# The Cater Site

## The Archaeology, History, Artifacts and Activities at this Early 19th Century Midland County Site


Chippewa Nature Center and
the Oxbow Archaeologists

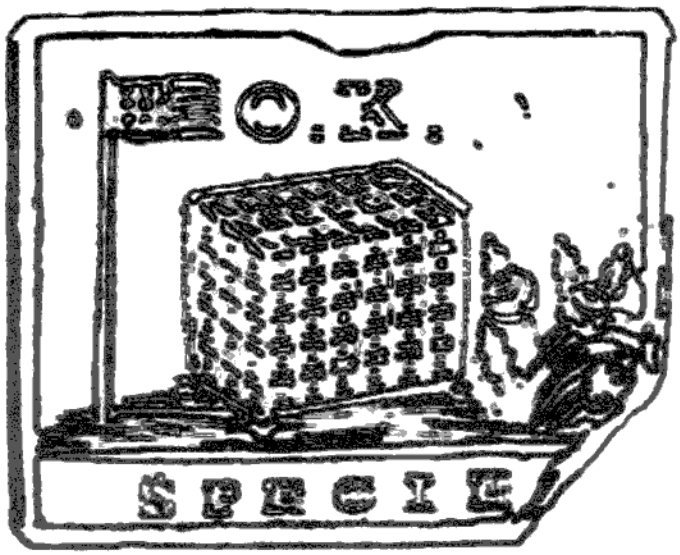
A Chapter of the Michigan Archaeological Society



Publication supported by the **Rollin M. Gerstacker Foundation**
and the **Midland Area Community Foundation**

# The Cater Site

*Cater Site Field School, Chippewa Nature Center, 1994. (Photo by Al Stark)*




# The Cater Site

## The Archaeology, History, Artifacts and Activities at this Early 19th Century Midland County Site

***Chippewa Nature Center***
***and***
***the Oxbow Archaeologists***
***(a Chapter of the Michigan Archaeological Society)***

Editor: Dr. David J. Frurip

Publication supported by the **Rollin M. Gerstacker Foundation**
and the **Midland Area Community Foundation**

January 2001

Cover design and photo by Dr. John Osborne.
Drawings on back cover by Scott Beld.
Designed and printed by Quick Reliable Printing, Midland, Michigan.



Published by Chippewa Nature Center
400 S. Badour Road
Midland, Michigan 48640



Printed in the United States of America

ISBN 0-9707225-3-2

# Table of Contents

# Preface and Dedication

Dick Touvell
Executive Director
Chippewa Nature Center

One of the most significant aspects to the study of local history is to have people who have an insatiable curiosity and passion for learning about what went on before them. Archaeological investigations have always been an important part of Chippewa Nature Center's educational activities. Since 1966, various volunteer groups and field schools have passionately, yet meticulously, studied that part of our history which requires unearthing and interpreting artifacts. For thousands of years, native peoples, and more recently European settlers, have occupied the Center's 1,032 acres and the adjacent lands. To date, 42 archaeological sites at the Center have been registered with the State of Michigan.

*Avocational archaeologist Lois Wang (1919-1997). This publication is dedicated to her*

In 1980, archaeological study was formally recognized with the creation of the Oxbow Archaeologists (originally called "Little Forks"), that became an official chapter of the Michigan Archaeological Society and an Affiliate Group of the Nature Center. Under the guidance of professional archaeologists, this group carefully excavates, documents, and publishes some of the archaeological findings found on land now owned by Chippewa Nature Center. Work completed by the Oxbow Archaeologists documents a significant and fascinating history of the comprehensive activities on this land.

We are fortunate for the caliber and dedication of individuals who have performed everything from archaeological research, writing, to, of course, a great deal of "shovel and trowel" work. Scientists, teachers, business people and students have melded a rich diversity of talents to uncover stories buried in the past.

While many have made contributions, one individual has been paramount to the story of local archaeology studies. Lois Wang inspired and led so many staff and volunteers in her favorite avocation - archaeology. It is most pleasing to recall some of the earlier years with memories of Lois Wang. She was involved in the early work, and additionally helped with record keeping and public reporting. Much of Lois's output contributed greatly to our historical knowledge and we often think of her personal joys and talents. I remember fondly in 1993 when the Chippewa Nature Center and the Oxbow Archaeologists awarded Lois a Lifetime Achievement Award for her outstanding contributions. It is with much joy, appreciation and respect that this publication is dedicated to her memory.

# Introduction

Dr. David J. Frurip
President, Oxbow Archaeologists
A Chapter of the
Michigan Archaeological Society

The Cater project has involved dozens of people, thousands of hours, millions of mosquitoes, tons of dirt, plenty of sweat, exciting finds, and not many boring days. Why was so much effort expended on a measly few hundred square feet of ground on the banks of the Chippewa River? Mainly it was because of the historical importance of the site. This was immediately recognized by its discoverer, Lois Wang, in the 1960s. Its significance was not lost on the participants in the project. Like so many armchair historians and ersatz "Howard Carter" type archaeologists, we all saw this project as a chance to realize our desire to dig into the past. The group became passionate, dedicated, and their enthusiasm was contagious!

We realized from the start that eventually we needed to document, in writing, what we were finding and what it all meant. Too many times, well intentioned individuals tackle the easy part of an undertaking but never complete what may be the most important part - writing up the details so that this historical and archaeological information is not lost to the future. Remember that once an artifact is removed from the ground, its significance is lost unless the exact location and circumstances of its position are recorded and interpreted.

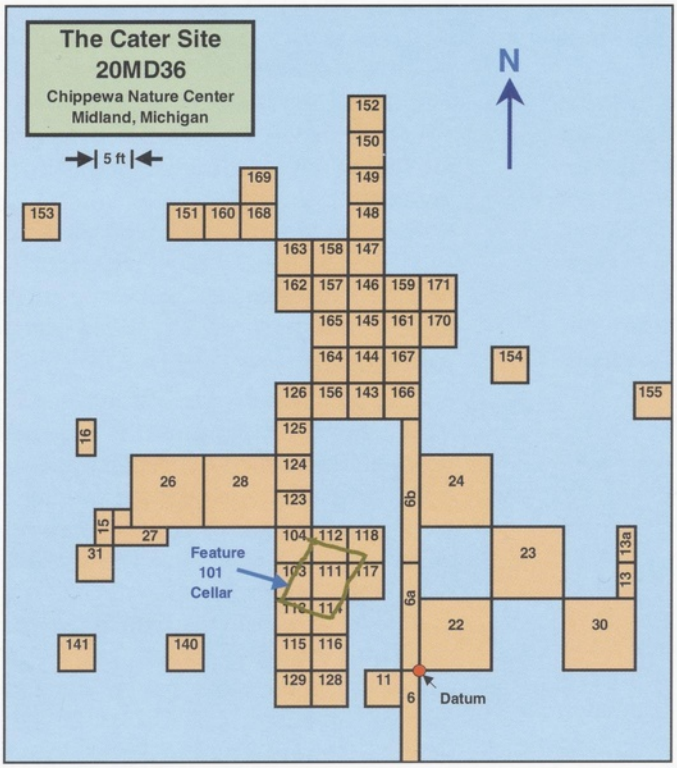
In addition to this publication, please note that two additional publications are in press for the Cater site. These more scholarly reports by Scott Beld and by Dr. Terry Martin will appear in a future issue of *The Michigan Archaeologist* (a journal publication of the Michigan Archaeological Society). Copies will be available for purchase at Chippewa Nature Center. If you enjoy this publication, you may want to consider obtaining these more detailed articles.

## Scope

You will note that this publication does not focus entirely on the 1840s occupation at the site, although it is certainly the main theme. The reason for this (discussed in detail in Scott Beld's chapter) is that the area we've been digging since 1994 has both 1840s, Euro-American settler artifacts, *and artifacts from a separate* 1820s (approximately), Chippewa Indian occupation. These artifacts are for the most part all mixed together, occasionally making it difficult for us to distinguish the two. Nonetheless, the obvious early Chippewa artifacts (like the gaming piece – see Appendix D) have added to the fascination of this archaeological endeavor. This is especially true since early 19th century Chippewa sites have not often been investigated archaeologically and are therefore very unique. Consequently, we decided to include some discussion in this work about the Chippewa occupation.

## "Cater Site East"

At the time of this writing, we have moved the focus of our excavations slightly east, to a site a few hundred feet down river. We did this because we believe that in this new area may be a "pristine" Chippewa site. Thus, the artifacts found at the new site will help us sort out the Cater site artifact assemblage to distinguish between the Euro-American occupation and the Native American occupation. Scott's Alma College class of nearly 50 students opened up a lot of dig




*A map of part of the excavation area at the Cater site. The site designation, 20MD36, is the official state registration indicating that it is the 36th site registered in Midland County (MD), Michigan (20th state alphabetically prior to Alaska and Hawaii). A substantial amount of the site has been excavated since it was first studied in the 1970s. Each rectangular area delineated is designated with a Unit Number. All units with a unit number greater than 100 were excavated since 1994. The Chippewa River is about 200 feet north of the datum (in this case the datum is a cement post and metal top plate put in the ground by Tim Klinger in the 1970s). The location of the 1840s cabin cellar, a key find in 1994, is shown as Feature 101. Note that the 1970s excavations just missed this area. The photograph in Scott Beld's chapter (page 19) showing the midden (trash layer) is a view north down the trench extending from unit 148 to unit 152.*

ging area in 2000 and found many interesting artifacts. Hopefully, in the near future, a full description of this new site will be published in a similar format.

It is important to keep in mind when reading this series of articles that after all the archaeological and historical research to date, we really still do not know who lived at the Euro-American cabin site. Hopefully, future historical and archaeological research will unlock this secret. Regardless of this fact, we must remember that through all the efforts of the many dedicated amateurs and professionals, we know a tremendous amount about the activities and lives of those who lived there.

## Organization of Report

First, the historical setting of Michigan between 1830-50 is portrayed by Dr. Dean Anderson. Next, in a chapter by Kyle Bagnall and Dennis Pilaske, the focus is narrowed to Midland County in the same time frame with embellishments on the earlier Chippewa Indian activities. The main theme is reported in the next section, authored by Alma College archaeologist Scott Beld, President of the Michigan Archaeological Society. Here he describes what's known about the Cater site historically and archaeologically. This is the largest and most detailed section since it represents literally years of painstaking detailed work by Scott and the members of the Oxbow Chapter. Finally, the Appendices include a series of articles and photographs related to the archaeological activities at the Cater site and Chippewa Nature Center.

## Some Thank You's

It has truly been a great pleasure to be involved with the Cater Project. I've met many fascinating people who share an interest in history and a strong desire to learn.

Although a comprehensive list of acknowledgments is presented in a separate section of this report, I'd like to mention a few individuals and groups.

Clearly this endeavor would not have been possible without the tremendous support of the staff of Chippewa Nature Center, in particular the always enthusiastic and supportive Executive Director, Dick Touvell. The generosity of the **Midland Area Community Foundation** and the **Rollin M. Gerstacker Foundation** allowed us to complete the project by engaging top notch professionals in the fields of archaeology (James Payne and Scott Beld) and faunal analysis (Dr. Terry Martin). We also gratefully acknowledge the financial support of Bill Wang, husband of the late Lois Wang, for his help with publication costs.

I'd also like to thank Jeff Graham for inspiring us in 1993 to take a major step up in the group's level of archaeological activities. Without Jeff's leadership and vision of what the Oxbow Chapter could ultimately become, I doubt that we would have tackled a major project such as this.

Also, I thank James Payne, our first professional archaeological mentor who taught us the basics of good archaeological practices and got us started on the road to completing this project. Sincere thanks also to Scott Beld who has been the technical leader of our group for several years. His patience with our lack of skills has been remarkable!

I'd like to thank Janea Little (Chippewa Nature Center Senior Naturalist) for her assistance in editing this publication. Finally, I'd like to thank long time Oxbow member Al Stark for his assistance in accumulating the photographs in this publication (many of the photos were taken by Al).

## Other Activities of the Oxbow Archaeologists

Not only have we been involved with the Cater site, but over the years we have been asked to participate in other interesting projects. Twice we've assisted Dr. Daniel Fisher of the University of Michigan in his quest to unearth locally discovered Mastodon skeletons. Once, with James Payne, we visited an ancient buried forest, uncovered during the construction of a pond.

On occasion we even get involved in interesting scientific investigations involving artifacts. Examples: Using infrared spectroscopy to identify the chemical makeup of a button (see Dr. McKelvy's article in Appendix C); using light microscopy to look for tool wear marks on a modified bear jaw.

## An Invitation to Join Us

Are you interested in history, especially local history? Do you want to experience firsthand the thrill of archaeological discovery? Then why not consider joining our group and getting involved? No experience is necessary; we will teach you the necessary skills as we go.

Typically we can use help in two areas: digging in the warm months and washing and sorting in the cool weather. If you want more information, call Chippewa Nature Center (989-631-0830) and they will put you in contact with someone from our group who can give you more information.

We are indeed proud of the fact that several young archaeological enthusiasts have worked with us and have gone on to acquire university degrees in the field. We believe that our activities offered these people an opportunity to hone their fledgling skills and in some small way we contributed to their career decision.

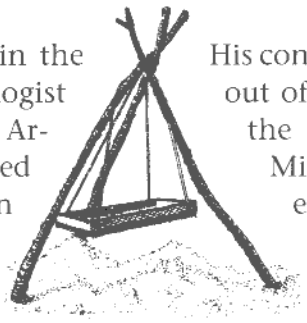
## Oxbow Web Site

We now have a web site which Dr. John Osborne of the Oxbow Chapter keeps filled with photos and descriptions of artifacts and our activities. You may visit it by going to Chippewa Nature Center's web site,

**www.chippewanaturecenter.com**

Clicking on "Affiliates", then on the "Oxbow Archaeology Group" link to our web page.

# Introduction to Chapter 1



Dr. Dean Anderson works in the Office of the State Archaeologist as the resident Historical Archaeologist. When we decided to tackle the Cater Project in 1993, Dean was contacted and he immediately lent his enthusiastic support to the endeavor. Dean continues to be informally involved in the archaeological activities of the Oxbow Archaeologists, consulting on a periodic basis and helping us sort out the identification and interpretation of artifacts. Several times in the past few years, Dean has entertained audiences at the Nature Center with fascinating presentations about his work as an archaeologist in the Great Lakes region.

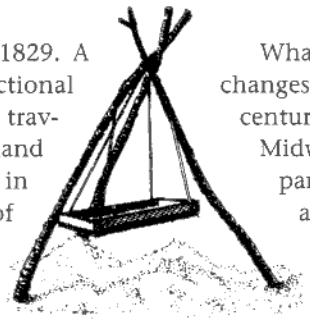
His contribution to this report grew out of a presentation he made at the 1997 Fall Workshop of the Michigan Archaeological Society. The Cater Site was the main focus of this event, which was held at Chippewa Nature Center. He sets the stage for the remaining contributions of this report, giving us a glimpse of Michigan in the time period of the Euro-American occupation of the site, i.e. 1830-1850. Dean's clever use of the fictional character, Joshua, personalizes the discussion of political and economic change in Michigan in this time period.

*-David Frurip*

CHAPTER 1

# MICHIGAN AND THE WESTERN GREAT LAKES REGION: 1830-1850

Dr. Dean Anderson, Historical Archaeologist, Michigan Historical Center



Let's imagine that the year is 1829. A young man named Joshua (a fictional character), twenty-four years old, traveled west and bought 80 acres of land in southern Michigan - that is - in what would become the state of Michigan several years later in 1837. In the spring of 1830, he moved his family from back east to his newly-acquired piece of Michigan land. Settlement was sparse at that time - the population of Michigan Territory was only 31,640 - and he and his family were among the first to settle in the area where he had purchased land. The prospect of carving out a new life in a distant place was both exciting and frightening, all at the same time. What was it like to move to Michigan at that time, and what was life like once you got there?

In 1820, when Joshua was fifteen years old, his parents talked about moving to Michigan Territory but never did so. Michigan was still a wilderness at the time and there were few Euro-American settlers there. Also, there was no way to purchase land. His parents knew that if they moved, they would be "squatters," settling on land they didn't own in the hope that some day they would be able to obtain legal title to it. His parents decided there were just too many unknowns involved and that they would stay put and make the best of things where they were. But, times were changing. Since about 1800, interest in western land was growing fast. By the end of the 1820s, Michigan Territory was on the threshold of a major land rush, and Joshua intended to be part of it.

What happened to bring about these changes? At the turn of the nineteenth century, interest in acquiring land in the Midwest was on the rise, both on the part of settlers seeking to start farms and on the part of speculators seeking to turn a profit. The U.S. government, for its part, wanted to help this happen. At that time, the government was land rich and cash poor and wanted to sell some of its vast western landholdings.

In Michigan Territory, however, as in many parts of the west, land was held by Native Americans. The government could not sell that land until it obtained title from Indian peoples. For nearly 200 years, land had not been an issue in the west, mainly because the fur trade had been the primary Euro-American economic interest in the region. The fur trade drew people to Michigan but it did not cause a quest for land, nor did it result in significant settlement. Rather, the fur trade produced widely scattered outposts like Michilimackinac on the south side of the Straits of Mackinac, Fort Pontchartrain at what is now Detroit, and Fort St. Joseph near the present-day city of Niles. These outposts, however, were mere islands of Euro-American population in the vast Great Lakes wilderness.

During the early decades of the nineteenth century, the fur trade in the western Great Lakes region declined as the focus of the trade shifted to the west. This had a dramatic impact on Native American - Euro-American relationships. The fur trade was an exchange relationship in which Indians

played the crucial role of trappers and collectors of furs which they then traded to Euro-Americans for manufactured goods. As a result, Euro-Americans sought to establish alliances and relationships with Indian peoples in order to maintain trading partnerships. But, as the fur trade faded, the economic position of Native peoples faded, too. As that happened, and as the demand for western land grew, Indian peoples and Indian land claims became, in the view of the U.S. government, impediments to Euro-American settlement.

As a result, the federal government set out to separate native peoples from the land so that it could be made available for sale and subsequent settlement by Euro-Americans. As the fur trade declined, the U.S. government sought to obtain land cessions from Indian peoples. Through a series of treaties, beginning with the Treaty of Greenville in 1795, the U.S. government acquired land ceded by Indian peoples as part of the treaty agreements. The Treaty of Saginaw in 1819, for example, provided for roughly 6 million acres of the northeastern Lower Peninsula, including the Midland area, to be ceded to the U.S. By the time Michigan became a state in 1837, the only substantial portion of land still held by Indian peoples was the western Upper Peninsula. In 1842, the government also obtained that region through the Treaty of La Pointe.

Once the government had acquired vast amounts of land in Michigan and in other parts of the western Great Lakes region, it began taking steps to sell that land. This meant the land had to be surveyed so that tracts could be identified. Government land surveying in Michigan began after the War of 1812. By 1825, most of the southern third of the Lower Peninsula had been surveyed. From 1825-1835, the advance of land survey to the north was slow because the government concentrated on road building. But, between 1835-1840, survey of the Lower Peninsula was virtually complete. By 1851, with a few minor exceptions, the entire state had been surveyed.

Once the land was surveyed, the government began selling it. The sale of public lands in Michigan began on July 6, 1818, with an auction in Detroit. At that auction, the minimum price that could be bid was $2.00 an acre. The average price paid at the auction was $4.00 per acre, although some of the prime land around Detroit went for as much as $40.00 per acre. In 1820, Congress reduced the minimum price for land to $1.25 per acre and also reduced the minimum amount of land that could be purchased from 160 acres to 80 acres. That meant that for about $100, a settler could buy a farm of approximately 80 acres.

This was the situation that piqued Joshua's parent's interest in 1820, and tempted them to think about moving to Michigan. But, there were few people living in Michigan Territory, and while it presented opportunity, it was still an unknown and somewhat forbidding place. There were hardships and risks involved in such a move, not the least of which was the problem of simply getting there. Water transportation to Michigan in the early part of the 19th century was considered dangerous, unreliable and fraught with discomfort. Travel conditions on Lake Erie were considered more dangerous than those encountered on the Atlantic Ocean. Approaching Michigan by land from the south required crossing an area in northwestern Ohio known as the "Black Swamp." During the War of 1812, a military road had been constructed across the Black Swamp, but shortly after the war, the road had all but disappeared. The perils of the Black Swamp were widely publicized and became one more factor that discouraged prospective settlers from choosing Michigan as their destination.

By the late 1820s transportation to the Midwest had improved considerably, and the conditions necessary to open Michigan to Euro-American settlement were in place. The U.S. government had succeeded in extinguishing native peoples' claims to the

land, much of the land had been surveyed, and offices were open to transact land sales. As a result, land in Michigan became hot property about 1830. Over the next several years, interest in Michigan skyrocketed, and it became the most popular destination for settlers moving west. In 1830, slightly over 147,000 acres of public land in Michigan were sold. By 1834, that amount more than tripled to over 498,000 acres. The land boom peaked in 1836 when the sale of more than 4 million acres - approximately one ninth of Michigan's total land area - brought in more than 5 million dollars. This represented more than one fifth of the total land sales for the entire country.

So it was that in 1830, at the beginning of the Michigan land rush, Joshua, like thousands of other people seeking a better life, packed up his family's belongings and began the journey to Michigan Territory. This meant leaving western New York state which had been his family's home since his parents moved there from Massachusetts several years earlier. Many of the people who moved to Michigan in the 1830s were New Englanders who had first settled for in New York before deciding to move on to Michigan.

To reach their new home in Michigan, Joshua and his family traveled a route commonly used by many westbound pioneers of the day. The first leg of the journey was a trip on the Erie Canal, which had been built in 1825 and helped open the way to Michigan and other western lands. At Buffalo, the western end of the canal, they boarded a steamer that took them up Lake Erie to Detroit. From there, they struck out across southern Michigan Territory by wagon on the Chicago Road, which was built a few years earlier as a military road connecting forts in Detroit and Chicago. That road was an important route, and eventually became U.S. Highway 12, which still exists today.

Land transportation in Michigan in the 1830s was challenging to say the least. Roads were few and far between, and even a relatively major artery like the Chicago Road was essentially a cleared trail along which crude bridges had been built over streams, and marshy, low-lying areas had been corduroyed with logs. Much of the road building effort at that time was put into east-west roads to accommodate westward travelling settlers. When settlers had to leave the main road to reach the land they had purchased, they were at the mercy of unimproved trails, which snaked their way into the forest. In spite of the hazards and difficulties, however, these roads were crucial in making the land rush and settlement boom possible in Michigan during the 1830s.

The southern part of the Lower Peninsula - the area in which Joshua purchased his land - posed challenges, but it was also the part of Michigan Territory that was settled most quickly. As the population of the region swelled in the 1830s, the Territorial Legislature organized counties, which meant naming the counties, setting boundaries, and providing for county governments. Towns also emerged across southern Michigan, like Cassopolis, Bronson (later changed to Kalamazoo), Adrian, and Paw Paw. This meant that goods and services became more locally available as businesses such as general stores, inns, blacksmith shops, banks, mills, and breweries were established.

The wave of settlement in Michigan proceeded, for the most part, from south to north. In the 1830s and 40s, the southernmost tiers of counties - where good farm land was abundant - were the most popular destinations in Michigan, and the population grew fastest there. In the central portion of the Lower Peninsula, settlement was well underway by the 1850s. In much of the northern Lower Peninsula, settlement did not begin until the lure of pine timber brought loggers into the area in the 1870s. It is more difficult to generalize about the development of settlement in the Upper Peninsula. Two of the earliest settlements in the state are located there - Sault Ste.

