. His research has also led us to the understanding that some types of pottery were formed using flexible molds, such as bags woven from local plant fibers.

Pottery usually has a *tempering* agent added to the clay before the shaping begins. Temper helps keep the vessel from cracking while drying, and is thought to aid in firing as well. A common temper in modern ceramics is fired clay, crushed into tiny bits. Prehistoric ceramics were often tempered with sand, pulverized stone, or crushed shell. Most prehistoric ceramics discovered in Minnesota have either pulverized stone, also known as *grit*, or shell temper. Temper is one attribute archaeologists look at to associate pottery with time period, geography and other cultural materials, in their effort to understand our prehistoric past.

Clay is transformed into pottery by a process of dehydration. When the clay is heated, or *fired*, the naturally occurring water is removed. This is a more intense dehydration than simple drying, and requires a prolonged temperature in excess of one thousand degrees. At this temperature, the water is driven permanently from the clay, which causes a permanent change in the material.

Studying Prehistoric Pottery

As in our culture today, styles of the ancient past can be associated with time periods. Archaeologists are as familiar with traditions and styles of prehistoric pottery as car enthusiasts are with different makes and models of automobiles. Archaeologists study pottery because it can help identify time periods, and also because it provides clues to the daily life and culture of people in the prehistoric past. Pottery is especially significant in these studies because its use and manufacturing technique changed more frequently than other artifact types such as stone, bone or copper. Prehistoric pottery styles often have names associated with where the ware or type was first identified, how it was manufactured, how it was decorated, or a combination of these attributes. Some examples are *Kathio*, *St. Croix Stamped*, and *Brainerd Net-impressed*.

Lloyd Wilford of the University of Minnesota began examining Mille Lacs sites and ceramics in the 1930s. He noted different styles and changes through time, as well as recognizing the similarities of some early ceramics with those of the Havanoid and Hopwellian traditions to the south. In 1969 Elden Johnson of the University of Minnesota expanded upon Wilford's work and labeled six major ceramic wares found in the region. Although other wares are found in the area, the six labeled by Johnson as *Malmo*, *St. Croix*, *Onamia*, *Kathio*, *Sandy Lake* and *Ogechie*, dominate the assemblage of ceramic artifacts from Mille Lacs prehistoric archaeological sites.

Ceramic wares are often divided into types, based on attributes such as vessel shape, manufacturing technique, paste composition and decoration, and are further divided into varieties within the types.

In Minnesota, this process is ongoing. Most archaeologists agree that much work has yet to be done toward an effective and accurate ceramic typology for Minnesota prehistoric ceramics.

Malmo 500 BC – AD 500



Reconstructed vessel from the Graham Lake site (21OT 005). Photo courtesy University of Minnesota

This ceramic ware derives its name from the Malmo Site, located on the north shore of Mille Lacs. This site includes a habitation dating from 200 BC to AD 500 as well a series of mounds. Malmo pots are thick-walled and conoidal shaped. Archaeologists note that they have strong similarities to other early Middle Woodland wares from the Great Lakes and appear to have stylistic relationships with the Hopewell region of Ohio.

These pots are grit tempered and have smoothed exterior surfaces, which are sometimes covered with a slip of clay. Some later examples within the time period have cord-marked exterior surfaces. Decorations are simple and quite variable, including slashes, punctates, bosses and incised lines. Commonly the vessels have a smoothed over surface with no applied decoration. A vessel uncovered at the Malmo Site had crushed limestone temper. Limestone does not occur naturally in or near the Mille Lacs region. Many Minnesota archaeologists think that Malmo ware is ill defined, that is, it includes what may be a broad range of styles, possibly indicating use by different peoples.

St. Croix AD 500 – 800



Replica created by Grant Goltz, on display at Mille Lacs Kathio State Park

St. Croix pottery is among the Mille Lacs prehistoric wares originally labeled by Elden Johnson in 1969. Lately, some researchers prefer to include these pots in the Onamia category, as a type within the more general Onamia ware. St. Croix pots are grit-tempered, sub-conoidal to rounded in shape, with slight constriction at the neck and a high vertical rim. Archaeologist Christy Hohman-Caine studied St. Croix pottery quite intensively and notes two main varieties: a dentate stamped variety and a comb stamped variety. Pots of the Dentate Stamped Variety have geometric decorations, which may have been made with a carved stamp, forming rows of parallel or oblique lines encircling the vessel near the rim. Those of the Comb Stamped Variety have rows of parallel horizontal, vertical and oblique stampings in various combinations encircling the rim. Both types have corded markings on the exterior surface of the body.