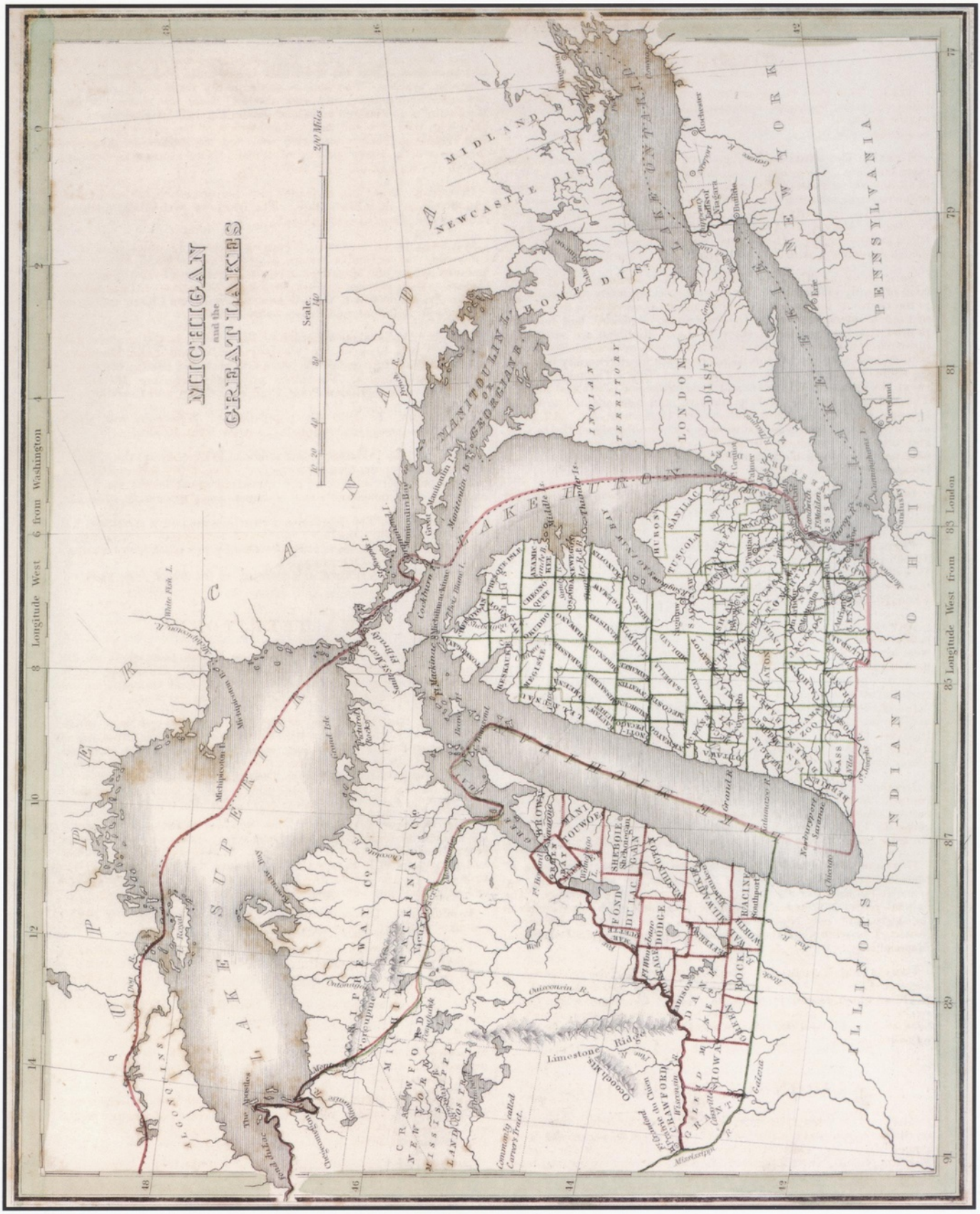
Marie (1668) and St. Ignace (1671), both of which had their beginnings as Jesuit missions founded by Father Jacques Marquette. But in spite of early beginnings, the thick forests, the thin soils and the long, hard winters of the Upper Peninsula were not conducive to agriculture, and settlement developed slowly. Copper mining drew people to the Keweenaw Peninsula and to the Ontonagon County area beginning in the 1840s. Similarly, iron mining stimulated settlement in the western Upper Peninsula, initially in the region of the Marquette range in the 1840s, and later in the areas of the Menominee range and the Gogebic range. As in the Lower Peninsula, logging also stimulated migration to the Upper Peninsula. This came about primarily during the 1880s and 90s, as the supply of prime timber in the Lower Peninsula was dwindling and loggers turned their attention to the forests of the Upper Peninsula.

The first order of business for Joshua and his family when they arrived at their new homestead was to construct a house. Joshua's wife and two children lived with neighbors who helped him build a log house. Then came the long and backbreaking task of clearing land for crops. This was not just a matter of clearing trees in order to have open ground for planting. It was also necessary to clear a large enough area so that the planted ground would not be in shade from the surrounding forest most of the day. It would take several years of enlarging the fields a little bit each year before there would be enough land to grow not only enough food to eat but a surplus to sell as well.

The first years of establishing a farm were difficult. There were times when Joshua feared that the farm would fail and he wondered anxiously what he would do to provide for his family if that happened. In the early 1840s, logging was just beginning in the pine forests in the Saginaw Valley and across the central Lower Peninsula. In any area in which people settled, trees were cut to clear land and saw mills sprang up to provide lumber for houses and barns and other buildings. In the 1840s and 50s, logging in Michigan was in its infancy; it wasn't until the 1860s that a large scale logging industry got under way in Michigan in response to the demand for lumber from more distant markets. But, early logging work in the 1840s offered another potential means of making a livelihood and Joshua thought seriously about going north during the winter, as a number of farmers did, to work in a logging camp, and then return to the farm, and to his family, in the spring at planting time.

At about the same time, during the late 1840s, settlers in southern Michigan also heard that both copper and iron had been discovered in the Upper Peninsula. The lure of these metals, along with reports that gold and silver could be found as well, triggered a mining rush to the western Upper Peninsula. Mining companies formed almost overnight it seemed, and in many cases, disappeared nearly as quickly, as mines failed and investments were lost. But some mines were successful, and Michigan became the leading copper-producing state during the second half of the nineteenth century. The copper country of the Keweenaw Peninsula region was a long way from the farmland of southern Michigan. But the thought of going north and perhaps "striking it rich" was a powerful temptation, especially when faced with the year-in, year-out uncertainties of successful crop production.

In the end, however, Joshua decided to devote his energy to making his farm a success. The frontier was changing and his corner of the world was becoming less remote all the time. Coincident with the land rush of the 1830s was a strong clamor for "internal improvements," such as construction of roads, railroads, and canals. In the 1820s and 30s, most effort was put into the construction and improvement of roads. But, at the same time, plans were formulated for future canals and railroads that would fa-




*An 1834 map of Michigan and Wisconsin published by G. W. Boynton & Co. Sc. showing the county names prior to finalization at statehood. The colored lines delineating the counties are hand drawn on the map. Note that Saginaw County encompassed present day Midland County. [From the personal collection of David Frurip]*

cilitate transportation of both settlers and goods. In 1837, the same year in which Michigan became a state, it passed its Internal Improvements Act, and work began on a variety of transportation projects.

For Joshua and his family, this meant that, within a few years, a railroad line came through within about a mile of his farm. In a way, this new transportation artery created a new world for Joshua and his neighbors. Suddenly, their geographic range of access to goods and services was considerably expanded. Perhaps more importantly, the railroad gave them access to a much larger market for their agricultural products. Joshua was able to hire a farm hand who, along with Joshua's son, helped clear more land and increase the farm's production. As his volume of sale increased, Joshua was eventually able to replace their log home with a larger, frame house. After years of hardship and toil, the success of his farm was secure and the future looked bright. Joshua began to think about buying more land so he could give it to his son when he was ready to strike out on his own.

In the twenty years since 1830, Michigan had become a very different place. By 1850, the population had grown to 397,654: a more than twelve-fold increase over the population of Michigan Territory in 1830. In the southern Lower Peninsula, much of the forest had been cleared and a considerable amount of land was under agriculture. Further north, logging of Michigan's vast forests had begun. In the Upper Peninsula, settlements sprang up next to copper and iron mines and disappeared as the mines played out. Transportation and communication links not only drew Michigan closer to growing urban areas back east, but also connected its own population centers of Detroit and Grand Rapids with outlying areas. By 1850, at the threshold of the second half of the nineteenth century, Michigan was rapidly losing its wilderness quality.

**Cleland, Charles E.**
1992 *Rites of Conquest: The History and Culture of Michigan's Native Americans.* University of Michigan Press, Ann Arbor.

**Dunbar, Willis F. and George S. May**
1995 *Michigan: A History of the Wolverine State.* Third Revised Edition. William B. Eerdmans Publishing Company, Grand Rapids.

**Hathaway, Richard J., editor**
1989 *Michigan: Visions of Our Past.* Michigan State University Press, East Lansing.

**Karamanski, Theodore J.**
**1989** *Deep Woods Frontier: A History of Logging in Northern Michigan.* Wayne State University Press, Detroit.

**Kestenbaum, Justin L., editor**
1990 *The Making of Michigan, 1820-1920: A Pioneer Anthology.* Wayne State University Press, Detroit.

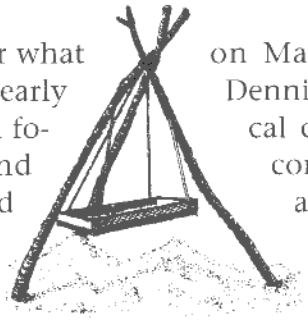
**Lankton, Larry**
1991 *Cradle to Grave: Life, Work, and Death at the Lake Superior Copper Mines.* Oxford University Press, New York and Oxford.

**May, George S.**
1987 *Michigan: An Illustrated History of the Great Lakes State.* Windsor Publications, Northridge, California.

**Quaife, Milo Milton, editor**
1967 *The Bark Covered House, or Back in the Woods Again.* 4th edition, Dearborn Historical Commission, Dearborn, Michigan.

**Rosentreter, Roger L.**
1980 Michigan's 83 Counties: Branch. *Michigan History*, Vol. 64, No. 2, March/April, pp. 6-8; 1980 Michigan's 83 Counties: Cass. *Michigan History*, Vol. 64, No. 4, July/August, pp. 8-11; 1984 Michigan's 83 Counties: Kalamazoo. *Michigan History*, Vol. 68, No. 5, September/October, pp. 8-12; 1985 Michigan's 83 Counties: Lenawee. *Michigan History*, Vol. 69, No. 6, November/December, pp. 12-15. 1987 Michigan's 83 Counties: Midland. *Michigan History*, Vol. 71, No. 4, July/August, pp. 8-11; 1988 Michigan's 83 Counties: Montmorency. *Michigan History*, Vol. 72, No.2, July/August, pp. 8-11; 1991 Michigan's 83 Counties: Van Buren. *Michigan History*, Vol. 75, No.4, July/August, pp. 8-10.

# Introduction to Chapter 2



Now that we have a feel for what Michigan was like in the early nineteenth century, we can focus a bit more on Midland County. Kyle Bagnall and Dennis Pilaske both work at Chippewa Nature Center; Kyle as the Historical Interpreter and Dennis as the Curator of Collections. Both have been active in the administration of the archaeological activities of the Cater project. Kyle was formerly an historical interpreter at Fort Mackinac, a nineteenth century military post on Mackinac Island, Michigan. Dennis manages the archaeological collection (see his separate contribution in Appendix B) and he tries his best to keep us from making a dirty mess in the collection room (it's not easy!). These two contributors do a fine job describing the picture of local life during the early nineteenth century. They include a glimpse of life during the earlier time of the Chippewa occupation at the Cater site as well.

*-David Frurip*

CHAPTER 2

# Life at the Forks: Gathering, Trading and Settling at the Forks of the Tittabawassee River, 1800-1850

Kyle Bagnall, Historical Interpreter, CNC and Dennis Pilaske, Curator of Collections, CNC

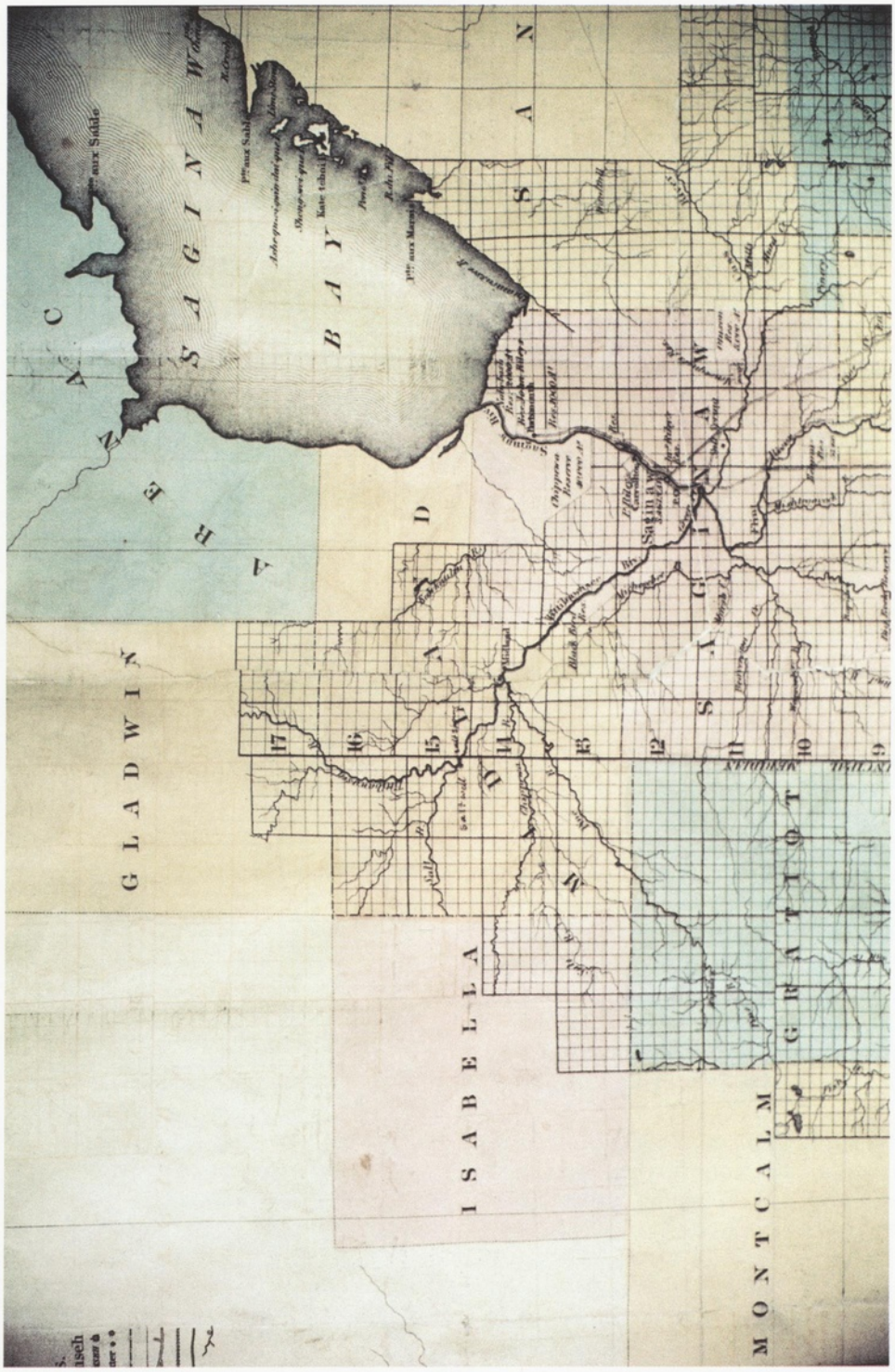
*"Thursday, May 30, 1822...The country was generally well timbered with oak, pine, beech, maple, elm and provided with running streams of wholesome water...Thence to the forks of the [Tittabawassee and Pine] river[s], where there is a small Indian village, and thence up the Pine River, about three miles, to another Indian village, the country is in general well timbered, level and interspersed with open flats and running streams."*[1]

*Observation by J.L. Cole while traveling through the Saginaw Valley on horseback in 1822*

The dominant natural feature of the Saginaw Valley is its rivers. In 1800, the Valley's 800 miles of rivers ran through 8,709 square miles of forests, swamps, marshes and fields. Mixed forests of beech, maple, oak and hemlock dominated the land, interspersed with smaller areas of towering white pines. For centuries, aboriginal groups used the rivers that carve their way through the Saginaw Valley. They fished for lake sturgeon and suckers and used the rivers as water highways on which they paddled birchbark and dugout canoes between seasonal camps. They also hunted white-tailed deer, bear and small game animals in the surrounding forests.

Most Europeans came to the Great Lakes region primarily for one of two reasons: missionary work and fur trading. Missionaries, such as Father Henri Nouvel, came to convert native groups to Christianity. Father Nouvel spent the winter of 1675-76 with native groups in the Saginaw Valley. A letter about his stay is the first known written description of the landscape and people living in this area. Other Europeans established a fur trade with native groups in the late 17th century. This trade network became the dominant economic and political force in the Great Lakes region for nearly 200 years. Native groups hunted beaver, muskrat, mink, and other fur-bearing animals and traded their pelts for European goods, such as blankets, kettles,

*Native peoples traveled the waterways of the Saginaw Valley in dugout canoes and ones made of birch bark like the one shown above. (Photo © Phil Stephens)*




*Most Native American and early European settlement in the Saginaw Valley occurred near rivers. This 1837 map shows the extensive river systems of this area, the major towns and Indian reservations.*

firearms and metal implements. Despite the population of fur bearing animals and native villages, neither French nor British traders established a permanent trading post in the Saginaw Valley. Not until long-time trader and resident of the Flint River, Jacob Smith, began making frequent trips to this region in 1810 is there any record of a Euro-American fur trader regularly operating along the Saginaw River and its tributaries. A permanent trading post was not established until 1815. The post, of John Jacob Astor's American Fur Company, was situated on the west side of the Saginaw River.[3]

Increased American interests in the Saginaw Valley led to the Saginaw Treaty of 1819 between the Chippewa (Ojibwa) nation and the United States. In this treaty, the Chippewa ceded a total of 6 million acres and a number of reservations were established around previously existing villages. Two of the reservations were on the Tittabawassee River; *Arbetchwachewan*, near present-day Midland, and *Miscobenessi*, near present-day Freeland. These two reservations were 6,000 acres each.[4]

By 1828, two American Fur Company trading posts were operating near the Little Forks of the Tittabawassee River to serve native groups in the area. Trading post operator Ephraim Williams later recalled:

*I was successful in taking a large lot of valuable furs such as beaver, otter, martin [sic], mink, fisher, bear, coon [sic] and muskrat and doeskin. My men were absent from home most of the time gathering furs from the Indians.*[5]

There was much competition between the two posts at the Little Forks. Relationships between them were contentious, with open hostilities being present at times.[6]

By the mid-1830s, the Great Lakes fur trade declined dramatically as fur-bearing animal populations plummeted due to overharvesting. At the same time, local Chippewa groups faced epidemics of cholera and smallpox in 1834 and 1837, respectively. Among the Ojibwa in the Saginaw Valley, estimates of death tolls in 1837 ran as high as two-thirds, although the official count was 354, leaving a population of 993.[7] By 1840, the fur trade had effectively ended in the Saginaw Valley.

In the 1830s, the long history of settlement at the Little Forks grew to include permanent Euro-American residents. Robert Clark Jr. and his survey party surveyed the area in 1831-32 for the federal government. Within the next year, settlers and speculators purchased large tracts of land along the Pine, Chippewa and Tittabawassee Rivers. Among these was Thomas Ponton, who planned to establish a mill along the north bank of the Chippewa River.[8] He never constructed the mill and by 1835 had sold the land. Dr. Daniel Fitzhugh purchased up to 700 acres at the Little Forks in 1835. John and Sarah Wyman settled on Fitzhugh's land in 1836, clearing some trees and building a cabin. Dr. Fitzhugh's son, Charles, arrived in 1838 with his family and later established a farm. After Michigan became a state in 1837, settlement slowly increased in the Midland area over the next two decades. The Chippewa Indians living in the area ceded the rest of their land in the Saginaw Valley for eight townships in Isabella County, near Mt. Pleasant, in 1855 and the whole of Saginaw Valley was open for Euro-American settlement. [9]

It was throughout this changing climate from fur trade to settlement that the occupations at the Cater Site took place. The first occupation at the site, associated with Ojibwa residents, is likely the Indian village seen by J.L. Cole three miles from the Little Forks, when he traveled up the Pine River in 1822. The second occupation at the site, associated with a Euro-American settler or squatter, took place in the 1840s.

Archaeological and historical evidence suggest this second settlement was short lived. In February 1854, Lutheran missionary Ferdinand Sievers passed through this area on a trip to the Bethany Mission on the Pine River, near St. Louis, Michigan. After taking shelter at the Fitzhugh farm at the

forks of the Tittabawassee, his party continued their journey up the Pine River, "...along which there was not a single dwelling or clearing to be found."[10] The stories of the people living at the Cater site remained buried for more than a century until they were uncovered in the late 1960s.

---

[1] **J.L. Cole**, "J.L. Cole's Journal of a Pedestrian Tour From Detroit to Sagana (Saginaw) River in 1822," in *Michigan Pioneer Collection, Volume 2*, pp. 470-475. In 1822, the river past the confluence of the Pine and Chippewa River was called the Pine River. Currently that section of river is called the Chippewa River.

[2] **Harold M. Foehl** and **Irene M. Hargreaves**, *The Story of Logging the White Pine in the Saginaw Valley* (Bay City, Red Keg Press: 1969), pp. 11, 62; **Judith D. Soule**, et al. *A Watershed Bio-diversity Assessment of the Saginaw Bay Watershed*, (Lansing, Michigan Natural Features Inventory: 1998); p. 4; **Patrick Comer**, *Wetland Trends in Michigan Since 1800: A Preliminary Assessment* (Lansing, Michigan Natural Features Inventory: 1996), p. 51.

[3] **Jeremy W. Kilar**, *Saginaw's Changeable Past: An Illustrated History*, (St. Louis, Missouri: G. Bradley Publishing, Inc., 1995), pp. 20, 23; **Charles Cleland**, *Rites of Conquest: The History and Culture of Michigan's Native Americans* (Ann Arbor: The University of Michigan Press, 1995), pp. 174-181, 214-216.

[4] **Ruben Gold Thwaites**, ed., *The Jesuit Relations and Allied Documents*, Imperial Press, 1900; **Helen Hornbeck Tanner**, ed., *Atlas of Great Lakes Indian History* (Norman: University of Oklahoma Press, 1987), p. 134; Treaty of 1819, Article 2, In the treaty the location of *Arbetchwachewan* was referred to as the Little Forks, and *Miscobenessi* was established at Black Bird's town.

[5] **Ephraim S. Williams**,"Personal Reminisces," in *Michigan Pioneer Collection*, Volume 8, 1885, pp. 244-249.

[6] Ibid.

[7] **Cleland**, *Rites of Conquest*, p. 180; **Tanner**, *Atlas of Great Lakes Indian History*, pp. 173-174.

[8] **Albert Miller**, "The Mill Site at the Forks - A Cold Bath - Indian Hospitality," in *Michigan Pioneer Collection*, Vol. 7, 1884. pp. 247-248. J.L. Cole indicated this location along the Chippewa River as early as 1822 as a potential mill site. It is located across the river from the Cater site, the main subject of this publication.

[9] **Grace A. Dow**, *History of People of Midland*, 1911 (unpublished); **Cleland**, *Rites of Conquest*, p.218.

[10] **Ferdinand Sievers**, "A Visit to the Bethany Mission Station (Gratiot County) Michigan in February, 1854," in *The German Lutheran Bethany Indian Mission*, Volume II, Harold Moll, ed., 1989, pp. 45-46.

# Introduction to Chapter 3

The next chapter represents the "meat" of this publication. First, much more detail of the historical research relating to the Cater site is given. Next, the fascinating artifacts are described, and more importantly, what these artifacts tell us about the lives of the people who lived at the site 150-200 years ago.

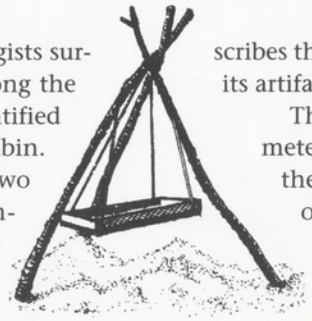
Scott Beld has been our chief archaeological mentor and leader since 1996 when James Payne left the area. Scott is a tireless, dedicated, professional archaeologist who is always enthusiastic about the activities of the Oxbow Archaeologists and very patient with our lack of technical skills. His interest in the project arose out of the connection between the Cater site and the Bethany Mission site where Scott led an archaeological excavation 1986-1991. This 1850s site is located several miles upstream from Cater (on the Pine River, near St. Louis in Gratiot County) and is nearly contemporaneous with Cater. Scott saw the Cater project as a way to add to the public's knowledge of the Saginaw Valley in the early nineteenth century. Each year for the last several years, Scott has brought his Alma College students to Cater (in 2000, nearly 50 participated). Also, Scott has taught two field schools at the site. We are indeed fortunate to have such a fine mentor, with his depth and breadth of knowledge (he reads Sumerian!) associated with our group. We look forward to continue working with him in the future. Please note that a more technically detailed version of this report will appear in the Michigan Archaeologist.

*-David Frurip*

CHAPTER 3

# The Cater Site (20MD36): Description of Excavations and Recovered Material

Scott G. Beld, Alma College



In the early 1970s archaeologists surface collecting a plowed field along the banks of the Chippewa River identified artifacts from an early settler cabin. Over the next twenty-five years, two series of excavations were conducted at this site. These excavations recovered artifacts from an 1840s settler cabin, a War of 1812 era Chippewa occupation, as well as evidence of Late Woodland (A.D. 600-1600) occupations. This chapter describes the excavation of the Cater site and its artifacts.

The Cater site is located about 75 meters south of the Chippewa River on the edge of a terrace formed by an old river channel. The artifacts found by the discoverers included dish fragments (earthenware), window glass (or flat glass), and nails. These artifacts indicated the presence of an 1840s cabin. The site was of interest because it represented the habi-

*An aerial view of the Cater site in 1994 when the site was reopened after a hiatus of nearly twenty years. The location of the 1840-1850 settler's cabin, not discovered in the first investigation, was eventually found in 1995 as a dark rectangular stain in the soil. The shape of this dark area and the artifacts found there proved it was the remnants of a shallow log cabin cellar. In it was found a number of household items and complete axe head. (Photo by Jeff Bowen)*

*Re-opening the Cater site excavations in 1994 was an important event in Midland County history. A field school, directed by James Payne, gave the members of the Oxbow Chapter of the Michigan Archaeological Society a unique opportunity to learn more about this 1820-1850 Midland County occupation site on the property of Chippewa Nature Center. (Photo by Phil Stephens)*

tation of an early Midland settler (before the Civil War). Excavations were conducted starting in 1974 to determine 1) the nature and extent of the site and by whom and 2) during what time period it was occupied. Two series of excavations were conducted at the site from 1974 to 1976 and again from 1994 to 1999. The 1970s excavations were directed at different times by Fel Brunett and Timothy Klinger. In 1993, the Oxbow Chapter of the Michigan Archaeological Society relocated and sorted the 1970s Cater site artifacts in conjunction with a reorganization of Chippewa Nature Center's archaeology collection. In June 1994, James Payne conducted a field school at the site in order to train Oxbow Chapter members. Excavations were continued over the summer. My involvement with the site began in 1995. In the winter of 1995 Chippewa Nature Center applied for and received funds from the Rollin M. Gerstacker Foundation and the Midland Area Community Foundation to prepare a report on the site. This report is the result of those generous grants.

Among the first things done whenever a historic period site is located is historical research. The first step in this type of research is to check local records, particularly local histories and the local Register of Deeds, in order to see if the site is mentioned and who owned and possibly lived at the site. The initial research on the Cater site was conducted in the 1970s and was reexamined and added to by Oxbow Chapter members Kevin and Sarah Frazier. It showed that a man named Charles Cater, after whom the site is named, was the first Euro-American owner. He purchased the 118 acres on which the site is located from the U.S. Government on December 9, 1833. The Land Patent for this purchase was issued by Andrew Jackson and is dated April 28, 1835.

Charles Cater and this parcel of land

occur in two accounts written by Judge Albert Miller and published in the Michigan Pioneer and Historical Collections. To quote Judge Miller:

*In 1833 a young English sailor named Charles Cater came to Saginaw and purchased land near the forks of the Tittabawassee and returned to his business of sailing on the ocean. In 1834 Abram Cater, a brother of Charles, came to Saginaw to make a permanent residence and was married there in 1835 (I remember the date, for it was the first marriage ceremony I ever performed), soon after which he heard that his brother Charles had been cast away and perished at sea. Abram Cater was sickly and lived at Pine River on the bay with his wife and her relatives, but he was anxious to settle his brother's estate, being the sole heir. I made a journey in the winter of 1835-6 to Pine River and granted him letters of administration on his brother's estate, and before its full settlement Abram Cater died. It seems that Charles Cater had a residence in Ohio, before coming to Saginaw, where he had personal property. After the news of his death his estate in Ohio was administered upon, converted into cash and sent to me to be paid over to Abram Cater's widow, who was considered the person best entitled to receive it.*

*After the money had been for some time in the hands of Abram Cater's widow, who was not then a resident of Saginaw, the Ohio administrator of Charles' estate wrote to me, expressing some concern about the matter, saying that Charles Cater had returned there and demanded his property. I could do nothing in the matter, as the widow of Abram Cater had married again and left the country. About this time the fact that I had no jurisdiction in the case of the estate of Charles Cater, even had he been dead, came to light, and Charles Cater took out letters of administration from the probate court in Oakland county on Abram's estate, and became the heir of Abram instead of Abram*

*Since much of the site was used for agricultural purposes for many years a shovel is sometimes employed to remove the so-called "plow zone" where the artifacts are mixed up due to the action of plowing. We also used shovels to remove the floodborn deposits laid down after the site was abandoned in the 1850s. As we moved down the slope, this layer was sometimes quite thick (note depth in photo) and generally barren of artifacts. Shown here with shovel in hand is professional archaeologist Scott Beld (Alma College), the Oxbow Chapter's technical advisor since 1995. Dave Frurip (back to camera) is on the left. (Photo by Al Stark)*

*Careful excavation technique, using trowels, dust pans and brushes, is the key to proper archaeological methodology at the Cater site. The exact location of all artifacts recovered is recorded and each is gently cleaned, sorted, and properly curated at Chippewa Nature Center. Oxbow member Sarah Frazier is in the foreground of this photo. (Photo by Al Stark)*

*becoming the heir of Charles. I think the want of jurisdiction was discovered before any record of the proceedings was made in Saginaw county. (Miller 1888:381)*

In the other account of the same event published by Judge Miller seven years earlier, he notes that the money was paid to Abram Cater's widow by cutting the bills in half and sending one half and then the second after the first half had arrived (Miller 1881:191). This was done as a means of foiling would be thieves.

As part of the historical research, probate court records were examined in Oakland County by Oxbow member Donna Hiser in 1993. The probate court case concerning the Cater Estate on file in Oakland County indicates that James Frazer was the administrator of the estate. It contains a notice of a petition to sell the real estate, a notice of the sale of the estate, an inventory of the estate and debts owed by the estate to Abraham Cater ($213.94), James Ponton ($10.00), and James Frazer ($62.00). The money owed to Abraham Cater was for loans, hiring workers, taxes on the land ($5.00) and trips to Detroit and the Forks (of the Tittabawassee) in 1834 and 1835. The money owed James Frazer was for one trip to the Forks, two to Pontiac, and one to Pine River.

From records at the Midland County courthouse we learned that on May 15, 1837, James Frazer of Saginaw, as administrator for the Charles Cater estate, sold the land on which the site is located at a public auction in Pontiac, Michigan, to Sherman Stevens of Pontiac for $623.39. About a month later on June 27, 1837, Sherman Stevens sold this land to Daniel Fitzhugh and Edward Leroy for $625.00. A few years later, on January 19, 1841, Edward Leroy

(of Livingston County, New York) sold his share of this land to Daniel Fitzhugh (also of Livingston County, New York) for $3,500.00. This large sum is likely due to inflation associated with the depression of 1838. Daniel Fitzhugh owned the land until August 7, 1879, when he sold it to Elizabeth Ayrault of Geneva, New York.

From this research we were able to determine that none of the owners of the Cater site prior to the 1880s resided at the site or in the State of Michigan. Nevertheless, the archaeological assemblage from the Cater site dates to the 1840s when Daniel Fitzhugh owned the site. At the present time we have been unable to identify the occupants in any records, which makes it likely that they were squatters or tenants.

Once this initial research had been conducted and a research design was developed,[1] excavations were begun on the site. One of the most important things archaeologists try to document is the context of the artifacts and features they find. Context consists of three things: 1) the immediate matrix (or ground the find is made in), 2) the location of artifacts in the matrix (or ground), and 3) their association with other artifacts on the site. There are two types of context. Primary context refers to contexts in which artifacts were deposited by the people who used them and have not been disturbed since that time. Secondary context refers to situations where the artifacts have been disturbed or moved since they were deposited by the people who used them. Because archaeologists are trying to study and learn about the people who left the artifacts, context is crucial because it provides clues as to how the artifacts were used and how people lived - not unlike a police investigation of a crime scene. Be-

[1]A research design is a plan for the project stating its goals and how it will be accomplished.

*A photo of the cellar feature which confirmed the location of the 1840-50s cabin. Cellars in cabins at this time were simply shallow storage areas with access via trap doors. The shape of this dark area and the artifacts found there proved it was the remnants of a log cabin cellar. In it was found a number of household items and complete axe head (see separate photos of reconstructed bowl and axe head). (Photo by Scott Beld)*

*As the excavation continued past the 1994 field school, our interest turned toward the river, down the gentle slope to the lower floodplain. In this area we came upon the so-called midden, or trash layer, filled with bones (deer, bear, sturgeon, and other species) and many other important artifacts. Shown here is Scott Beld (in trench with hat), John Osborne (also in trench) and Jim Woodgate (standing). The straw seen strewn about is from the bales used to protect the walls of the excavation during the winter. The midden layer may be seen as the dark band along the bottom right of the trench. (Photo by Al Stark)*

cause archaeological fieldwork removes artifacts, it is destructive and information (context) must be carefully recorded so that reconstruction can be made later during analysis. In other words the artifacts recovered from an archaeological site are not the "ends", but rather a "means to an end." While we all like to find nice artifacts and have a curiosity about them, archaeologists do not excavate sites to find artifacts but rather to find out about the people who lived at the site.

In order to document the context of the finds, the initial step in excavating the Cater site was to establish a datum point. A datum point is a point from which all measurements on the site are taken. It is usually marked by a steel plate or iron bar set in concrete. Once this had been established, excavation units were laid out on a grid aligned north-south and east-west. These units usually measured 5' by 5' or 10' by 10' (square) though some trenches measuring 2.5' by 15' or 20' were also excavated. Typically, plow disturbed sediments or the plow zone (usually about 14" thick) was removed and sifted through a 1/4" screen hung from a tripod. Once the plow zone had been removed and sifted, the floors of the units were trowelled and examined for features.[2] Features are "non-portable" artifacts. Examples are walls, pits, hearths, cellars, etc., in other words things that cannot be excavated without destroying them. Recording these requires great care so that important information is not lost. All items excavated were placed in bags labeled with the unit and level. The recovered material was taken from the field and washed, sorted, catalogued and analyzed in the Visitor Center or Resource Building. Chippewa Nature Center maintains a collection of material recovered from the Nature Center grounds and surrounding area. The material recovered from the Cater site forms part of this collection. Some of the Cater site artifacts are also on display in Chippewa Nature Center's Visitor Center.

We learned from the excavations at the Cater site that there were two main occupations of the site, a Chippewa occupation

[2] "Plow scars" were frequently identified at the base of the plow zone. These are dark linear soil stains in the lighter matrix (or surrounding soil). They are created when the point of the plow digs deep and allows dark topsoil to fall into these deeper grooves in the light colored subsoil.

around 1800 and an Euro-American settler occupation about 1840. In addition, we also identified minor prehistoric occupations (600-1600 A.D.).

The settler occupation was the first one identified at the site and initially it was the main reason the site was investigated. Two features (or primary context deposits) could be associated with this occupation based on the artifacts they contained. One of these was a "trench-like" pit (Feature 5) which was about 14 inches wide and four inches thick. It consisted of black soil and ash and contained earthenware, brick, flat glass, nails and metal fragments.

*The midden (trash layer) is a very distinct darker colored layer when viewed in profile on the side of one of the excavated trenches. It is amazing to consider how much floodborn soil has been deposited at the site since the early 19th century when the site was occupied first by the Chippewa (1820s) and later by a settler's cabin (1840-50). Shown here is Oxbow member John Osborne excavating a feature. (Photo by Al Stark)*

The other feature associated with the settler occupation was a cellar or pantry type structure (Feature 101). It was identified at the end of the 1994 season and excavated in the 1995 season. It measured 6'10" by 9'0" and was 9" deep below the bottom of the plow zone or 27.5" below the present surface. Three layers of fill were identified when it was excavated. These layers represent various stages in the filling of the feature as it was used and after it was abandoned. A layer of very dark grayish brown silt (Zone 1) was located at the top and represents the most recent deposit in the feature. A layer of lighter yellowish-brown silt (Zone 2) was located below it. Lastly, a layer of very dark grayish brown silt (Zone 3) was located at the bottom of the feature. A thin layer of charcoal was located between Zones 2 and 3, suggesting a fire had occurred that was possibly associated with the destruction of the cabin.

Artifacts were scattered throughout this cellar. They included bottle fragments, earthenware, flat glass, nails, brick fragments, a sear spring from a gun, percussion caps, lead shot and scrap, buttons, needle fragments, scissors, brass, slate pencil fragments, white clay pipe fragments, an axe head, and a screw, as well as bone fragments which included a pig mandible. A few artifacts associated with the Chippewa occupation were secondarily deposited in the cellar (these artifacts were in the surrounding soil prior to the cabin). These consisted of 12 seed beads, one shell wampum bead, one trade silver earbob wire fragment, and three small trade silver fragments.

A wide range of artifact types could be associated with the settler occupation. Among the most numerous were architectural artifacts from the cabin itself. These consist of door latch or lock fragments, hinges, brick fragments, window glass, and machine-cut square nails.

Even these mundane artifacts can yield

*Decorated earthenware from the Cater site. These dish, cup, and saucer fragments are associated with the Cater site settler cabin. The top row is relatively expensive transfer prints (blue). The bottom left shows polychrome handpainted cup and saucer fragments with multi-colored flowers. The sherd in the bottom center is an example of a handpainted monochrome saucer fragment. The sherds on the right are blue edge dish fragments. The scale is marked in cm. (Photo by Scott Beld)*

important information about the site. For example, the thickness of window glass on nineteenth century sites can be used as a rough dating mechanism. Over the course of time window glass increased in thickness. As a general rule, on sites dating before 1850 the average thickness will be less than 1.6 mm and on sites dating after 1850 the average thickness is usually greater than 1.6 mm. The average thickness of the flat glass from the Cater site is 1.25 mm and is consistent with a date before 1850.

The brick fragments are somewhat unusual on a frontier log cabin site. The nearest source of bricks in the 1840s would have been Saginaw, about 15 miles away. It is likely that the bricks would have been brought up the river on a scow, though it is also possible that the Cater site bricks were scavenged from a slightly earlier site which is located nearby.

Several artifacts can be associated with the kitchen and the preparation and consumption of food. These artifacts include fragments of dishes, cups, saucers, bowls, jugs, bottles, forks, knives, and spoons.

The dishes, cups and saucers from the site represent types common in the 1840s. Most of these are softpaste earthenwares manufactured in Great Britain. British pottery firms dominated the ceramic trade worldwide during the first half of the nineteenth century. There are, however, a few sherds of more expensive porcelain (including one with a handpainted floral motif and one figurine fragment) which were recovered from the site.

Most of the earthenware from the site consists of small white fragments smaller than an inch in diameter. However, one white bowl with beaded molding on the rim was reconstructed from sherds recovered in the cellar. Plain white undecorated vessels were the cheapest variety of ceramics avail-

able in the first half of the nineteenth century. Nevertheless, decorated varieties are more common on sites from this period. Decorated varieties from the Cater site include transfer prints (blue, brown, and purple), handpainted (monochrome blue and polychrome), spatter or sponge (blue, brown, green), edgewares (blue edge), and annular.

Of these decorated varieties, transfer printed wares were among the more expensive in the first half of the nineteenth century. The decoration on these vessels typically consists of a picture in the center of the vessel with a floral design around the rim or lip. Transfer prints were made by engraving a copper plate with the design which was then covered with pigment. A special type of paper was then laid on the copper plate and the design transferred to the paper. The paper was then lifted from the copper plate, carefully placed on the vessel to be decorated, and rubbed to transfer the design. Subsequently the vessel would be glazed and fired. Transfer printing was first used in the mid-1770s. By the early nineteenth century it was a common type of decoration. Initially, designs were in blue but about 1830 other colors were introduced (green, red, purple, black, brown). These colors were popular through the 1840s into the 1850s, though light blue continued to be the dominant color. The patterns of the designs were typically given a name which often appears on the back of the vessel. One of these patterns called "LUCERNE" was identified at the Cater site. This pattern was produced by a manufacturer named Joseph Clementson who operated in Great Britain from 1839-1864. Most of the transfer printed vessels from the Cater site are the common light blue variety, though one brown transfer cup and a few sherds of purple transfer are also present.

Another decorated variety of earthenware which was less expensive than transfer prints was handpainted ware. Handpainted wares appear as early as the

## The Value of Ceramics in the Cater Site Investigation

*Donna Hiser*

We often think of ceramics in terms of their aesthetic value. Archaeologists, however, use ceramics to help determine the historical and scientific values of the sites they dig. Ceramic artifacts from the historic period played an important role in helping us determine who lived at the Cater site and when they lived there. Archaeologists found literally hundreds of sherds (fragments of broken earthenware, or potsherds), most no larger than a thumbnail! How can these bits of broken plates and cups help us understand more about the lives of the people who lived at the Cater site?...read on.

Two characteristics are particularly helpful in evaluating ceramics: backmarks and motifs. A backmark identifies the manufacturer of a ceramic and many times the actual date of its manufacturer. A motif is a distinctive element or characteristic of a design. Figure A below shows a sherd with a backmark. These easily referenced backmarks unfortunately are rarely found intact so we rely instead on other characteristics of the ceramic: motif and color. Hand painting on the sherds in Figure B shows characteristic apple-green petals, bright red flowers and black stems. This motif was on many sherds found at the Cater site. Motifs can also indicate the date of manufacture of a particular sherd. Many colors and patterns were made for only a short time; for example the hand painting on the sherd in Figure B

*(continued next page)*

*Figure A: A small ceramic sherd (approximately 13/16 in. along the long edge) from the Cater site showing a partial backmark with the maker's name "CLEW[S]" impressed. (Photo by Dave Frurip)*

*Figure B: Examples of sherds of colorful hand painted ceramics found at the Cater site. The pieces above with apple-green petals, bright red flowers and black stems were only produced in the 1830-1840 time period. Scale: the top edge of the upper right hand piece is approximately 9/16 in. (Photo by Dave Frurip)*

shows distinct colors produced only during the late 1830s and early 1840s.

Backmarks can further identify the ceramic by dates and names. One distinct sherd found at the Cater site has been identified by a backmark with "CLEW[S]" impressed on it. (An impression is a mark or indentation made by pressure on the ceramic.) James Clews, a ceramics manufacturer, was born near Staffordshire, England, an area of many small towns where ceramics were produced in the nineteenth century (and are still produced today!). Earthenwares were very popular exports to the American market. Clews purchased the business from Andrew Stevens in 1819. The unusual mark he devised was an impressed circle with double band containing the words "CLEWS WARRANTED STAFFORDSHIRE" surrounding a large crown. In November of 1834, Clews ceramics went under. The business was sold and a new backmark was created. From this information we can see that the original backmark on the sherd found at the Cater site could only have been impressed during the time frame 1819-1834.

Other clues from the Cater site ceramics tell us more about the people who lived there. Blue and white motif on earthenware was very common in the early nineteenth century, which leads us to believe that the people living at the site were of average income. Very few porcelain sherds (a fine kind of ceramic, with a translucent body and a transparent glaze) were found at the Cater site. Porcelain was more expensive then and remains expensive today.

From these few examples, one can see that backmarks and motifs on ceramics can be used in conjunction with accompanying artifacts to help archaeologists determine the approximate time the Cater site was occupied. Also the information gleaned from a study of the ceramics can help determine the financial status of the occupants.

1780s and were in common use into the 1860s. The type of decoration is named for the handpainted designs which appear on them. Typically these designs are floral motifs. Both monochrome (single color, usually blue or green) and polychrome (multi-color) flowers occur. The handpainted sherds from the Cater site come from cups and saucers. Most of these are from polychrome vessels with flowers that have black stems, apple green leaves, and blue, red and/or yellow petals. These are consistent with varieties common in the 1840s. Fragments of an earlier monochrome blue cup and saucer set have also been recovered from the site. A base fragment of the saucer has an impressed maker's mark: "CLEW[S WARRANTED STAFFORDSHIRE]". This mark was used by James and Ralph Clews between 1817 and 1834 while they were manufacturing pottery in Great Britain. James Clews subsequently came to the United States and operated a pottery works in Louisville, Kentucky from 1838 to 1842 (see inset).

Another type of inexpensive earthenware was spatter or sponge ware. This type of decoration was produced by spattering pigment on the vessel with a brush or applying it with a sponge. A few sherds from blue, brown, or green sponge cups and saucers were recovered from the Cater site. Spatter or sponge ware first occurs in store records in the 1840s and continues through the 1860s. Sponge or spatter decoration was also occasionally combined with handpainted floral decoration. Three small sherds of a green spatter cup with a polychrome handpainted floral motif were recovered at the site.

Among the least expensive varieties of earthenwares were edge-decorated wares. These have decorated relief or impressions around the rim which were highlighted with pigment, usually blue or green. The edgewares from the Cater site consist of plates with unscalloped (straight) rims with impressed designs and blue pigment (Blue Edge). This variety of Blue Edge dates to ca. 1840-1860. Earlier varieties have scalloped rims with impressed bud designs (ca. 1810-1840) and latter varieties have unscalloped straight rims without impressions (ca. 1850-1860s). Neither of these varieties occurs at the Cater site.[3]

Several annular or banded vessels occur at the Cater site. This type has different colored bands for decoration. It was produced in England throughout the nineteenth century and is commonly found as pitchers, bowls, and mugs. The Cater site examples are decorated with blue, yellow, tan or brown bands.

Other ceramic vessel types recovered consist of stonewares and redwares which were utilitarian ceramics. The relatively hard paste stoneware sherds from the site come from a brown glazed jug. The soft paste redware (red paste) sherds come from vessels with brown and green glaze. The Cater sherds are generally small but when large enough to determine vessel form, they seem to be from bowls.

Fragments of bottles represent another type of container. Only about six bottles are represented by these fragments and they include aqua, clear and dark olive colored glass. One whiskey flask and four open-ponteled bases were found. Pontel marks on the bases of bottles are the result of attaching a "pontel" rod to hold the bottle while the lip is being fashioned. In 1857 a snap case with padded arms which clamped around the bottle was invented and led to the demise of the pontel rod. Pontel marked bottles are generally an indication of a pre-Civil War date.