Onamia AD 800 – 1000



Replica created by Grant Goltz, on display at Mille Lacs Kathio State Park

Onamia pots are made with a conoidal base and rounded shoulders, with high, straight rims

culminating in flat lips that are sometimes beveled outward. These grit-tempered vessels have an exterior surface treatment that is smooth on the rim area with the body cord-marked or cord-marked and then smoothed over. Two general types have been identified. The Cordwrapped Stick Impressed type was decorated before firing with a stick loosely wrapped with cordage. This cord-wrapped stick was pressed into the clay, leaving impressions in an oblique row around the exterior of the rim. Sometimes impressions were also made on the rim's interior surface. In the Dentate type, a pattern of either oblique or horizontal dentate markings, were impressed into the clay on the rim exterior with a tool that was probably a carved stamp. These *dentate* markings are small square impressions. Onamia is generally thought to be a ware that was transitional between St. Croix and Kathio wares. As is mentioned in the section on St. Croix ware, however, some archaeologists believe that St. Croix and Onamia are types within the same ware.

Kathio AD 800 – 1200



Replica created by Grant Goltz, on display at Mille Lacs Kathio State Park

Kathio vessels are globular in shape with constricted necks and out-flaring rims. The exterior body surface is cord-marked and the lip, that is, the top surface of the rim, is often flattened and is sometimes thickened.

Rims of Kathio pots are decorated with impressions that were likely made with a tightly wound cord-wrapped stick. These impressions are formed in closely spaced horizontal rows, and short, oblique cord impressions are common across and below the lip. Kathio ceramics are often noted to be quite similar to Blackduck ware, which is found to the north, and to Clam River ware, which occurs to the east.

Sandy Lake AD 1200—Contact (1750)



Replica by G.Goltz, on display at Mille Lacs Kathio S.P.

Sandy Lake ceramics were probably used by ancestors of the Dakota people. Early Sandy Lake pots are grit tempered, while later ones are tempered with crushed shell. These pots are globular in shape with a short, straight or slightly flared rim. Exterior surfaces have extensive cord markings. Some of these vessels are thought to have been formed in a net-like bag woven from plant fiber, which gives the paste composition a layered effect and the exterior surface a corded appearance. Sandy Lake pots are usually not decorated, but some have check stamping, trailed lines and punctates just below the rim. One Sandy Lake variety has the lip designed in a saw-tooth fashion, or has the lip modified with finger impressions, like the edge of a modern piecrust.

Ogechie AD 1400 – Contact (1750)

Ogechie pots are squat and globular with either a round or elliptical shape. They have a constricted neck with vertical or out-flaring rims. Some pots have small loop handles placed opposite one another on the underside of the out flaring rim. Most vessels are tempered with shell. Some are tempered with grit and some have both grit and shell temper mixed. The

exterior surface is smooth. Decorations are made of trailed lines drawn down the rim and onto the shoulder. Some decorations have tool impressions such as punctates in geometric forms within zones of trailed lines. Lips are often decorated with tool impressions as well. Some vessels have smooth surfaces and no decorations. Ogechie pottery is contemporary with Sandy Lake pottery and often occurs in the same archaeological sites. Ogechie ware closely resembles Oneota wares from sites along rivers to the south.

Other prehistoric ceramic wares found in the Mille Lacs region include Brainerd, Howard Lake, Fox Lake, and Angelo Punctate.

Further study of Mille Lacs ceramics will likely result in more wares, types and varieties, as well as a better understanding of their use, distribution and time periods. One particularly interesting study is that of Brainerd ware from central and northern Minnesota. Radiocarbon tests on these ceramics revealed dates as far back as 1,500 BC! Another recent study involving analysis of charred plant residues on ceramics revealed evidence of the earliest cooking of corn in the Mille Lacs region.



Ogechie Pot

Replica by Grant Goltz, on display at Mille Lacs Kathio S. P.

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