Examples of tableware from the site include two-tine forks, iron fork or knife handle fragments with pins for the attachment of wood or bone handles, an iron

[3] The color of the pigment also has chronological significance. Most edgewares have blue pigment (Blue Edge). However, until the mid-1830s green pigment (Green Edge) occurs as a minor variety. In central Michigan, sites with occupations prior to 1836 will usually have examples of Green Edge. No Green Edge occurs at the Cater site, indicating a date after 1835.

spoon, a pewter spoon handle, and several knife fragments.

Artifacts from the site associated with clothing include buttons, buckle fragments, clothing fasteners, and grommets. Buttons from the site include 4 and 5-hole bone buttons, one-piece brass buttons, a brass suspender button, 4-hole iron buttons, cloth-covered iron or "florentine" buttons, 3 and 4-hole shell buttons with notched edges or star designs, one glass button, and white pressed porcelain or "agate" buttons. Agate buttons were invented in 1840 and become common on archaeological sites in the early to mid-1840s. In addition to buttons, hook-and-eye brass clothing fasteners made from brass wire and bone grommets were also recovered. Iron needle fragments, brass pins, and iron scissors indicate that clothing was made by the family residing at the site.

Several tools were recovered from the site. These include an iron axe head which was found in the cellar, a chisel, a drill fragment, files, a hoe, and a scythe blade. In addition, a clasp or "jack" knife with an iron blade and wood sides was recovered.

Most of the artifacts relating to firearms can be associated with the Chippewa occupation of the site. However, several percussion caps are probably associated with the settler occupation. Over twenty percussion caps have been recovered. By the time the percussion mechanism became popular in the Saginaw Valley (1840s), the Cater site was occupied by the Euro-American settler. One of the first references to a percussion gun in the Saginaw Valley is to one carried by Alexis de Tocqueville on his trip to Saginaw in 1831. This gun excited interest, particularly among the Native Americans, because it could shoot in the rain. By 1850 most Native Americans in central Michigan were also using firearms which had been converted to the percussion mechanism.

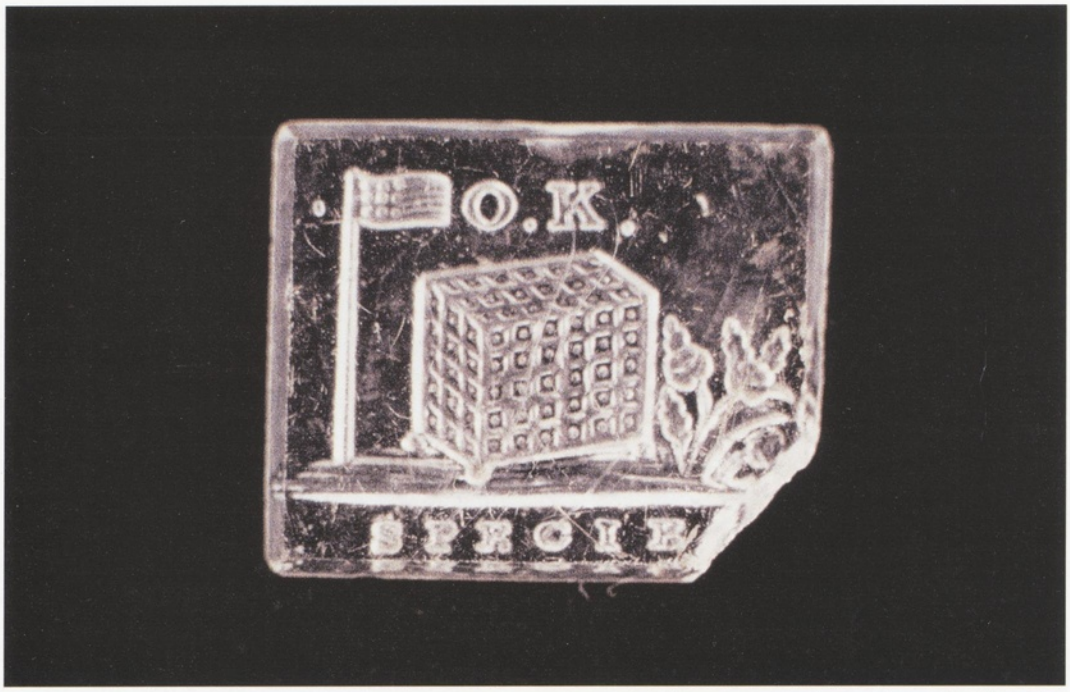
Two slate and one lead pencil from the site probably indicate the presence of schoolchildren.

Several white clay smoking pipe fragments were recovered. Several of the pipe bowls are plain or undecorated though most are decorated. The most common pipe bowl decoration on the site is a ribbed or fluted decoration. This type of decoration was common in the first half of the nineteenth century. There is one "thirteen-star patriotic pipe" from the site, which has a circle of thirteen stars surrounding the letters "TD" (facing the smoker). This decorative motif was in use from about 1840 to 1875 and becomes very common on sites in the 1850s (just after the Cater occupation). Other types of pipe bowl decoration common in the 1840s which were found at the Cater site include an embossed TD and a pipe bowl in the form of a human head. One of the stem fragments from the site has a maker's mark: "MURR[AY]" on one side and "[GLA]SCOW" on the other side of the stem. This manufacturer produced pipes in Glascow, Scotland, between 1826 and 1862.

Among the most interesting artifacts from the site and certainly the most interesting artifact associated with the settler occupation is a Martin Van Buren presidential campaign badge from the 1840 presidential election. This artifact is made from glass, which has been etched, on the back. It was originally held in a brass casing, which could be pinned to clothing. The design consists of a safe in the center with a flag to the left and flowers to the right. The inscription "O.K." is located above the safe and "SPECIE" below.

The presidential election of 1840 is perhaps best known from the "Log Cabin and Hard Cider" campaign of the Whig candidates William Henry Harrison and John Tyler (for vice president), with their campaign slogan "Tippecanoe and Tyler too." Harrison and Tyler ran against Democratic candidates Martin Van Buren and Richard Johnson (for vice president).

The term "O.K." which appears on the Cater site badge above the safe came into popular use as part of a fad started in 1838 by Boston and New York writers. These writ-




*Perhaps the most interesting artifact found at the Cater site is a small (2.1cm x 1.7cm) campaign token from the 1840 presidential election campaign of Martin Van Buren. This item is made from glass which has been etched on the back. It was originally held in a brass casing which could be pinned to clothing. Why was it here in the virtual wilderness of early Midland County? (Photo by Scott Beld)*

ers abbreviated "humorously" misspelled words as a type of code. "O.K." meant "oll korrect" (i.e. "all correct"). In the political campaign of 1840, "O.K." referred to Van Buren's nickname "Old Kinderhook" (Van Buren was from Kinderhook, New York).

"SPECIE" on the Cater site badge refers to the currency policy of the Jackson and Van Buren administrations and the specie amendment to the Independent Sub-Treasury Bill. The Jackson and Van Buren administrations were opposed to the Bank of the United States, believing it to be unconstitutional and that its monopolistic power threatened to corrupt the government and to destroy freedom. The Democrats favored a "hard money" policy based on coinage (i.e. specie), whereas the Whigs favored a sound currency (i.e. paper money) policy. During Jackson's presidency "hard-money" measures were undertaken, for example revaluing gold in relation to silver, making foreign coinage legal tender, enlarging the U.S. mint, and limiting the use of small denomination currency notes. Van Buren retained Jackson's "specie circular" which required payment for federal lands to be made in specie only, though it was repealed by an act of Congress in 1838.

The safe on the badge refers to the "Sub-Treasury" Bill. This bill required the Federal Government to deposit its money in its own vaults and not in banks. The connection of the safe with the Sub-Treasury Bill can be seen on other Van Buren campaign tokens with a safe and the legends "THE INDEPENDENT SUB-TREASURY, THE CHOICE OF THE PEOPLE" and "SUBTREASURY & DEMOCRACY". The safe symbolized that the people's money was safe.

The popular "Log Cabin and Hard Cider" campaign of Harrison and Tyler, and the depression of 1838 with its subsequent "hard times", resulted in the defeat of Van

Buren and the election of Harrison in 1840. Most of these badges belong to the Harrison campaign and have a picture of a log cabin and/or cider barrel with the legend "HARRISON & REFORM". While Harrison badges are more common, certain campaign issues advocated by the Democrats were popular on the western frontier and probably account for the Van Buren badge at the Cater site. These issues concerned land. The Democrats favored restriction of sales to actual settlers, rights of states to tax land when sold, safeguarding squatters' rights (preemption), and graduation of the price of land so unsold lands became cheaper. These squatter's rights and cheap land were likely major concerns of the Cater site occupants.

*Prehistoric Pottery Sherds. More than thirty prehistoric pottery vessels are represented by fragments from the Cater site. This reconstructed rim section was found below the midden and dates to about 1200-1400 A.D. The decoration was made by pushing and pulling a cordwrapped stick across the surface of the vessel. The scale is marked in cm. (Photo by Scott Beld)*

The Cater site Euro-American occupation represents one of the earliest Midland settler sites identified to date. This 1840 Van Buren presidential campaign badge indicates a date in the early 1840s. The earthenware from the site is generally consistent with an 1840s date, including light blue, brown and purple transfers, "blunt arrow" blue edge with straight rims, "new palette" handpainted wares, and a limited amount of spatter or sponge ware including handpainted spatter/sponge. The white pressed porcelain or "Agate" buttons which were invented in 1840 also indicate a date in the early 1840s.

Among the original research questions when excavations began in the 1970s and again in the 1990s was determining who occupied the Cater site. The identification of the Cater site occupants has presented problems despite the excavations and historical research. A lack of congruence between the dates of the archaeological assemblage (early 1840s) and the first owner of the site, Charles Cater (1833-1837), indicates that he was not the occupant. In the 1840s, when the settler cabin was occupied, Daniel Fitzhugh, an eastern investor, owned the site (1837-1879).

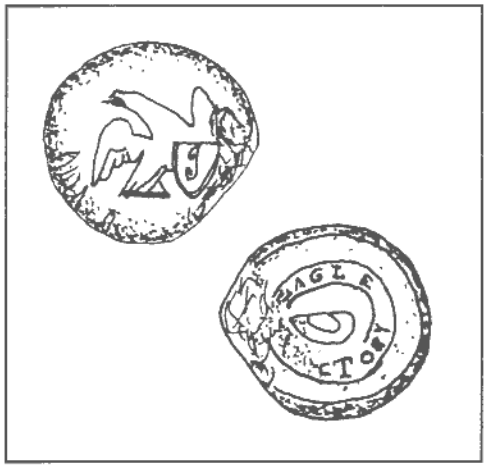
Because Charles Cater and Daniel Fitzhugh are known to have resided outside of Michigan and could not have lived at the site, it is likely that the occupants of the site were squatters or tenants. These people often left little or no record of their presence in official documents. Typically, squatters would settle on a piece of land hoping eventually to purchase it. If this was the case at the Cater site, the depression of 1838 which lasted into the mid-1840s may have affected the ability of the occupants to purchase the site. These "Hard Times" can be seen in the relative poverty of the assemblage and the lack of coins in the assemblage. Typically a cabin site will produce several coins. A nearby cabin site which dates to the "boom

times" in the mid-1830s has produced several large cents.

The artifact assemblage from the site is typical for a frontier cabin. The architectural artifacts (window glass and nails) are consistent with a cabin site. Evidence of women's tasks typical of frontier cabins are seen in artifacts associated with food preparation and consumption (relatively inexpensive dishes and tableware) and clothing manufacture and repair (buttons, pins, needles, etc.). The presence of children is perhaps indicated by slate pencil fragments. Men's tasks are documented by the axe head (clearing land and cutting firewood), percussion caps (hunting), and hoe and scythe blade (farming) - typical activities on a frontier site. In fact, during the excavations a field associated with the settler was identified on the floodplain adjacent to the river. When we were excavating the flood plain below the terrace, plow scars were identified at a level two feet below the present surface which can be directly correlated with the 1840s land surface. This ground surface was buried as the result of increased flooding and sediment in the rivers associated with lumbering and farming over the last 150 years. The connection between the plow scars identified on the floodplain and the settler's cabin is shown by dish fragments (Blue Edge) and other artifacts which were recovered from them.

Floodplains were typically cultivated by earlier settlers in the Saginaw Valley as noted by Judge Albert Miller:

*All the early settlements at Saginaw made for agricultural purposes were on the banks of the streams, principally on the Tittabawassee; we thought in those days, that nothing but the alluvial bottom lands would pay to clear and cultivate. I once owned the 40 acre lot known as Mapes' addition to East Saginaw, which now includes the site of the depot and other railroad buildings of the F.&P.M.R.R., which I exchanged with the late James Fraser for a farm on the Tittabawassee, situated two miles below the present railroad crossing at Paines'. That farm was considered a choice selection, there being 60 acres of river bottom on it, and the crops raised on those lands might well satisfy the farmer, and the abundance of them amply compensated him for the inconvenience of an occasional overflow of his land by the spring freshets. Seventy bushels of shelled corn to the acre was no uncommon yield. I have raised common field pumpkins that weighed 60 pounds each, and from one vine I raised 22 pumpkins, the aggregate weight of which was 382 pounds. In 1833 Duncan McLellan raised 800 bushels of potatoes, the yield being between 300 and 400 bushels to the acre. In November, 1830, the elder Mr. McCarty and his son, Thomas, came from the city of Boston and settled on the Tittabawassee, neither of them ever having chopped a stick of timber previous to that time. They cut the logs and built a house with their own hands, in which they lived and cooked their own food, and during the winter and spring cut the timber into short lengths that they could roll into heaps by hand, and cleared the land, upon which they raised a crop of corn that they sold in the fall of 1831 for $60. Edward McCarty, a younger brother of Thomas, now (1886) occupies the same and surrounding lands, and is*



*U.S. Infantry button found in the midden during the 1998 field season. It is made of pewter and was used on uniforms between 1815 and 1821. The back of the button is inscribed "EAGLE FACTORY" which refers to the manufacturer. (Drawing by Scott Beld)*

*Gun parts from the Cater site. The two items in the center are parts of a Chief Grade Trade Gun (ca. 1790-1820). The top item is a side plate with an engraved design and the bottom item is a flattened trigger guard with the same engraved design. The item on the left is a fragment of a serpent side plate from a Northwest Trade Gun. The item on the right is a frizzen spring. The scale is marked in cm. (Photo by Scott Beld)*

*one of the richest farmers in Saginaw county. The McCartys raised their first crop without any team work. After that date it was customary for settlers to fell the timber and pile the brush neatly and burn it in the spring, and plant and raise their first crop of corn among the logs. A settler once told the writer that he could raise a larger crop in that way than if the land was cleared, for he always planted close to the logs on each side. (Miller 1888:354-355)*

The local Chippewa community also located their fields on floodplains. (Hubbard, 1881) Prior clearing by Native Americans, in addition to the fertility and ease of cultivation of floodplain soils as described by Miller, was sometimes another reason settlers cultivated the floodplains. This is also a possibility at the Cater site which had a Chippewa occupation 10-25 years before the settler occupation.

During the course of the excavations, several prehistoric artifacts dating to the Late Woodland period (ca. 600-1600 A.D.), as well as artifacts associated with historic Native American occupations (i.e., trade silver fragments and beads) were recovered from the site. The artifacts associated with the prehistoric occupations included six projectile points (or "arrowheads"), flakes (i.e., pieces of stone broken off during manufacture of stone tools), and numerous pottery sherds. Most of this prehistoric pottery consists of small fragments (less than an inch in size). However, several sherds formed a large section of the rim of a vessel. Parts of this vessel were impressed with a piece of fabric and a "cord-wrapped stick." These cord-wrapped stick impressions had charred residue from the contents of the pot and some of this charred material was submitted for a radiocarbon date. The resulting date was about 1100 A.D.

More significant than the small, short-term prehistoric occupations was a Chippewa occupation identified at the end of the 1995 season. This occupation was


*A deer antler fragment found below the 1820-1850 midden (trash layer) at the Cater site. Artifact placement, carefully recorded as they are found, add much to the information about an archaeological site. Since this one was found several inches below the midden, it may be representative of the earlier, prehistoric occupation at the site. Many other prehistoric artifacts (stone points, pottery, etc.) have been found at the site. (Photo by Al Stark)*

found when we started to excavate a trench down the slope of the terrace on which the site is located, hoping to find a deposit of trash (midden) which had been thrown down the slope. This area of the site had only limited excavations prior to this. At the end of the 1996 season we returned to this area to finish these units. At that time, we encountered a "sheet midden" or trash deposit (kitchen refuse) which required postponing the closing of the excavations. The entire 1997 season was spent determining the extent of this midden. It was found to extend about 100 feet east-west along the terrace and about 40 feet north-south down the slope. The midden ranged in thickness from four to ten inches and consisted of dark gray or black friable silt sandwiched between lighter brown silts. At the top of the terrace slope the midden was located ten inches below the present surface and at the bottom of the slope it was 24 inches below the present surface. This depth of sediment is likely the result of increased sedimentation and flooding caused by land clearance (lumbering and agriculture) in the second half of the nineteenth and early twentieth centuries. The midden ended in the field associated with the settler cabin where shallow plow scars from a horse drawn plow were encountered at the midden level, as previously discussed. Most of the material recovered from the midden consisted of animal bones, with deer and various species of fish being particularly common. Artifacts associated with an early nineteenth century Chippewa occupation (gun parts, gunflints, beads, trade silver fragments, awls, brass fragments, stone and white clay pipes, etc.) and the 1840s settler cabin (brick, flat glass, nails, earthenware, white clay pipes, etc.) were also common.

This Chippewa occupation was unexpected and added a new and important dimension to the site. Until 1996, excavations had mainly been limited to plowed areas on the top of the river terrace. In this area a

*This photo shows gunflints in the top row and percussion caps in the bottom row. These gunflints are British blade gunflints commonly in use between 1800 and the 1840s. In the 1830s and 1840s the flintlock firing mechanism began to be replaced by the percussion mechanism. The scale is marked in cm. (Photo by Scott Beld)*

few artifacts clearly associated with historic (trade silver fragments and beads) and prehistoric (flakes, potsherds, and projectile points) Native American occupations had been identified. However, the small number of these artifacts seemed to indicate sporadic or temporary occupations over a long period of time. A preliminary analysis of material from the midden indicated that, for the most part, the faunal assemblage was not consistent with a settler's cabin and certain artifacts (particularly a perforated bear mandible tool) indicated a Native American presence. As artifacts were plotted by their depth it was noted that Native American associated artifacts (beads, trade silver, etc.) occurred throughout the midden, whereas artifacts associated with the 1840s cabin were lacking from the bottom 2"-4". This indicated some stratigraphic[4] separation of the occupations in the midden.

Because no early nineteenth century Chippewa sites had previously been excavated in the state, it was decided that a larger artifact sample and more information concerning this occupation were desirable. We therefore decided to postpone preparation of the report, modify our research design, and continue the excavations. The 1997 season was spent determining the limits of the midden. In the 1998 and 1999 seasons we expanded our excavations in the midden and opened a block of units.

In addition to the midden, several features on the site could be associated with the Chippewa occupation. These included a linear scatter of bone (Feature 1), a hearth (Feature 6), and a burned area (Feature 108). Four smudge pits (Features 7, 8, 9, and 103) for the smoking of hides were also identified. The smudge pits were usually about eight to twelve inches in diameter and contained charred corncobs, bark, and/or charcoal. Some of the corn from one of these smudge pits was radiocarbon dated and produced a modern date (i.e. after 1680 A.D.).

The artifacts associated with the Chippewa occupation have yielded information about what the occupants were doing and the date of the occupation. In general, the artifacts are consistent with a date between 1780 and 1825. A couple of artifacts allow us to tighten this date range to the period between 1800 and 1825. British blade gunflints which do not occur in North America much before 1800 indicate a date for the occupation after 1800. A possible end date for the occupation is provided by a pewter 1815-1821 issue U.S. Infantry button. The presence of this button at the Cater site is not particularly unusual. Military buttons occur rather frequently on frontier sites and uniforms were often given to important Native Americans, particularly at treaties.

Besides the numerous animal bone fragments from the midden, several artifacts attest to the hunting and trapping activities of the Chippewa living at the site. Chief

[4] "Stratigraphy" is an archaeological and geological term for the layering of sediments. It has chronological implications in that deeper strata ("layers") are older than layers higher up in a stratigraphic sequence.

*This ax head was recovered from the cellar excavated at the Cater site. The cellar location may be seen in the site map shown earlier in the Introduction. We can only speculate why such an important tool was left here. The scale is marked in cm. (Photo by Scott Beld)*

among these are parts from at least five guns. The gun parts from the Cater site come from a Northwest Trade Gun, two Chief Grade Trade Guns, and two rifles, one of which is probably a Type A English Pattern Trade Rifle.

Three fragments from a Northwest (or "Common") Trade gun were recovered from the Cater site. This type of firearm was popular with Native Americans throughout North America and is probably the most common type of gun found on Native American sites from the end of the eighteenth century into the second half of the nineteenth century. They were a rather inexpensive smoothbore gun which had a characteristic side plate in the form of a serpent or dragon. The Northwest gun parts from the Cater site consist of the head of one of these cast brass serpent side-plates, a brass butt plate finial with square nail holes, and an iron trigger guard fragment. The square nail holes on the butt plate fragment are significant for dating the gun. In the mid-1820s screws started to be used to attach the butt plate to the stock. Prior to this time nails were used. This indicates that the Cater specimen was probably manufactured before circa 1825. Northwest guns had a deep trigger guard which allowed the gun to be fired with two fingers or while wearing gloves. Half of one of these trigger guards was found.

The two Chief Grade Trade guns from the Cater site are represented by a trigger guard, a side-plate, a ramrod pipe finial, and two butt plates. Chief Grade Trade guns (smoothbore) were presentation pieces distributed by the British Indian Department to prominent Native Americans between the 1790s and 1820s. The Cater site trigger guard was flattened and is engraved with a crossed arrow, shield and cursive S-design. The sideplate has the same crossed arrow, shield and cursive S-design. The butt plates are engraved with a hunting-horn and boar's head motif.

Two ramrod pipes from the site are somewhat diagnostic and could come from either a Northwest or a Chief Grade Trade gun.

*Trade silver earbob. This is a type of trade silver artifact which is common on Native American sites from the early nineteenth century. They were frequently suspended from the ear in groups. Several fragments of these were found during the excavation. The loop is approximately 2 cm in diameter (Photo by Scott Beld)*

Another gun is represented by a brass butt plate which probably comes from a Type A English Pattern Trade Rifle. This type of gun was imported by the British Indian Department for distribution to Native Americans, possibly in the 1780s. It had a rifled barrel and was characterized by a sliding wooden patch box. The dovetailing for the wooden patch box can be seen on the Cater butt plate. Another rifle is represented by a brass trigger guard with an engraved rococo design with flowers. It also has a hole at the front for attaching a sling swivel and like the Chief Grade Trade gun trigger guard, it has been flattened. This trigger guard almost certainly comes from a rifle, possibly

*Native American pipes from the Cater site. The two specimens on the left are made from clay. These are typically found on prehistoric Late Woodland sites in central Michigan. The two on the right are made from stone and are associated with the historic Chippewa occupation (second from the right is the "bird-effigy" pipe). All the pipes from the Cater site were fragmentary and several were unfinished which indicates manufacture of pipes at the site. The scale is marked in cm. (Photo by Scott Beld)*

of American manufacture, and possibly dates to the 1780s.

Other gun parts which are not characteristic of a particular gun include two frizzen springs and a sear spring.

Two or three pistol flints from the site indicate that the inhabitants also had a pistol. In addition to these pistol flints, over thirty gunflints or fragments of sizes for rifles and muskets were recovered in the excavations. Most of these gunflints are British blades, though one burned French blade flint, one burned French spall, and three gunflints made from locally available pebble cherts were recovered. British blade gunflints were not produced until the 1780s or 1790s and did not appear in North America until about 1800 or later.

Another characteristic of the Cater site gunflints is that they are heavily used. Many of them have edge concavities and localized edge battering from use against a firesteel. After these flints were no longer sharp enough to spark when struck against the frizzen or were too small to be held properly in the hammer, they were likely used with a steel to start fires.

Lead ball, shot, and scrap were also recovered. The lead balls fall between .38 and .55 caliber. There is much more small shot which ranges in size from 0.11 to 0.20 inches. Most of the lead scrap is amorphous, though one cut lead bar fragment and two round pieces were also recovered. These artifacts indicate that balls were cast at the site.

At least three trade knife fragments were found. A complete brass handle in a filigree pattern with part of the iron blade was recovered from the midden. Fragments of a second were also recovered from the plow zone. Identical knife handles have been recovered at Fort Michilimackinac and the Mill Creek site at the Straits of Mackinac, and at an 1802-1803 Northwest and XY Company winter trading post in Wisconsin. The third knife is represented by a complete iron blade.

Most of the artifacts associated with the Chippewa occupation of the Cater site consist of ornaments and clothing items. These include trade beads, trade silver fragments, a brass hawk bell, brass and tin tinkling cones, and a cut brass pendant.

Well over 200 trade beads have been recovered. Most of these beads are glass varieties including six-sided faceted (apple

green and blue), round (red, green, and blue), cylindrical or tubular (mainly black or white), and wound barrel or convex-shaped (black or white). The black and white tubular varieties are the most common. Over 100 small black, white, blue, red, and green seed beads were also recovered. Besides the glass beads, several shell wampum beads have also been found.

The trade silver from the Cater site consists of earbobs, ring broaches and small fragments of broaches. The earbob fragments include cones, the balls or globes to which the wire loop and cone were attached, as well as wire fragments.

Several ornaments were made from cut pieces of brass or tin kettles. One pendant was made from kettle brass and there are several "tinkling cones". Tinkling cones were made by cutting a triangular piece of brass and rolling it into a cone. They were attached to hair or clothing. Most of the Cater examples are brass though one was made from a tin kettle.

*This plain white bowl with a beaded rim was carefully reconstructed by Oxbow member John Osborne from fragments found in the cellar. The bowl dates from the 1830s or 1840s. Plain white ceramics were the least expensive variety in the nineteenth century. The scale is marked in cm. (Photo by Scott Beld)*

These tinkling cones and cut brass pendant are one of several types of artifacts recovered from the site that represent craft activities where the Native Americans took locally available materials (stone and bone) or trade items (brass and tin kettles) and modified them into tools or ornaments.

Two rolled brass awls probably also represent items made at the site. Six awls (used for punching holes to sew leather, etc.) were recovered. Four of these are iron and at this period (War of 1812) would have been obtained from traders or as gifts from the British Indian Department. However, the two rolled brass awls could have been made locally by cutting, rolling, and hammering kettle brass.

Bone artifacts include two cut deer phalange which were made into pieces of a cup-and-pin game. (Further details about these game pieces may be found in a separate section of this report entitled "Stabbing a Hollow Bone.") In addition one complete and one fragmentary perforated bear mandible tools were recovered.

Several stone pipe bowl fragments were recovered from the site. These pipes were being made at the site and represent another craft activity. Several of the fragments were clearly broken during manufacture. This is indicated by pieces with holes that are not completely drilled and one example which has marks from an iron file or rasp.[5] The pipes that reached a more advanced stage before they broke are in various forms. One has faceted sides and another is in the form of a bird. The "bird-effigy" pipe is decorated with small circles which were formed by drilling.

Two white clay pipes from the site are associated with the Chippewa occupation and were probably received from either traders or the British Indian Department. One is a bowl-stem juncture and the other is a nearly complete bowl

[5] Files and file fragments were found at the site and occur in nineteenth century lists of trade items.

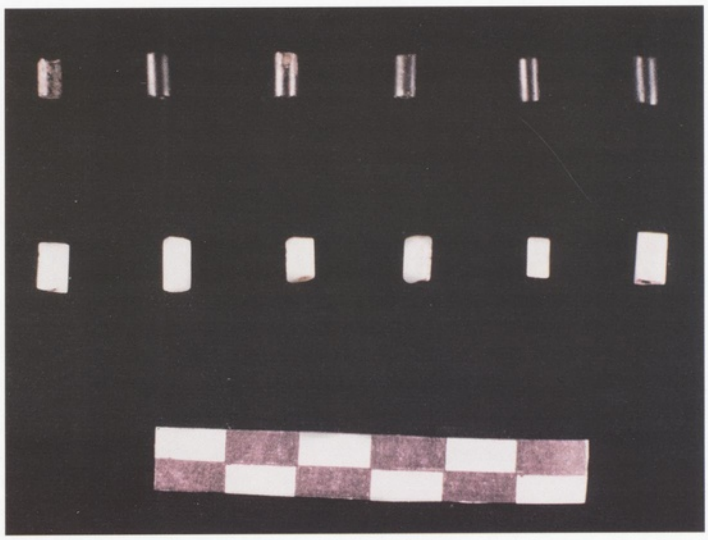
*This white clay trade pipe was modified by one of the Chippewa occupants by drilling holes near the rim of the pipe bowl similar to the "bird-effigy" pipe recovered from the site. (Photo by Scott Beld)*

with part of the stem. Both have "TD" on either side of the spur which projects from the base of the bowl/stem juncture. The specimen with the complete bowl has an impressed or incised "TD" in a shield. This type of pipe is common on sites from the late eighteenth and early nineteenth century.

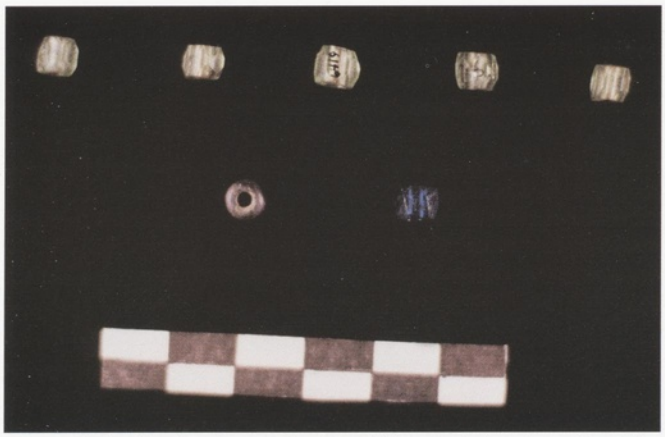
The complete specimen is also interesting for the two ways in which it was modified by the Native American occupants of the site. First, a series of dots or circles was drilled at the top of the bowl which is very similar to the decoration on the "bird-effigy" stone pipe from the site. And second, the broken stem has been whittled, possibly for insertion into a wood or reed stem. This specimen represents another interesting example of the way in which the Native American occupants modified European trade items to suit their needs.

The Cater site is important because, in addition to the settler occupation, it provides a rare, carefully excavated assemblage from a historic Chippewa/Ojibwa habitation site. Chippewa bands occupied the Saginaw Valley of lower Michigan following the conclusion of the Iroquois Wars in the eighteenth century. In the first half of the nineteenth century, around 250-300 Native Americans (Chippewa) lived in the Midland area. These people were associated with two "villages" around which reservations (*Arbetchwachewan* and *Miscobenessi*) were established under the 1819 treaty between the Saginaw Chippewa and the United States Government (Tanner 1987:134). Population figures for the bands associated with these two villages are given in two censuses compiled by Saginaw Sub-agents in the late 1830s, i.e. Henry Conner (1837) and John Hulbert (1839).

Henry Conner's 1837 census records



*White and black cylindrical glass beads. These were the most common types of trade bead recovered from the historic Chippewa occupation. The scale is marked in cm. (Photo by Scott Beld)*



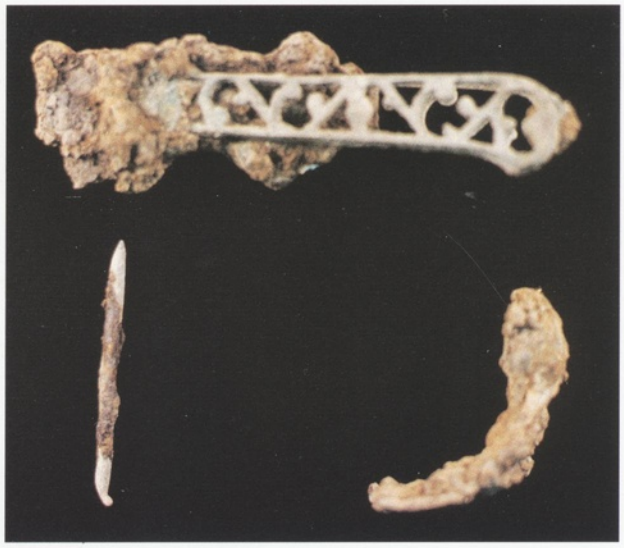
*Faceted glass beads. A second variety of glass trade bead was faceted. Most of the Cater site examples are apple green color. The scale is marked in cm. (Photo by Scott Beld)*

138 people living on the Tittabawassee River[6] and 83 living at Arbetchwachewan.[7] An additional 87 people[8] at the "Little Forks" and 13 people[9] at Arbetchwachewan, or 32% of the local Chippewa population, are recorded as having died in the 1837 small pox epidemic (Records of the Michigan Superintendency, National Archives Microcopy Series M1, Roll 45, pages 127-129).

John Hulbert's 1839 census lists 226 people[10] in the Little Forks Band with Pay mos se gay Chief (Records of the Michigan Superintendency, National Archives Microcopy Series M1, Roll 47, page 631). The increased number of people in Paymosegay's band in the 1839 census likely reflects the reorganization of local Chippewa bands following the devastating small pox epidemic of 1837/1838.

The appearance of the Chippewa villages of the Saginaw Valley is described by Bela Hubbard in an account of a geological expedition conducted in 1837.

*As we followed down the stream memorials of the present and recent Indian occupation were frequent. Sometimes we passed huts, constructed of poles, and thatched with bark; but only a few women and children were visible. At one place on the bank were ten graves, over which a sort of tomb had been erected, built of logs. Trails were frequent, and on one of these we came upon a tree containing an Indian symbolic epistle. There were figures of men and horses, but we were unable to decipher the meaning. At another place was a cache, a pit for hiding provisions. Many of the Indian clearings stretched for several continuous miles, and many acres bordering the river were covered with the luxuriant maze [i.e. maize/corn], the chief cultivated food of the natives. These plantations receive the name of villages, because they are resorted to by the tribes at the periods of cultivation and harvest. But, in fact, these people*



*This photo shows three common trade items. On the top is a trade knife with a brass handle in a filigree pattern and part of the iron blade. Identical knife handles have been found at Fort Michilimackinac, Mill Creek, and trading posts in Wisconsin. The bottom left shows an iron awl and the bottom right half of the bow of a trigger guard from a Northwest Trade gun. (Photo by Scott Beld)*

[6] 39 men, 29 women, 49 children, and 21 infants.

[7] 23 men, 26 women, 22 children, and 12 infants.

[8] 32 men, 28 women, and 27 children.

[9] 4 men, 4 women, and 5 children.

[10] 37 men, 61 women, 128 children.


*These two rolled brass awls were made by the Chippewa occupants of the Cater site. They were made by cutting pieces of broken brass kettles and then rolling and hammering them. (Photo by Scott Beld)*

*had no fixed habitations, but wandered ... from place to place, in patriarchal bands, finding such sustenance as the woods and waters afforded, and pursuing the occupation of trapping and barter with the Indian traders. At this time also they were much scattered by the small-pox, a disease recently introduced by the whites, and which had proved very fatal to the aboriginal inhabitants of this part of Michigan [i.e. the smallpox epidemic of 1837/38]. (Hubbard 1881:191)*

In 1819 a treaty was concluded between the United States Government and the Saginaw Chippewa Tribe which ceded most of the Saginaw Valley.

The Chippewa occupation of the Cater site dates to ca. 1790-1830, a period when the Chippewa tribe had occupied the Saginaw Valley. The features from the site document disposal of trash (midden), tanning hides (smudge pits), and heating and cooking (hearth). The large faunal (bone) assemblage from the midden has produced important information on the amounts and kinds of animals which were exploited. In addition to the faunal remains, numerous (as yet unanalyzed) plant remains have been recovered from the midden. These include corn kernels, corncob fragments, squash or pumpkin seeds, tubers, grape seeds, and a variety of other wild plants. These plant remains document the presence of horticultural fields, possibly along the riverbank as mentioned by Bela Hubbard, as well as the collecting of wild plant resources.

Several of the artifacts are clearly associated with this early nineteenth century Chippewa occupation. These include beads, the hawk bell, the brass pendant, tinkling cones (brass and tin), trade silver (earbobs, ring broaches, and fragments), stone pipe bowl fragments, white clay pipes with TD on the spur, gun parts (Chief Grade and Northwest guns), and gunflints. However, there are also several artifacts which could be associated with either the Chippewa or the settler occupation. These include scissors, Jew's harps, brass and iron fragments, tacks, etc. Even dated artifacts like the handpainted monochrome blue saucer and cup with the CLEW backmark (1817-1834) could also be associated with either occupation of the site.

Because of this problem we have started testing areas adjacent to the Cater site in order to try to identify Chippewa occupations without overlying settler occupations. In the 1998 and 1999 field seasons two areas were identified to the east of the Cater site with the assistance of field crews from Alma College. These areas have produced faunal and artifact samples similar to the Cater site Chippewa occupation and will be the focus of continuing excavations starting in 2000.

---

*(Editor's note: the following bibliography is taken from the more extensive and detailed report on the Cater Site authored by Scott Beld to be published in The Michigan Archaeologist)*

**Anderson, Dean L.**

n.d. A Revised Temporal Context for Thirteen Star Patriotic Style White Clay Pipes. Paper presented at the Annual Meeting of the Society for Historical Archaeology, January 1982.

**Beld, Scott G.**

1990a 20GR91: A Late Woodland Site in Gratiot County, Michigan. *The Michigan Archaeologist* 36:57-77.

1990b *Gratiot County Archaeology, Phase V, S89-273: Shin-gwah-koos-king / Bethany Mission* (20GR186/187/199). Report submitted to the Michigan Historical Center by Alma College.

1993 Site 20SA665: A Late Woodland Site in Taymouth Township, Saginaw County, Michigan. *The Michigan Archaeologist* 39:46-105.

**Beld, Scott G. and J. Tracy Luke**

1998 Three Woodland Sites in the Pine River Drainage, Gratiot County, Michigan. *The Michigan Archaeologist* 44: 3-52.

**Brashler, Janet G.**

1981 *Early Late Woodland Boundaries and Interaction: Indian Ceramics of Southern Lower Michigan*. Anthropological Series Vol. 3(3). The Museum, Michigan State University, East Lansing.

**Cole, J.L.**

1878 J. L. Cole's Journal of a Pedestrian Tour from Detroit to Sagana (Saginaw) River in 1822. *Michigan Pioneer and Historical Collections* 2:470-475.

**Demeter, C. Stephan and William L. Lowery**

1977 Archaeological and Historical Investigations at the Berrien Springs Jail Site. *The Michigan Archaeologist* 23:41-114.

**Dewitt, J. Doyle**

1959 *A Century of Campaign Buttons 1789-1889*. Hartford.

**Ferris, Neal**

1984 Buttons I Have Known. Kewa: *Newsletter of the London Chapter* 84-5:2-16.

1985 Bellamy: A Late Historic Ojibwa Habitation. *Ontario Archaeology* 44:3-21.

**Ferris, Neal, Ian Kenyon, Rosemary Prevec and Carl Murphy**

1985 Bellamy: A Late Historic Ojibwa Habitation. *Ontario Archaeology* 44:3-21.

**Fischer, Fred W.**

1972 Schultz Site Ceramics. In *The Schultz Site at Green Point: A Stratified Occupation Area in the Saginaw Valley of Michigan*, edited by James E. Fitting, pp. 137-190, 273-300. Memoirs, No. 4. Museum of Anthropology, University of Michigan, Ann Arbor.

**Fitting, James E. and Susan Sasse**

1969 The Hodges Site, 20SA130, Saginaw County, Michigan. *The Michigan Archaeologist* 15:57-77.

**Flexner, Stuart Berg**

1976 *I Hear America Talking: An Illustrated Treasury of American Words and Phrases*. New York.

**Flexner, Stuart Berg and Anne H. Soukhanov**

1997 *Speaking Freely: A Guided Tour of American English from Plymouth Rock to Silicon Valley*. New York.

**Gunderson, Robert Gray**

1957 *The Log-Cabin Campaign*. University of Kentucky Press.

**Halsey, John R.**

1976 *The Bussinger Site: A Multicomponent Site in the Saginaw Valley of Michigan with a Review of Early Late Woodland Mortuary Complexes in the Northeastern Woodlands*. Ph.D. Dissertation, University of North Carolina, Chapel Hill. University Microfilms International, Ann Arbor.

**Hamilton, T. M.**

1980 *Colonial Frontier Guns*. Chadron, Nebraska.

1982 Chapter 6, Relics from 18th Century Osage Sites. Pp. 71-105 in T.M. Hamilton, editor, *Indian Trade Guns*. Union City, Tennessee.

**Hamilton, T. M. and K. O. Emery**

1988 *Eighteenth-Century Gunflints from Fort Michilimackinac and Other Colonial Sites*. Archaeological Completion Report Series, Number 13. Mackinac Island State Park Commission, Mackinac Island, Michigan.

**Hawkins, Bruce and Richard Stamps**

1989 *Report of the Preliminary Excavations at Fort Gratiot (1814-1879) in Port Huron, Michigan* (Odyssey, Research Monographs, Vol. II, No. 1). Oakland University, Rochester.

**Hubbard, Bela**

1881 A Michigan Geological Expedition in 1837. *Report of the Pioneer Society of the State of Michigan, Pioneer Collections*, Volume III. Lansing.

**Humphrey, Richard V.**

1969 Clay Pipes from Old Sacramento. *Historical Archaeology* 3:12-99.

**Jones, Olive**

1971 Glass Bottle Push-Ups and Pontil Marks. *Historical Archaeology* 5:62-73

**Kenyon, Ian**

1985a A History of Ceramic Tableware in Ontario 1780-1840. *Arch Notes: Newsletter of the Ontario Archaeological Society* 85/3:41-57.

1985b A History of Ceramic Tableware in Ontario 1840-1870. Arch Notes: *Newsletter of the Ontario Archaeological Society* 85/5:13-28.

1985c A History of Ceramic Tableware in Ontario 1870-1890. *Arch Notes: Newsletter of the Ontario Archaeological Society* 85/6:14-21.

**Kenyon, Ian and Neal Ferris**

1984 Investigations at Mohawk Village, 1983. *Arch Notes: Newsletter of the Ontario Archaeological Society* 84/1:19-49.

**Klinger, Timothy C.**

1974 *A Nineteenth Century Homestead on the Chippewa River* (Chippewa Nature Center, Man, Time and Environment Publication Number One). Midland.

**Krakker, James J.**

1984 Investigation of a Small Late Prehistoric Site in St. Clair County, Michigan. *The Michigan Archaeologist* 30:89-123.

**Lofstrom, Ted, Jeffrey P. Tordoff, and Douglas C. George**

1982 A Seriation of Historic Earthenwares in the Midwest, 1780-1870. *The Minnesota Archaeologist* 41:3-29.

**Lorrain, Dessamae**

1968 An Archaeologist's Guide to Nineteenth Century American Glass. *Historical Archaeology* 2:35-44.

**Mann, Rob**

1996 *Archaeological Excavations at the Ehler Site (12-Hu-1022): An Early 19th Century Miami Indian Habitation Site Near the Forks of the Wabash, Huntington County, Indiana.* Report of Investigation 95IN0062-P3r01, LANDMARK Archaeological and Environmental Services, Inc.

**Martin, Patrick E.**

1985 *The Mill Creek Site and Pattern Recognition in Historical Archaeology. Arch. Completion Report Series No. 10*, Mackinac Island.

**Mason, Ronald J.**

1986 *Rock Island: Historical Indian Archaeology in the Northern Lake Michigan Basin* (MCJA Special Paper No. 6).

**Mayer, Robert**

1995 Some Research Notes on Root Cellars, Ice Houses and Coolers. *Arch. Notes* 95-6:10-17.

**McGuinn, William F.**

1978 *American Military Button Makers & Suppliers: Their Backmarks & Dates.* McLean, Virginia.

**Miller, Judge Albert**

1884 Pioneer Sketches. *Report of the Pioneer Society of the State of Michigan, Pioneer Collections Volume VII* :229-262. Lansing.

1888 Incidents in the Early History of the Saginaw Valley. *Michigan Pioneer and Historical Society, Historical Collections Volume XIII*: Lansing.

**Newton, Bill**

1984 *The Trade Muskets or Northwest Guns by Whately 1770s Barnett 1830.* Deaver, Wyoming.

**Oerichbauer, Edgar S.**

1982 Archaeological Excavations at the Site of a North West and XY Company Winter Post (47-Bt-26): A Progress Report. *The Wisconsin Archaeologist* 63:153-236.

**Orser, Charles E., Jr.**

1994 Corn-Belt Agriculture during the Civil War Period, 1850-70: A Research Prospectus for Historical Archaeology. Pp. 173-190 in Clarence R. Geier, Jr., and Susan E. Winter, *Look to the Earth: Historical Archaeology and the American Civil War.* Knoxville.

**Ozker, Doreen**

1976a Sumac Bluff (20MD25), A site on the Chippewa River in Midland. *The Michigan Archaeologist* 22:283-313.

1976b The Naugle Site 20MD30, Midland County, Michigan: Early Late Woodland and Late Archaic Components on a Pine River Site. *The Michigan Archaeologist* 22:315-355.

**Payne, James H.**

1984 *Dyer Farm: Archaeological and Historical Investigations of a Mid-nineteenth Century Occupation in Lucas County, Ohio.* Unpublished report prepared for the Whitehouse Historical Society, Whitehouse, Ohio

**Robertson, David A., Eva M. MacDonald, and Martin S. Cooper**

1997 Among Marshes and Gneiss Mounds: The Archaeology of La Vase Island. *Ontario Archaeology* 64:8-38.

**Tanner, Helen Horbeck**

1987 *Atlas of Great Lakes Indian History*, University of Oklahoma Press, Norman, Oklahoma.

**Van Deusen, Glyndon G.**

1963 *The Jacksonian Era: 1828-1848*. New York.

**Williams, Petra**

1978 *Staffordshire Romantic Transfer Patterns: Cup Plates and Early Victorian China*. Jeffersontown, Kentucky.

1986 *Staffordshire Romantic Transfer Patterns II: Cup Plates and Early Victorian China*. Jeffersontown, Kentucky.

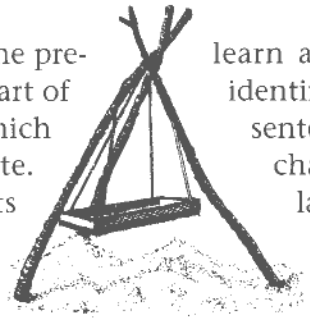
**Wilson, Major L.**

1984 *The Presidency of Martin Van Buren*. Lawerence, Kansas.

**Woolworth, Alan R. and W. Raymond Wood**

1960 River Basin Surveys Papers, No. 20: The Archeology of a Small Trading Post (Kipp's Post, 32MN1) in the Garrison Reservoir, North Dakota. Pp. 239-305 in Frank H. H. Roberts, Jr., ed., *River Basin Surveys Papers: Inter-Agency Archaeological Salvage Program Numbers 15-20*. Washington.

# Introduction to Chapter 4



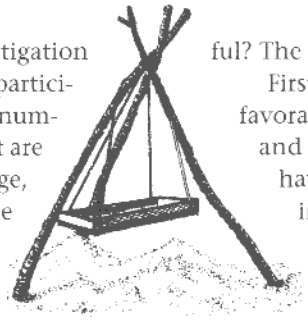
The artifacts described in the previous section tell a major part of the story of the activities which took place at the Cater Site. Another group of artifacts found in great number at the site is bone. More animal bones were found during the course of the excavations than any other artifact type. To the untrained eye, these bones don't mean much. However, to the likes of Dr. Terrance Martin, bones from archaeological sites can tell us a lot about those who lived at Cater. Terry is an expert in the identification of bones, or, in the jargon of the field, he is a faunal analyst. Working at the Illinois State Museum in Springfield, Illinois, Terry has helped us in many ways during the Cater project. By conducting workshops during the field schools, Terry has allowed the rest of us to learn at least the basics of bone identification. Also, Terry has presented lectures to the Oxbow Archaeologists and to the Midland chapter of Sigma Xi (a national scientific organization) discussing his efforts on an important Russian archaeological project. As with Scott Beld's contribution, an expanded, more technically detailed version of this report will appear in the Michigan Archaeologist. In the following contribution, Terry Martin describes why faunal analysis is important to the interpretation of an archaeological site, the identification of some of the bones found at the Cater site, and what they mean. There are still plenty of bones to analyze from the Cater site, and we look forward to working with Terry in the future to help unlock the secrets of the site.

*-David Frurip*

CHAPTER 4

# What Do Animal Bones Tell Us About the Cater Site?

Dr. Terrance J. Martin, Associate Curator of Anthropology, Illinois State Museum



Once an archaeological investigation is well underway, many of the participants are often surprised by the number of animal bones and teeth that are found. In fact, depending on the age, kind of soil conditions, and the nature of the site, fragmentary skeletal remains are commonly more numerous than other artifacts. In this chapter, we will learn about the animal remains that were discovered at the Cater site and explore how this collection can inform us about what life was like during the early 1800s along the Chippewa River in the vicinity of what is now Chippewa Nature Center. Not only can we learn about what kinds of animals were being used for food and other necessities such as furs, tools, and ornaments, but a detailed study of the zoological materials can provide considerable information about what the environment was like, what time of the year people lived at the site, and even how the site residents may have perceived their world.

## What are all these bones doing here?

Since excavations began at the Cater site, many hundreds of thousands of animal bones, teeth, and shells have been discovered in addition to various kinds of artifacts. So many bones have been found that some of the Oxbow Archaeologists have probably wondered if they were actually participating in a paleontology dig. The bones are found in all sizes, but most of the specimens are broken. Why are they so plentiful? The answer is not simple.

First of all, not all soil conditions are favorable for the preservation of bones and teeth. Many soils in Michigan have a high acidity and bones buried in such soils will deteriorate over time until only the most dense and compact elements (such as tooth enamel) or bones that were altered by incomplete burning will survive. Alternatively, alkaline soils and certain damp conditions will retard the action of bacteria resulting in the preservation of fragile materials such as fish scales, bird bones, and pieces of eggshell. Secondly, the more recent the human activity in the past, the less time has passed for the materials to decompose. And probably the biggest factor is the nature of the human behavior that took place at the site. Depending if people resided at a location over an extended period of time-whether that was a few days, several weeks, a couple of months, or years-the more different kinds of activities were likely to have occurred there. In addition to other chores, these people probably had to capture animals for food, prepare them for cooking, and discard the refuse. Not only was the meat from animals eaten, but many of the bones were broken on purpose so that the nutritious marrow, fat, and grease could be extracted, either by hand or by boiling, such as in a broth or soup. If these people lived at the location continuously for an extended time, they may have buried their everyday wastes in order to minimize odors and discourage unwanted visits by animals scavenging

through the garbage, be they small rodents, raccoons, wolves, or black bears. Then again, if a family did not live in the same place for very long, or if the ground was too hard to dig such as during the middle of winter, people may have simply discarded their garbage outside of the living quarters or down the terrace slope toward the river. Interpreting this scenario becomes more complex when someone in the past came to a location, carried out activities there, and dug a pit for a hearth, a cellar, or a refuse pit, and encountered some of the garbage that was left by some unknown person or group who lived at the same place years, decades, or even centuries before.

Information from some of the artifacts discovered at the Cater site inform us that someone came to settle near the Chippewa River probably during the 1840s. The lack of local historical documentation for this leads us to suspect that this may have been a family of "squatters," people who had no formal title to the land they inhabited. An even greater number of artifacts were found to indicate that there was a more substantial occupation at this place at least a few decades previously. We know that the Chippewa Indians lived here during the late 1700s through the early 1800s, so much of the bone refuse may have been discarded by them.

## How are the bones identified?

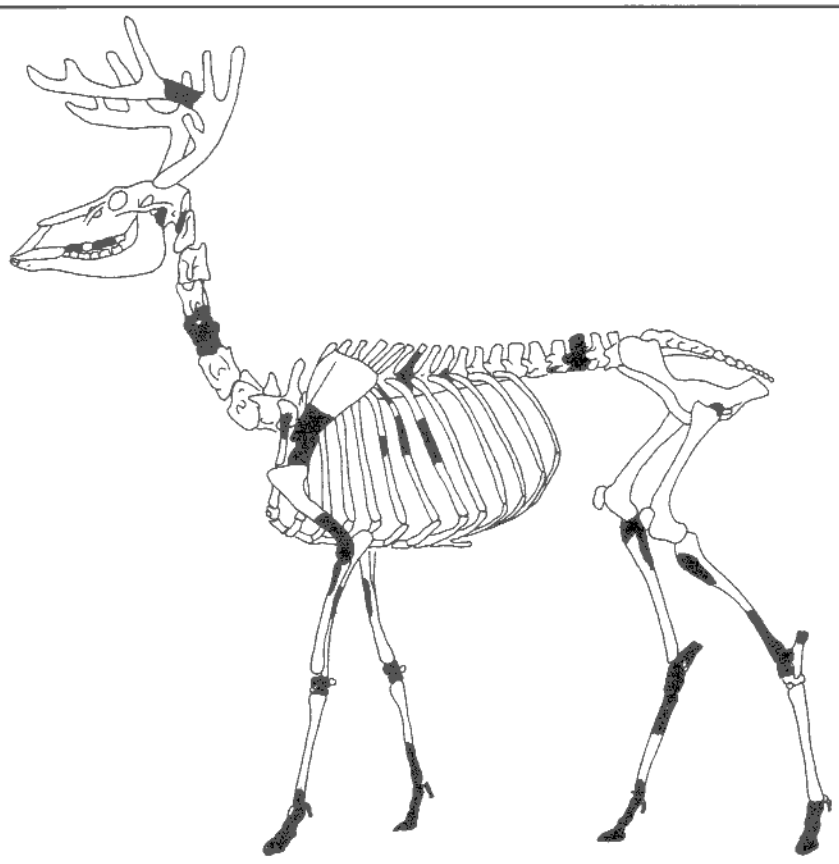
The supervising archaeologist Scott Beld met with members of the Oxbow Chapter and the staff from the Nature Center to decide how the archaeological investigation should proceed. They decided first to try to concentrate on the material and time period of the 1840s settler. Chosen for detailed analysis of their contents were about a dozen "features" (hearths, refuse pits, and a cellar). More than 14,000 animal remains were segregated for study from these features along with selected trenches that were excavated during the 1970s. On at least three different occasions, Scott Beld and I presented informal workshops at Chippewa Nature Center where we demonstrated to the Chapter members and those enrolled in summer field schools just what is involved in identifying animal remains. But most of the work was performed at the Illinois State Museum in Springfield where a laboratory is maintained especially for the identification of animal specimens from archaeological sites. With approximately 11,000 complete skeletons of mammals, birds, reptiles, amphibians, and fish, and another 8,000 freshwater mussels, this unique lab is used not only by staff specialists in Springfield (referred to as zooarchaeologists, archaeozoologists, or faunal analysts), but also by researchers from other universities and museums who do not have access to such a collection. This important research collection was founded by Dr. Paul W. Parmalee, a former curator of zoology who was a pioneer in interdisciplinary research and whose contributions have appeared in hundreds of journal articles and archaeological site reports since the mid-1950s.

By using modern skeletons as reference material, museum technical assistant Chris Richmond and I sorted the various fragments of bones, teeth, and shell from specific levels and units into animal classes. We systematically compared the archaeological specimens to the corresponding zoological analogue and then recorded various attributes (name of bone; portion; side; condition of the epiphysis if present; presence of pathological anomalies, burning, rodent or carnivore-gnawing, dismemberment marks such as knife cuts, hatchet chops, or sawed margins; and weight). This information was entered on computer, which enabled us to sort and quantify the various taxa.[1]

[1] Based on A Dictionary of Ecology, Evolution and Systematics, by R.J. Lincoln, G.A. Boxshall, and P.F. Clark (Cambridge University Press, 1982), a taxon is any group of organisms or populations sufficiently distinct from other such groups to be considered as a separate unit. In some situations a taxon may be synonymous with a species, but in others a taxon may be a genera or higher level taxonomic unit. For example, bones from freshwater drum (Aplodinotus grunniens) are easily considered as one species, whereas bones from redhorse suckers (multiple species of the genus Moxostoma) and ducks (multiple species and genera within the subfamily Anatinae) are often difficult to identify to a precise species, and so are discussed together as respective taxonomic groups.

By counting most redundant bones for each kind of animal and looking for differences in sizes and biological ages, we next calculated the minimum numbers of individual animals (abbreviated as MNI) that were represented for each taxon. This can be very difficult for some species. For example, bones from lake sturgeon are very distinctive because of the pitted or sculptured texture. However, these "dermal bones" are most often found broken into very small pieces that cannot be identified as to particular dermal bone (e.g., right operculum, left parietal, right supracleithrum). As a result, our MNI estimates for sturgeon are probably always too low. Similarly, 60 of 69 identified specimens of longnose and/or spotted gar are hard, diamond-shaped ganoid scales. Scales on a large individual gar vary significantly in size, and thus estimating the number of individual gar represented in the archaeological sample is also difficult. When studying fish bones, we classify them not only by kind of bone and species of fish, but also by 8-cm-size-class. This way we can conclude that a dentary from a redhorse sucker comparable in size to one that was 40 to 48 cm long represents a unique individual from a maxilla from a redhorse in the same pit that was 48 to 56 cm long.

Although this work requires many hours of intensive effort, an exciting aspect is not knowing what we will find in any



*Composition of white-tailed deer remains. Those parts found in the Cater site faunal assemblage are shown in filled black. Bones from the feet (i.e. carpals, tarsals, and phalanges) represent 53.4% of all deer specimens. Isolated teeth compose nearly 18%, the second highest total.*

given bag of animal remains from a site. The Cater site, for example, provided a single example of a cervical vertebra from a mountain lion from the cellar fill. This is only the third mountain lion bone reported from an archaeological site in Michigan, the first being from a Late Woodland site in Saginaw County that was identified by Dr. Charles Cleland at Michigan State University and described in a 1975 issue of The Michigan Archaeologist (Foster and Hagge 1975:65). We also found several bones from black bears, a claw bone from a bald eagle, and a wing bone fragment that we suspect to be from the now extinct passenger pigeon. A single screech owl is represented by 51 bones, but because of its completeness, we suggest that its presence is probably more recent and coincidental to the other animals.

## What animals were most important at the Cater site?

Our examination reveals the significance of local wild animals to the various people who resided at the Cater site during the early nineteenth century. Refuse pits used by the earlier Chippewa Indians contained bones from white-tailed deer, black bear, and some mammals that were valuable in the fur trade. These include marten, mink, river otter, muskrat, and raccoon. Interestingly, beaver is not present in any of the features analyzed for this report, although their bones and teeth are present in other units at the Cater site. Domesticated animals are under-represented in contrast to most other sites of this time period in the Midwest. Although a pig mandible was found in the cellar fill, remains of domesticated animals are limited to some isolated teeth from pigs and cattle, a scapula from either a sheep or a goat, and a couple of chicken bones.

As a group, fish were also important, but spring-spawning lake sturgeon and redhorse suckers were especially prized. Other species present among the 18 taxa identified include rock bass, northern hognose sucker (or "hog sucker"), northern pike, walleye, gar, and freshwater drum (or "sheepshead"). Someone occasionally hunted ducks and ruffed grouse, and captured a variety of turtles including snapping turtle, painted turtle, and Blanding's turtle.

Although we found approximately 150 bones and teeth from small rodents such as voles and white-footed mice and/or deer mice, we suspect that most of these elements came from animals that fell into open pits and could not escape. Except for the terrace-edge midden that extends down toward the river floodplain (which will be the focus of our future analyses), the largest concentration of animal bones was in the fill of a dirt cellar that we think was built by the settler family of the 1840s. The similarity in kinds of animals to those found in the Chippewa pits leads us to believe that the sediment used to fill in the cellar contains refuse from Chippewa occupation. In fact, as a result of our overall analysis, we now suspect that data related to the subsistence practices of the settler family at the Cater site are being masked by the Chippewa refuse. Perhaps the settler family lived at this location for only a short time. Is it also possible that the settler family may have imitated the hunting and foraging lifestyle of the earlier Chippewa residents? If the settler was a tenant or a squatter, perhaps the netting of spring-spawning fish and the hunting of white-tailed deer provided sufficient food so that their diet was only sporadically supplemented by meat from domesticated animals.

## Were animal bones used for tools and ornaments?

Some of the more interesting specimens are those that were modified into various artifacts. At the Cater site these include a fragment of a bone plate for a cutlery handle, a piece of a broken polished and burned tubular bead, and crudely carved flat bone fragment that was possibly intended to be a gaming piece.

Especially exciting are two black bear

*A black bear mandible (jaw) found at the Cater site. Note the round hole (approximately 24mm diameter) which was deliberately made so that the bone could be used as a tool, possibly in stropping leather (see text of this chapter). Several similar artifacts have been found at Native American archaeological sites in the Great Lakes region dating to the seventeenth and eighteenth century. The scale is marked in cm. (Photo by Scott Beld)*

mandibles. One unbroken specimen from Unit 146 (see site map in Introduction) has a nearly round hole approximately 24 mm in diameter that was placed by someone in the rear portion, or ascending ramus. This is nearly identical to several examples of perforated bear mandibles from the Tionontate Huron Village in St. Ignace (Smith 1985); the Rock Island site in northern Lake Michigan that was visited by the Huron, Odawa and Potawatomi (Mason 1986:181-184); several Petun Indian sites along the southern shore of Georgian Bay in Ontario (Garrad 1969); and the site of Fort Ouiatenon in the Wabash Valley of northern Indiana (Martin 1991:414). Most of the perforated mandibles were probably used by Indians as stropping tools to make leather strips pliable, as indicated by wear-polish around the margins of the perforations. The Cater site specimen is a little different in that it does not have any wear-polish. A second example was found in 1999 in Unit 170. This one is only a fragment, but it includes the anterior and upper part of the perforation, which has polish and is more elongated from use. These mysterious tools may also have been used for processing basswood fiber, but based on the other sites where they have been found, they were made and used during the 1700s, and not as late as the 1840s. Despite the occurrence of numerous examples of perforated bear mandibles from archaeological contexts around the Upper Great Lakes region during the historic period, apparently no European witnessed their use, or at least wrote about them in correspondence or in journals. We are still left to ask, why were bear mandibles consistently used for such a tool?

## What do the animals tell us about the local environment?

Consistent with the mission statement

of Chippewa Nature Center, the faunal assemblage from the Cater site is providing an excellent source of information on early nineteenth-century environmental conditions and available natural resources in the northeastern portion of the Saginaw drainage. Bones from black bear and mountain lion remind us of a former time in Michigan, before the spread of the lumber industry, when large carnivores were a potential danger to human settlements. Continuing well into the nineteenth century whitetailed deer remained the staple source of fresh meat for people who lived along the Chippewa River. The fish in particular indicate that aquatic habitats near the site had clear water and a sandy, gravel bottom. Species that prefer this kind of aquatic habitat include redhorse suckers, hognose sucker, rock bass, and lake sturgeon, and these are the most plentiful fish at the site. The only two identifiable freshwater mussel shells are both from a species commonly called the kidneyshell (Ptychobranchus fasciolaris), which is also at home in gravel substrates of medium and large rivers (Cummings and Mayer 1992:98). In contrast to the Cater site, the site of the Trombley House in Bay City has an abundance of northern pike, channel catfish, bullheads, yellow perch, and walleye, but few remains of redhorse, hognose sucker, rock bass, and gar (Martin and Colburn 1989:146). We suggest that these differences reflect the unique riverine habitats that are present near each site.

## What will we learn from future studies?

Our focus in future studies will concentrate on the early nineteenth-century activities of the Chippewa Indians who lived along the Chippewa River in the area that includes the Cater site. Historians and archaeologists suspect that American Indians did not react the same to Euro-American technology, subsistence, and ideology in all areas. Over the past several years archaeologists have discovered sites in the Midwest that were occupied by different Native American peoples at approximately the same period. Among these sites are the Windrose site in northern Illinois that was inhabited by the Potawatomi, and the Ehler site in northern Indiana that was occupied by the Miamis. The Bethany Mission site in Gratiot County, Michigan also provides a perspective on local Chippewa Indians, but slightly later in time and in a different social environment. Careful detailed investigation of these sites will make possible comparisons of various aspects of these cultures. For example, attention to faunal assemblages from these different sites will permit us to ask how long the fur trade survived in certain areas? When did different peoples adopt domesticated animals into their local economies? What was the relative importance of aquatic and terrestrial resources to various Indians during the early nineteenth century?

A continuation of detailed investigations of animal remains will also give us more information about former environmental conditions in and around Chippewa Nature Center. Studies of the archaeological fish remains may disclose new details about past aquatic life in the Chippewa River. For example, the only direct local information about one of the most important Great Lakes fish species from the past, the lake sturgeon, is available from archaeological material from the grounds of the Nature Center. Terrestrial animals are also well represented in the local archaeological record. How common were black bears, mountain lions, wolves, and various furbearing mammals in the past, and how important were these animals to the local Chippewa populations during the nineteenth-century? The growing importance of DNA analysis to animal population studies may have applications for properly curated archaeological materials. The research potential of an interdisciplinary approach to the study of animal remains from archaeological contexts will undoubtedly give rise to many other questions and directions that we cannot even anticipate today.

**Cummings, Kevin S., and Christine A. Mayer**

1992, *Field Guide to Freshwater Mussels of the Midwest*. Manual 5, Illinois Natural History Survey, Champaign.

**Foster, Donald W., and Donald R. Hagge**

1975, A Unique Secondary Burial of Four Children Found in Taymouth Township, Saginaw County, Michigan, *The Michigan Archaeologist* 21(2).

**Garrad, C.**

1969, Bear Jaw Tools from Petun Sites, *Ontario Archaeology* 13: 54-60.

**Martin, Terrance J.**

1991, Modified Animal Remains, Subsistence, and Cultural Interaction at French Colonial Sites in the Midwestern United States. In *Beamers, Bobwhites and Blue-Points: Tributes to the Career of Paul W. Parmalee*, edited by James R. Purdue, Walter E. Klippel, and Bonnie W. Styles, pp. 409-420. Scientific Papers, Vol. XXIII, Illinois State Museum, Springfield, and Report of Investigations No. 52, Department of Anthropology, The University of Tennessee, Knoxville.

**Martin, Terrance J. and Mona L. Colburn**

1989, Faunal Remains. In Excavations at the Trombley House (20BY70): A Settlement Period House Site in Bat City, Michigan, edited by Earl J. Prahl, pp. 135-152. *The Michigan Archaeologist* 35(3-4).

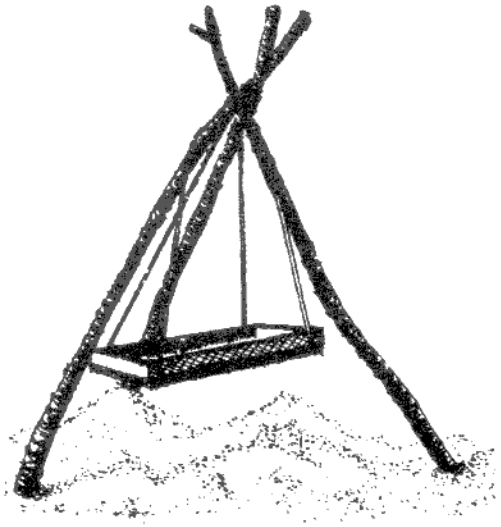
**Mason, Ronald J.**

1986, *Rock Island: Historical Indian Archaeology in the Northern Lake Michigan Basin*. MCJA Special Paper No. 6., Kent State University Press, Kent, Ohio.

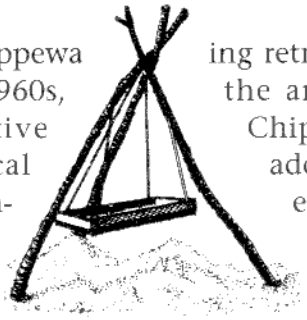
**Smith, Beverly A.**

1985, The Use of Animals at the 17th Century Mission of St. Ignace. *The Michigan Archaeologist* 31(4): 97-122.

# Appendices



# Introduction to Appendix A



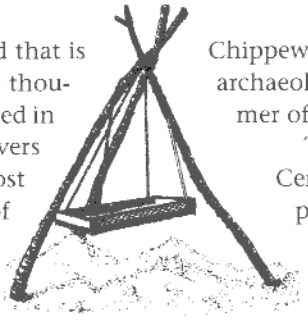
Since the inception of Chippewa Nature Center in the late 1960s, there has been an active avocational archaeological group. Kyle Bagnall, the Nature Center's Historical Interpreter, has scoured the records of these activities and contacted the previous participants (in particular, Fel Brunett) in order to put together this interesting retrospective. Taken together, the archaeological activities at Chippewa Nature Center have added a great deal of knowledge to the local history, from prehistoric times to the present. This information will undoubtedly be invaluable to future historians, scholars, and the general public.

*-David Frurip*

# APPENDIX A

# A History of Archaeology at Chippewa Nature Center

Kyle Bagnall, Chippewa Nature Center's Historical Interpreter



People have lived on the land that is now Chippewa Nature Center for thousands of years. Native groups hunted in fields and forests and fished in rivers here. By the mid-19th century, most of these people were forced out of this area and people of European descent began to clear trees. As forests gave way to farms, the ground quickly began to reveal evidence of ancient peoples here.

For decades, people walked the fields in this area and picked up pieces of broken pottery, arrowheads, and other stone tools. Local people took thousands of prehistoric artifacts from this land in the decades before the founding of Chippewa Nature Center in 1966. Only a few of these private assemblages were donated to the Nature Center and are now part of our collection.

## Archaeology comes to Chippewa Nature Center (1968-1973)

Archaeology was first introduced to the membership of Chippewa Nature Center in May 1968, when volunteer Lois Wang wrote "Of Stones and Bones and Pieces of Flint" for CNC News. The newsletter article informed readers why prehistoric artifacts are important to preserve, and familiarized them with the types of stone tools commonly found in mid-Michigan.

With interest in archaeology already growing, the Nature Center hired Fel Brunett as its first full-time naturalist in May 1970. In addition to his skills as a naturalist, Brunett also had prior experience participating in archaeological excavations. Fel lost no time in using his archaeological skills at Chippewa Nature Center, and held the first archaeology field school here in the summer of 1970 (CNC News, July 1970).

The following year, the Nature Center decided to build a new interpretive building on the banks of the Chippewa River. In an effort to salvage any artifacts before construction, volunteers began excavations in earnest on the Sumac Bluff site. Under the direction of Fel Brunett and Michigan State University student Rod McCurdy a crew excavated throughout the summer. The project continued during the 1972 season (Ozker, 1976).

In the spring of 1973, the Nature Center obtained additional property on the banks of the Pine River and decided to locate the planned interpretive building here. To accommodate this switch, volunteers began deep plowing the site, searching for concentrations of artifacts. Working ahead of bulldozers, excavators recovered three significant groupings of artifacts at the Naugle site that season (Wang, 1986).

Chippewa Nature Center also received special recognition in 1973 when a portion of its property was placed on the National Register of Historic Places. Officially known as the "Oxbow Archaeological District", this recognition underscored the significance and importance of our archaeological resources and provided additional support for their continued protection. (Kenaga, 1991)

## Field Schools, the Cater Site and Volunteers (1974-1979)

Evidence of the Cater site was first discovered when artifacts were found in a

*Archaeologist James Payne (right) and Jeff Sommer consult at the start of the 1994 Field School which reopened the Cater site. Note the careful layout of the excavation units with strings. Each major square unit (see site map in Introduction) was five feet on a side which was typically divided into four smaller units 2.5 feet square. The task of laying out the grid was made easier by a datum post left in the ground by the 1970s excavators. Although not recorded with the photograph, we believe James Payne is standing in unit 103 which is exactly where the 1840s cabin originally stood. This fact was unknown to us at the time of this photo, and the cellar feature (see photo on page 18) was discovered on the last day of excavation in 1994. (Photo by Phil Stephens)*

plowed field, not far from the Chippewa River. Initial excavation of the site took place in the summer of 1974, during a six-week field school organized and led by Fel Brunett, in cooperation with Dr. Karen Chavez of Central Michigan University. The first two weeks of the course were spent at the Cater Site (originally named the Ponton Site due to a mistaken identity of who actually owned the original site in the early nineteenth century), mainly uncovering artifacts from an 1830-1850 European occupation. (Brunett, 1999)

Participants spent the second two weeks of the field school excavating at the Naugle site, close to construction going on at the new interpretive building. After the season ended, Dr. Doreen Ozker, of the University of Michigan Museum of Anthropology, studied the materials recovered from the Naugle site. The Michigan Archaeological Society published her findings in the Michigan Archaeologist in December 1976. Her study of the Sumac Bluff site material appeared in the same issue. (Ozker, 1976)

The 1974 field school concluded on an exciting note, with excavations at the Barnes site in western Midland County. The Barnes site dates from about 10,000 years ago, when Michigan's first residents lived in this area. Due to the importance of the site, University of Michigan Professor Henry Wright provided Jerry Voss as director and interpreter of the excavation. (Brunett, 1999) Recovered artifacts, as well as an additional donation of surface-collected materials from the site, now reside in Chippewa Nature Center's collection.

In 1975, Chippewa Nature Center sponsored another archaeology field school in conjunction with Central Michigan University. The Cater Archaeological Project was set up not only to investigate the early historic occupation of the site, but also to provide an environment in which instruction in archaeological method and theory could be presented. The field school lasted for five weeks in June and July, during which nearly 26,000 artifacts were recovered.

Chippewa Nature Center published analysis of the season's work in a report written by Timothy Klinger, entitled, *The Cater Site: A Nineteenth Century Homestead on the Chippewa River.* (Klinger, 1975) In 1976, Fel Brunett conducted another field school at the Cater site, concluding excavation in this area for the remainder of the decade. Although both historical and archaeological

questions remained, there followed a period of inactivity at the Cater site that lasted almost twenty years.

After Fel Brunett resigned his position in 1976, volunteers once again took over archaeology activities at Chippewa Nature Center. Lois Wang and Marian McClennan, both active in many digs here, taught a weeklong class for junior high students and conducted several salvage excavations. Archaeology also remained a tradition in the Natural History Day Camp program, as it had been for nearly a decade, and in the "Man in the Saginaw Valley" school program. (CNC Annual Report, 1978)

## Archaeology with Little Forks (1980-1991)

Chippewa Nature Center hired Mark Thogerson as a naturalist and archaeologist in early 1980. His principal responsibilities included identifying and cataloging artifacts, conducting workshops and working with volunteers. During his short tenure at CNC, Mark organized a chapter of the Michigan Archaeological Society at the Nature Center. Officially named the Little Forks Chapter, this group consisted of about a dozen volunteers, most of whom had been active in the Nature Center's archaeology program for some time. For their first major project, the group conducted an archaeological survey of the areas to be impacted during the construction of the "Tridge" in downtown Midland. (CNC News, December, 1980)

After Thogerson left in early 1981, the Nature Center abolished the position of naturalist/archaeologist in favor of an historical interpreter. Gary Skory filled this position in March 1982, and also became the Chapter President. The group excavated the future site of a reconstructed log schoolhouse near the Nature Center's Homestead Farm that summer.

An active group, the Little Forks Chapter met regularly in the 1980s, hosting guest speakers, giving tours, and offering special programs for the public. They also continued to provide annual demonstrations at the Fall Harvest Festival, maintaining a tradition started in the 1970s.

Beginning in 1983, the Chapter focused on excavating the Pine Knoll site (originally called the River Bluff and Pine Bluff site). During this time, the group was fortunate to obtain the assistance of professional archaeologist James Payne, then Staff Archaeologist for the Saginaw Archaeological Commission. In 1988, Payne participated in "Archaeological Artifacts Identification Day" where he examined and identified artifacts brought in by visitors to the program. Participants also had the opportunity to tour the Pine Knoll site excavation. (CNC News, May, 1988)

After Gary Skory resigned in 1988, Jon Cowan joined the Nature Center staff as Historical Interpreter. In addition to his connections with the Little Forks Chapter, Jon developed a new archaeology school program in 1989. Designed for upper elementary students, the program included excavations at the Mapes site, an early 20th century farmstead on Nature Center land.

In the early 1990s, the Little Forks Chapter continued to sponsor guest speakers and to increase their contact with professional archaeologists. In addition to their traditional winter lecture series, the group held another "Artifacts Identification Day" in December 1990 with archaeologist Scott Beld from Alma College. (CNC News, December, 1990)

The spring of 1991 brought excitement and change to the archaeology program at the Nature Center. In March, a grant from The Dow Chemical Company made possible the paleoecological study of a bog on the southern part of Nature Center property. Radiocarbon dates for peat samples dated back to 8,750 years ago, at which time this area was covered by spruce, birch, willow, sedges and cattails. (Kenaga, 1991)

The Little Forks Chapter of the Michigan Archaeological Society officially disbanded in May 1991. This change occurred

for many reasons, including waning attendance at meetings. The remaining volunteers decided to form a more informal group that would be an affiliate member of the Chippewa Nature Center, but not an official part of the statewide organization. In response, the group renamed themselves the Oxbow Archaeologists.

## The Oxbow Archaeologists and the Cater Site (1991-1999)

For their first project, the Oxbow Archaeologists explored a site on Nature Center property they believed to be the location of an historic Native American village. Volunteers excavated the Badour Gate site in the spring of 1991 and examined artifacts that winter. Although the group conducted more tests and excavations during the 1992 season, the artifacts recovered did not support the existence of a Native American village in that location.

In 1993, under the co-direction of Dave Frurip and Jeff Graham, members of the Oxbow Archaeologists started researching the historical records and artifacts of the Cater site collected in the 1970s. While over 26,000 artifacts had been uncovered in previous years, many questions as to the early occupants of the site remained unanswered. The group presented an update of their work at the Nature Center's Annual Meeting in February 1994.

When Jon Cowan resigned his position as Historical Interpreter in the fall of 1993, dedicated volunteers once again took control of archaeology at the Nature Center, with help from professional archaeologists. On December 8th of that year, the Oxbow Archaeologists surprised longtime volunteer Lois Wang in a special ceremony where she


*Participating in the Fall Harvest Festival has become an annual tradition of the Oxbow Archaeologists. Above is a photo from 1994 which shows typical activity around our table of artifacts and screen as the public shares our enthusiasm for archaeology. On the left is Lois Wang and second from the right is Al Stark. The Oxbow Chapter offers a unique opportunity to learn about and participate in the fascinating field of archaeology. We encourage ethical and professional archaeological activities. The group is an Affiliate of Chippewa Nature Center. (photo by Phil Stephens)*

was presented a Lifetime Achievement Award. The honor recognized her longtime contributions to the archaeology program at Chippewa Nature Center. (CNC News, February 1994)

In 1994, the Oxbow Archaeologists decided to return to the field to excavate an area at the Cater site thought to be the most likely location of a cabin. Due to the inexperience of the group, they invited James Payne, then Adjunct Professor of Archaeology at Saginaw Valley State University, to teach a field school in archaeological techniques before excavations began. After two intensive weekends of instruction, fieldwork started under Payne's direction in June.

Since the area they were excavating had been a plowed field and artifacts were already disturbed from their original locations, volunteers started digging mainly with shovels and sieves. After removing the disturbed area or "plow zone", careful excavation continued with trowels while recorders carefully noted the location of each item. During this time, Scott Beld, an archaeology instructor at Alma College, joined James Payne to assist in directing archaeological work. Beld took over as director when Payne left Michigan later that year.

In the spring of 1995, Chippewa Nature Center added Kyle Bagnall to its staff as Historical Interpreter. In addition to other duties, Kyle became a member of the Oxbow Archaeologists. Unlike past staff historians, however, he served only as a liaison between the group and the Nature Center, and did not become the official group leader. This was largely a reflection of the progressing professionalism of the volunteer group, and their regular association with professional archaeologists.

As the 1995 season began, the Oxbow Archaeologists returned to the Cater site to excavate a dark stain in the soil they found at the end of the previous season. As they suspected, the stain turned out to be the remains of a cellar from an 1840s cabin, no doubt one of the earliest Euro-American occupations in Midland County.

At the end of the season, members of the Oxbow Archaeologists assisted Dr. Daniel Fisher, a paleontologist from the University of Michigan, in recovering the remains of a mastodon from a farmer's field in nearby Sanford. After several hours of searching in cold mud, the group located a skull fragment, the atlas vertebra, part of a rib and a leg bone. (CNC News, January, 1996) The Oxbow Archaeologists once again became an official Chapter of the Michigan Archaeological Society (MAS) early in 1996 and quickly proved themselves to be one of the most active and professional chapters in the state. In 1997, the group showcased their Cater site work when they hosted the annual MAS Fall Workshop at the Nature Center, drawing speakers and participants from throughout Michigan.

The Oxbow Archaeologists got assistance with the ever-expanding archaeology collection in 1997 when the Nature Center hired its first Curator of Collections, Dennis Pilaske. Since his arrival, Dennis has authored a collections management policy that sets strict, professional guidelines for all Nature Center collections. He also developed a database to inventory the thousands of artifacts in the general archaeology collection and made significant improvements in collections storage, retrieval, and inventory control.

The Oxbow Archaeologists spent the seasons of 1996-1999 excavating at the Cater site and analyzing the artifacts they found there. Much of this time was focused on a large "midden" or trash layer that extended over an extensive area north of the cabin cellar. The midden contained artifacts from both historic and prehistoric Native American occupations.

## The Oxbow Archaeologists Today

Today, the Oxbow Chapter is made up of an active group of avocational archaeologists who meet regularly throughout the year at Chippewa Nature Center. Scott Beld continues to provide the archaeological leader-

ship and directs the group's activities. Membership is open to anyone over 18 years of age interested in archaeology. Older children (ages 13-17) may also participate if accompanied by an adult.

There are two seasons in archaeology; the digging season, (when the weather is suitable in late spring, summer and fall) and the laboratory work. These two activities are equally important, as every hour in the field requires at least one hour of cleaning, sorting and cataloguing the artifacts that are uncovered. The final stage, that of interpretation and documentation, is ongoing throughout the year as new artifacts are found and examined in more detail. Oxbow members may participate in one or all of these activities depending on their interests, knowledge and available time.

Besides their archaeological activities at the dig or in the laboratory, the Oxbow Archaeologists also play a role in informing and educating the public in all aspects of archaeology. For the winter lecture series, which is open to the public, university professors, professional archaeologists, and expert amateurs are invited to speak at the Nature Center. Talks in the past have included a variety of subjects, from the history of Fort Michilimackinac to mastodons in Michigan. Other educational activities include the Fall Festival, an annual Nature Center event where all ages learn how people interact with the environment today and how they have in the past. At this event, the Oxbow Archaeologists share their knowledge of the earliest years in Michigan with exhibits of artifacts and tours of their current excavation site. The group also participates in other community activities such as Riverdays festival in downtown Midland.

For those interested in "hands-on" archaeology, the Oxbow Chapter of the Michigan Archaeological Society provides a wonderful opportunity to both learn and participate. Field schools and workshops at the Nature Center educate new members and anyone interesting in taking part in an archaeological dig. More information on the Oxbow Archaeologists can be obtained through the Chippewa Nature Center by calling (989) 631-0830.

You may visit us on our web site given in the Introduction section of this report.

## The Michigan Archaeological Society

The Great Lakes region has enjoyed a long, rich and varied history. Much of this history is known, but a great deal of information still lies hidden and waits to be discovered. The Michigan Archaeological Society (MAS) was formed over 30 years ago for people dedicated to unearthing the past. The MAS holds among its primary goals the education of the public toward understanding the importance of preserving our cultural resources.

Members gain access to the MAS through the network of local chapters. These chapters hold monthly meetings during most of the year and often feature speakers from professional, academic and advanced amateur circles. The organization now has hundreds of members in chapters throughout Michigan, including the Oxbow Chapter. In addition to local chapter meetings, the MAS hosts two yearly statewide meetings. The fall workshop includes practical experience with archaeological methods, and the spring annual meeting offers a chance to conduct Society business and features many excellent speakers.

MAS members include professional archaeologists, amateur archaeologists and many people from various backgrounds who are interested in preserving our links to the past. Through the MAS, professionals are offered a chance to report on and present research and new ideas. Amateurs can acquire knowledge from both professionals and their peers, as well as learn about new opportunities for fieldwork. All members receive a subscription to the Michigan Archaeologist, a scholarly journal published by the MAS about 4 times a year, covering ar-

chaeological and ethnographic topics in the Great Lakes region. The Michigan Archaeologist is also available to institutions on a subscription-only basis, without membership in the MAS. For more information about the MAS write to: Treasurer, Michigan Archaeological Society, P.O. Box 359, Saginaw, MI 48606.

---

**Brunett, Fel.**

"Some Recollections and Observations Concerning 20MD36, the Cater Site, at Chippewa Nature Center, Midland County, Michigan" September 1999 (unpublished).

**Kenaga, Eugene.**

*Chippewa Nature Center: The First Twenty-Five Years*, 1991.

**Klinger, Timothy C.**

*The Cater Site: A Nineteenth Century Homestead on the Chippewa River*, December 1975.

**Ozker, Doreen.**

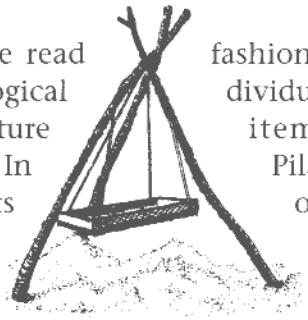
*The Michigan Archaeologist*, December, Vol. 22, 1976.

**Wang, Lois.**

"The History of CNC's Archaeology Program." September, 1986. (Appeared in CNC News, October 1986).

Also consulted various issues of *Chippewa Nature Center News* 1968-1996.

# Introduction to Appendix B



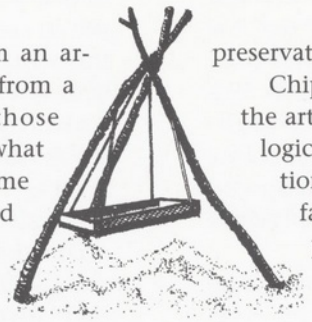
In the previous section we read about the various archaeological digs in which Chippewa Nature Center participated (or led). In the course of these projects literally thousands of artifacts were carefully retrieved from the ground, washed, sorted, cataloged, labeled and boxed. These items, taken together, are called the archaeological "collection". It is critical that these items are cared for in a responsible fashion so that future interested individuals may be able to use these items for research. Dennis Pilaske is the resident Curator of Collections, overseeing the Historical, Archaeological, and Natural History collections. He participates in our digs, helps us organize our lecture programs, and is a liaison between Oxbow members and other staff at Chippewa Nature Center.

*-David Frurip*

## APPENDIX B

# Puzzle Pieces: Chippewa Nature Center's Archaeological Collection

Dennis E. Pilaske, Curator of Collections and Exhibits, Chippewa Nature Center



The artifacts recovered from an archaeological site are like pieces from a puzzle. Archaeologists use those "puzzle pieces" to get an idea of what life was like during a certain time period. Have you ever wondered what happens to all of the artifacts excavated on an archaeological site? The items are preserved so future archaeologists can use the same "puzzle pieces" to verify an archaeologist's conclusions or even form new conclusions. It is essential that the artifacts be preserved because excavation destroys archaeological sites. Only through the keeping of careful field notes and artifact preservation can a site be reconstructed.

Chippewa Nature Center is preserving the artifacts from a number of archaeological sites. The archaeological collection is made up of excavated and surface-collected materials from European and American Indian habitation sites located on or near Chippewa Nature Center property (located in Midland County, Michigan). The only exception is material from a site located in Saginaw County near Bridgeport, Michigan. Approximately 17,000 artifacts have been cataloged into the archaeology collection, which includes materials dating from 10,000 years ago to AD 1905. Scholars and university researchers study these "puzzle pieces" to offer a glimpse into the material culture of the people who lived near what is now Chippewa Nature Center.

*Oxbow Chapter member Donna Hiser is shown recording data for the Cater site artifacts. For each hour in the field, archaeologists spend several hours in the lab washing, sorting, conserving, storing, and recording the data for future study and research. Ethical and professional archaeological method requires that this process is completed for every dig. (Photo by Al Stark)*

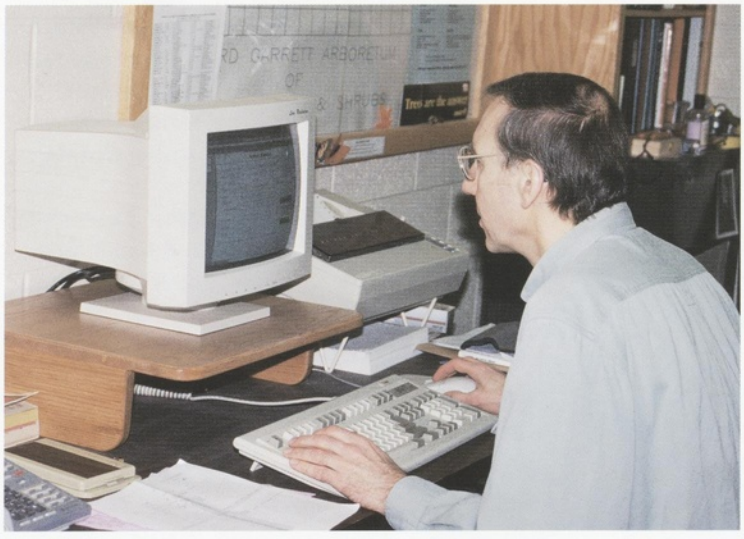
Chippewa Nature Center's archaeology collection had its beginning in 1966, not long after the Nature Center formed. The bulk of collecting during the early years consisted of surface finds in the plowed fields that made up Chippewa Nature Center. Dedicated volunteers walked the land and collected all manner of pre-historic artifacts including stone knives, scrapers, gouges, projectile points, ground stone tools and potsherds. In the first two years, volunteers collected and cataloged approximately 2,000 artifacts. These

surface-collected materials represent items typical of the Saginaw Valley from the early Late Archaic (4,500 years ago) to the early Late Woodland period (1,400 years ago).[1]

The collection grew during the 1970s as excavation took place at the Sumac Bluff site and Naugle site as a result of proposed construction in those areas. Again, nature center staff and volunteers excavated and mapped the sites as well as cataloged the artifacts found in these salvage operations. Analysis of the potsherds, stone tools, fire-cracked rock and organic materials from the Sumac Bluff site place it as a very early Late Woodland (1,400 years ago) base camp used in early winter for a small group of Native Americans.[2]

Interpretation of the material recovered from the Naugle site revealed point types characteristic of the Late Archaic period (4,500 - 3,000 years ago). Analysis also revealed that after the Late Archaic period occupation, the site was not occupied for nearly 800 years until the early Late Woodland period (1,400 years ago). Residents of the Naugle site during that time used locally available clay from the banks of the Pine and Chippewa Rivers in the production of pottery and small clay elbow pipes. They also made miniature clay vessels (mini-pots), most likely for children to play with. Also present among the artifacts of the Naugle site is upper mercer chert. This chert type is only found in Ohio, yet it appears on this site in central Michigan. The presence of this exotic chert links the early Late Woodland residents of the Naugle site to a vast trade network of exchange between native groups in different parts of the Great Lakes region.[3]

Artifacts recovered from many other occupations at Chippewa Nature Center are also cataloged into the archaeology collection. In most cases site numbers have been assigned to the sites by the state of Michigan in an effort to mark and preserve those occupations. Not all of these occupations have been excavated and published, but all artifacts found during shovel testing and archaeological survey have been retained in the archaeology collection along with the location where artifacts were found and field notes when available. Among these sites is the Pine Knoll site. During the early 1980s, excavation there revealed artifacts from a multi-component Middle Woodland site (2,400 - 1,400 years ago).



*Oxbow Chapter member Dr. John Osborne is shown here entering data from the Cater site artifacts into a central computerized database. This process is called "accessioning" and allows archaeologists at Chippewa Nature Center to systematically and conveniently organize the mass of data from an archaeological investigation. Typical types of information recorded are the exact location of each artifact (unit number and depth), color, size, and type. (Photo by Al Stark)*

Chippewa Nature Center also houses several collections that were not excavated and collected by nature center staff and volunteers. These collections were donated to the center for preservation. Two of these donations are extremely significant in the interpretation of Native

*Some important artifacts such as trade beads, lead shot, and small bones, are too small to be recovered from the standard screens at the site. These may be recovered using a special water screening technique where a gentle spray is used on the excavated soil over a window screen. Using this technique many trade beads, of different colors and shapes, have been discovered at the Cater site. Needless to say, this activity is reserved for warm weather. (Photo by Al Stark)*

American occupations of the Saginaw Valley. The Barnes site, Midland County, Michigan, dates from approximately 10,000 years ago during the Paleo-Indian period.[4] The Paleo-Indians, Michigan's first residents, gathered wild edibles and used large spear points to hunt large game animals like caribou and mastodon. The spear points are fluted. That is, a large flake was removed from the base of the point to thin the point to make it easier to attach the spear point to a handle. Recovered materials from the Barnes site offer a rare look at a variety of tool types these "first residents" used as they lived on the landscape. The Bugai site, Saginaw County, Michigan, dates from the early Late Woodland Period (1,400 years ago). This site illustrates the variety of cultural material preserved from one Woodland Period group in the Saginaw Valley. The site includes items made of clay, bone, stone, shell and copper.

Artifacts from European occupations are also represented in Chippewa Nature Center's archaeology collection. Items from the Cater Site, the focus of this publication, are preserved along with the previously mentioned collections. Another European occupation site is the Mapes site, an early twentieth century farmhouse. In the past, upper elementary students under the direction of Chippewa Nature Center staff and volunteers excavated this site. The artifacts have only recently been sorted and preparations are being made for their eventual cataloging.

All of this excavated and surface collected material at Chippewa Nature Center is securely stored in the archaeology collection room. The collection room offers a controlled environment with regulated relative humidity and temperature for optimum storage conditions to encourage long-term preservation of the artifacts. Fragile items

like pottery are stored in acid-free boxes filled with shredded ETHAFOAM, an inert foam that will not cause damage to the artifact. Lithic materials are quite durable, so they are stored in polyethylene bags. Each cataloged artifact is numbered and its data transferred into a logbook so any information regarding the item is retrievable. A computer database is now being used to organize the collection. This will make artifact retrieval easier and allow even tighter inventory and security controls. Through the use of careful excavation techniques, meticulous record keeping and sound collection management, the archaeological resources at Chippewa Nature Center will be preserved for future generations.

---

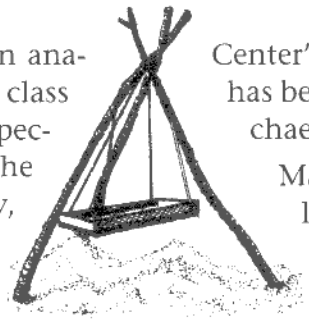
[1] For additional information regarding the analysis of Chippewa Nature Center's surface collections see **Doreen Ozker**, *A Descriptive Report of the Surface Collections From Site 20-MD-28, Chippewa Nature Center, Midland County, Michigan*, The Michigan Archaeologist 22:1 (March, 1976).

[2] For additional information regarding the analysis of Sumac Bluff see **Doreen Ozker**, *Sumac Bluff (20MD25), A Site on the Chippewa River in Midland*, The Michigan Archaeologist 22:4 (December, 1976).

[3] For additional information regarding the analysis of the Naugle Site, see **Doreen Ozker**, *The Naugle Site 20MD30, Midland County, Michigan, Early Late Woodland and Late Archaic Components on a Pine River Site*, The Michigan Archaeologist 22:4 (December, 1976).

[4] For additional information regarding the analysis of the Barnes Site see **H.T. Wright** and **W.B. Roosa**, *The Barnes Site: A Fluted Point Assemblage from the Great Lakes Region*, American Antiquity 31:6 (1966).

# Introduction to Appendix C



Dr. Marianne McKelvy is an analytical chemist with a world class reputation as an industrial spectroscopist. For her job at The Dow Chemical Company, she uses infrared spectroscopy routinely to help identify materials and mixtures (and quite frankly, various gooey things) people bring her. Along with her son, Alex, she developed a passion for archaeology and attended one of Chippewa Nature Center's summer Field Schools, and has been an active avocational archaeologist ever since.

Marianne saw a natural overlap between her archaeological interests and analytical chemistry. In her article she explains how her scientific abilities and analytical science in general may be used to solve important archaeological problems, including one which arose involving a button found at the Cater site!

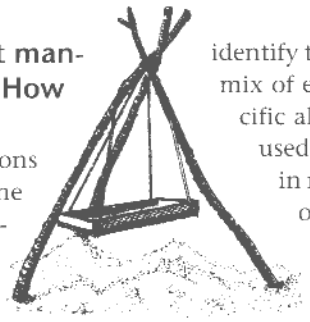
*-David Frurip*

# APPENDIX C

# ARCHAEOMETRY AND THE IDENTIFICATION OF ARCHAEOLOGICAL ARTIFACTS

Dr. Marianne L. McKelvy

**"What is this made of? Is it man-made or natural material? How old is it?"**



These are some of the questions archaeologists ask as they examine artifacts found at any site. The science of Archaeometry combines archaeology with analytical chemistry to provide the tools to answer these questions. The results of these tests are like puzzle pieces that can be fit together to answer a question or solve a problem. While almost everyone has heard of carbon dating to help identify the age of an artifact, there are many other analytical techniques that can be used to provide clues to the age and identity of these objects.

Are those marks on that piece of bone natural or were they carved by someone? Is this fabric natural or synthetic? Light microscopy can help us determine the answer. Visual observations of artifacts at high magnification can reveal important clues - sharp edges left by a knife, or more subtle edges from rodent gnawing. Synthetic fibers, because they are often made by an extrusion or melt-spinning process, are regular and even in shape. Natural fibers, like cotton and wool, have other characteristics that help identify them. And if there is not enough magnification from a light microscope, Scanning Electron Microscopy can produce magnification of as high as 400,000 times.

Want to know what kind of metal is in that fragment? By measuring the energy that is generated after an atom absorbs x-rays, x-ray fluorescence spectroscopy can identify the elements that are present. The mix of elements can further identify specific alloys. This technique can also be used to identify the elements present in rocks or paint pigments. This type of detector can even be coupled to an electron microscope to detect or identify traces of metal on an artifact - like what kind of knife blade was used to carve that piece of bone.

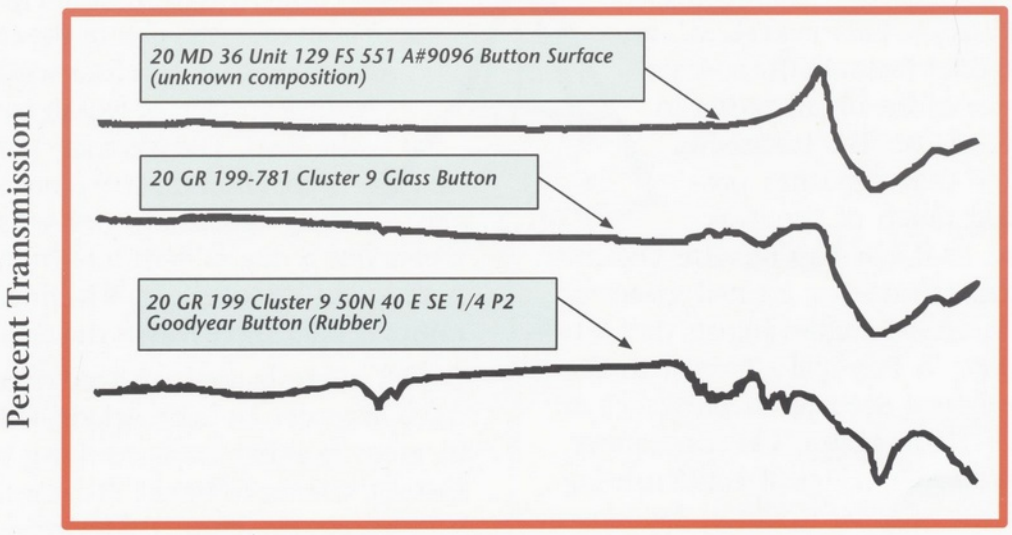
If further identification of a material is required, infrared spectroscopy can often be used to determine the nature of the material. An infrared spectrum is obtained by measuring the intensities of the absorbances of a molecule at various frequencies in the mid-infrared region of the spectrum. Certain absorbances are characteristic for specific functional groups, like C=O, $CH_2$ or $NH_2$. It is easy, for example, to tell the difference between bone and ceramics, since bone, largely calcium phosphate, has a much different infrared spectrum than ceramic (clay and calcium carbonate).

An infrared spectrophotometer can be coupled with an optical microscope so that infrared spectra of tiny samples can be measured. The infrared spectrum of wool, for example, is much different from that of cotton or nylon or polyester, allowing the easy identification of those fibers. Fine particles of paint or pigment can be removed from a painting and analyzed. Combined with data from microscopy and x-ray techniques described above, the identity of the pigment can be easily determined. Since we know, historically, that certain pigments were used

or invented at various time periods, we can use knowledge of their identity to help us date paintings, textiles and other artifacts.

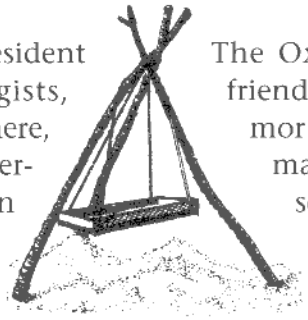
## Application of Infrared Spectroscopy to an Artifact from the Cater Site

A weathered button, found at the Cater Site, had potential for dating the site. It was suspected that the button was made of vulcanized rubber. Charles Goodyear patented rubber in 1851, so a positive identification might place the site after this time period. Infrared spectra of the Cater button, along with a glass button and a known rubber button are shown in the accompanying figure. Comparison clearly identifies the unknown button as glass, thereby leaving open the possibility of a pre-1851 date for the site.




*The infrared spectra of three button surfaces was obtained to help determine if a button excavated at the Cater site was made of rubber or glass. If the button were rubber, it might imply a later occupation of the site (see text). The top line represents the spectrum of the Cater site button. Immediately below is the spectrum of a glass button from another archaeological site. Finally, the lower curve is the spectrum of a known rubber button from the other site. The similarity of the top two spectra and the dissimilarity of the rubber button spectrum, make it clear that the Cater button is, indeed, glass. (The frequency scale runs from about 4000 cm-$^{1}$ to about 500 cm-$^{1}$; spectra were acquired at The Dow Chemical Company.)*

# Introduction to Appendix D



Dr. David J. Frurip is the President of the Oxbow Archaeologists, and, as you have read elsewhere, was a key factor in the re-emergence of the organization in the 1990s. His leadership since that time has provided much of the direction that has formed the Oxbow Chapter into the trained group of avocational archaeologists that it is today. A Physical Chemist in the Analytical Sciences Department at The Dow Chemical Company, Dave's skills of logical thinking bring a sense of order to Cater. Evidence of these skills applied to archaeology can be found in Dave's papers that describes the analysis of nails and gun parts found at Michilimackinac[1-2] and the analysis of Roman coins.[3] Dave has also been responsible for the bulk of the editing of this publication. The Oxbow Archaeologists extend their trowels in salute for this accomplishment!

The Oxbow Archaeologists are a friendly bunch; good-natured humor is an essential part of the camaraderie that develops while sorting artifacts or working in the field. Dave is a key part of that humor. It was noted long ago, that after what seems like a day of minimal finds, noteworthy discoveries will be made minutes after Dave leaves the site.

Dave's interests are highly eclectic. An avid reader, he is knowledgeable in areas ranging from cooking to history, science to travel. It came as no surprise, therefore, that within a week of the discovery of the carved deer phalange, he had uncovered pictures, references and mention of these artifacts on the Internet. His discussion of the gaming piece gives us insight into an area that might easily be overlooked - leisure activities of the residents at Cater.

*-Marianne McKelvy*

[1] Frurip, David J., Malewicki, Russell, and Heldman, Donald P., *Colonial Nails from Michilimackinac: Differentiation by Chemical and Statistical Analysis*, Archaeological Completion Report Series No. 7, Mackinac Island State Park Commission, Mackinac Island, Michigan, 1983

[2] Frurip, David J, Hamilton, Ted, and Huff Jr., Ed, *Differentiation of the National Origin of Brass Gun Parts from Michilimackinac*, in Proceedings of the 1984 Trade Gun Conference (C.E. Hayes III, ed.), Rochester Museum and Science Center, Rochester, N.Y., 1985.

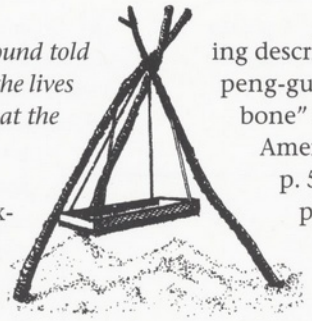
[3] Carter, Giles F. and Frurip, David J., *Discriminant Analysis of the Chemical Compositions and Physical Measurements of 245 Augustan Quadrantes*, Archaeometry 27, 1, 117-126 (1985).

# APPENDIX D

# STABBING A HOLLOW BONE

Dr. David Frurip, President, Oxbow Archaeologists, a Chapter of the Michigan Archaeological Society

*One day, one of the bones we found told us a different part of the story about the lives of the Chippewa Indians who lived at the Cater site in the early 19th century.*



The midden we had been excavating for a couple of years is essentially a layer of trash approximately eight inches thick. It contains many many bones, the remnants of meals eaten long ago. As you have read in previous parts of this publication, these bones tell us a lot about the lives of the people who lived at the site, both the settlers in the 1840s and the Native Americans a few decades earlier. Identification of the bones is somewhat difficult to the untrained eye but through the help of workshops presented by our official faunal analyst, Dr. Terry Martin, many in the group have been able to identify at least some of the bones as we pull them from the soil or as we wash them in the lab. One day in the lab, we had an exciting discovery of a different kind.

It was, by all appearances just another of the hundreds of bones we would wash that day. But this one was different. It looked like many deer toe bones we had seen in the past, but this one was hollowed out for some reason. There were other small holes in the piece, along with some markings. Luckily, the diligent Oxbow member who was washing it asked our archaeological mentor, Scott Beld, about it and he recognized it immediately as a piece from a Chippewa game!

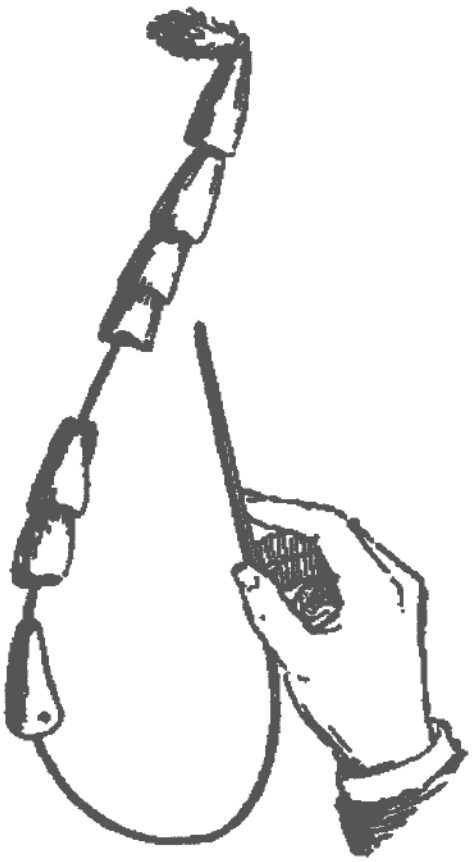
A little research turned up the following description of the Chippewa Game Pe-peng-gun-e-gun, or "stabbing a hollow bone" from Culin, "Games of the North American Indians" Dover, N.Y., 1975; p. 534; (a reprint of the original 1903 publication):

*"It consists of seven conical bones strung on a leather thong about 8 inches long, which has fastened to it on one end a small piece of fur and at the other a hickory pin 3 1/2 inches long. The game was played by catching the pin near the head, swinging the bones upwards, and trying to insert the point of the pin into one of them before they descended. Each bone is said to have possessed a value of its own; the highest value being placed on the lowest bone, or the one nearest to the hand in playing. This bone has also three holes near the wide end,*


*One of the two pieces of a Chippewa Indian game found at the Cater site made from the toe bone (phalange) of a white tailed deer. This was excavated from the midden (trash layer). The small visible marks on the piece are indications of the points awarded if the "pin" entered the small hole on the side. The V-shaped notch on the right was probably broken off during play when the pin entered the hole which is still party visible (arrow). (Photo by Marianne McKelvy)*

*and to insert the pin into any of these entitled the player to an extra number of points. Above each hole is a series of notches numbering respectively 4, 6, and 9, which were, presumably, the value attached..."*

We have since recovered another of these gaming pieces from the midden. Since both pieces have the holes and tally marks present, we presume that we have found at least two different games. The two pieces we found have the following (approximate) number of tally marks: 5, 9, & 29 and 1, 4, &10.



*The Chippewa game "Stabbing a Hollow Bone". Various forms of this game were played by many different tribes in North America. This sketch is from Culin "Games of the North American Indians" Dover, N.Y., 1975; p. 534; (a reprint of the original 1903 publication, used with permission).*

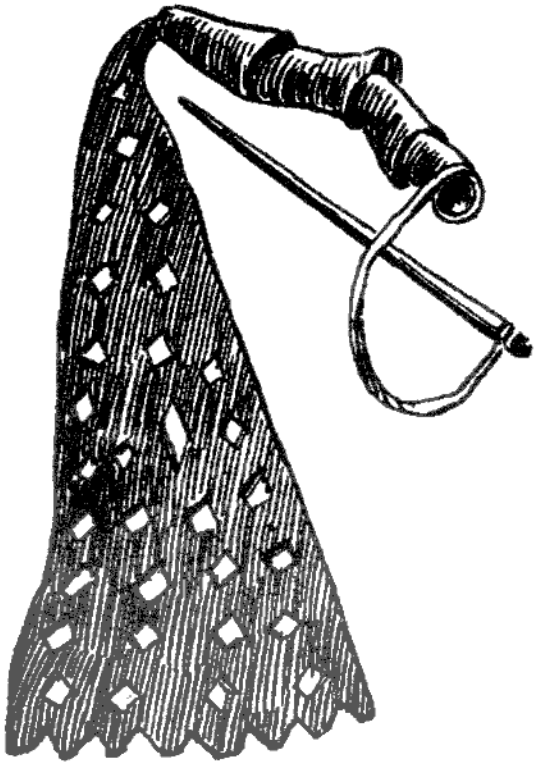
After looking at Culin's book a bit more, it is apparent that this game and many similar games were played by the vast majority of tribes in North America. We also found the following interesting description from a web site:
http://www.nativetech.org/games/ring&pin.html

*"The ring and pin game has ancient Native American roots. Nearly every Native nation across North America has its particular version which uses unique materials from the natural environment for the ring and pin. In all varieties of this game, a ring or other target is fastened to a cord. The target is thrown into the air and must be speared by the pin attached to the other end of the cord. Simple targets are carved rings of bone or hide, strings of toe bones or fish vertebra, perforated holed skulls, dried squash rinds, or bundles of twigs or hair. The pins were carved from long bones or antler in older times, while metal pins have sometimes been used since contact with Europeans. A leather or fur counterweight or loops of beads were sometimes attached below the target. The game was often played for women's and children's amusement and for stakes.*

*Among the Cheyenne of Oklahoma and the Penobscot of Maine, this game is sometimes referred to as a 'love game', a pastime for young men and women, as it serves as an excuse for introduction between two people, in which a woman could show her approval of a man by accepting to play the game with him, and by refusing to play the game if she is not interested in the other person. Players usually number two. Each party gets two tries to impale the ring the greatest number of times, after which it must be passed to the next player. In a Penobscot version using six deer toe (phalanx) bones, each player gets ten tosses, and the total number of bones speared by each player is compared. However, the counts can be extremely*

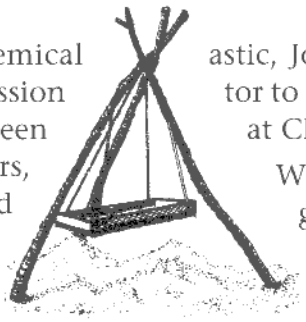
*varied in other versions of the game. The bones usually count progressively from the one nearest the pin. The total count of the game also varies from 2 to 4, 50, or 100 (the most common number), up to 2000."*

These artifacts add to our understanding of the leisure activities at this Native American site in the early nineteenth century.



*Another variation of the Chippewa game described in this Appendix. This version is from Turtle Mountain, North Dakota. If the center hole of the buckskin "dangle" was pierced, the game was automatically won, otherwise, each bone was worth one point. The sketch is also from Culin "Games of the North American Indians."*

# Introduction to Appendix E



Dr. John Osborne is a chemical engineer who also has a passion for archaeology. John has been with the group for five years, having moved to Midland from Canada. He is a past winner of our group's Archaeologist of the Year Award and was on the Board of the Michigan Archaeological Society. John also built and maintains our web site. You may find the link under "affiliates" at:

www.chippewanaturecenter.com

Always hard working and enthusiastic, John is a valuable contributor to the archaeological activities at Chippewa Nature Center.

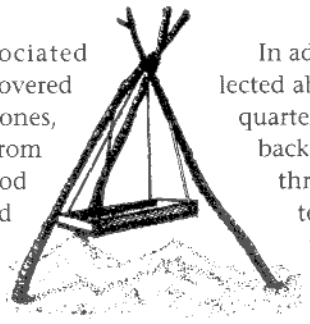
With his engineering background, it was not a surprise that he put his technical skills to work and came up with an innovative solution to a difficult task. I think the use of a recycled donut box is particularly creative! If copied, it is important to make sure to use a high quality donut box (no jelly stains) and that duct tape is used sparingly!

*-David Frurip*

# APPENDIX E

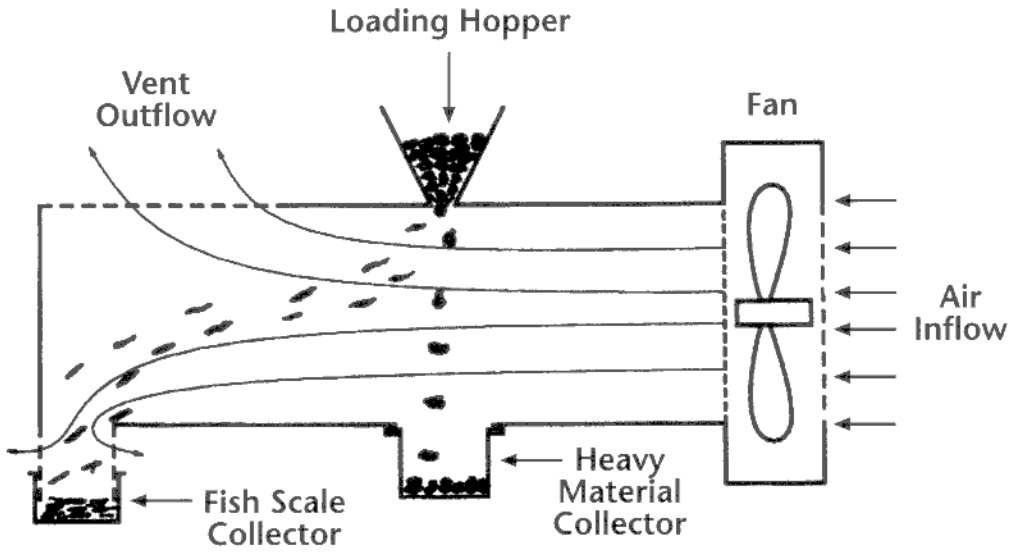
# THE FISH SCALE SEPARATOR

Dr. John Osborne



At the Cater site and associated midden, most of the material recovered consists of faunal remains: the bones, teeth, shells and other hard parts from the animals that were killed for food or furs. The larger bones, found during the excavation of a unit level, have their location plotted on the unit grid map and are put in level bags for later clean up and identification. Most of the rest of the dirt is sieved on site through 1/8 - inch screens to recover the smaller artifacts and bones not easily seen while troweling down to the next level.

In addition to the on-site material collected above, the dirt from the southwest quarter of each unit is saved and brought back to the Resource Building to wash through even finer sieves. This water-washed material contains small rocks, bone and shell fragments, and the smallest artifacts recovered from the site such as beads and fragments of metal and pottery. Also recovered are the faunal remains, from small rodents for example, and in particular, fish, which have many small bones and scales. This mass of small bits and pieces must now be separated into the different




*Operation of the Fish Scale Separator: The device works on the principle that lighter material can be separated from heavier material by passing it through a current of air. Using a donut box, computer fan and a few household items, a prototype unit was built to remove fish scales from water washed screen samples. This SIMPLE unit has helped reduce the tedium of picking out the fish scales with tweezers one by one.*

categories for further identification and cataloguing, a tedious task usually requiring tweezers and good eyesight.

Of the items often found in great abundance, but difficult to separate from the rest of the material, are fish scales, which must be picked out one at a time with tweezers. After spending many hours doing this, I wondered if there might not be an easier way to make this separation, thereby saving a considerable amount of time. Unlike most of the material such as small stones and bone fragments, which were heavy and compact, the fish scales were flat and light in weight. It seemed that blowing air through this material to separate the fish scales from the rest of the material in a kind of winnowing process might do the trick. After a particularly frustrating Saturday morning picking out fish scales, I went home and constructed the first prototype "Fish Scale Separator ". This highly "technical" piece of equipment was constructed from the box from our morning donuts, an old computer fan, detergent box scoops and window screen. The unit took shape in a few hours, and operated as shown in the schematic diagram.

The big test came the next week when I unveiled the fish scale separator at our laboratory session. It received much skepticism from the other members of the group. However I persisted and set up the unit on the table with the collector cups in place and selected a water-screen bag, which had a large quantity of fish scales. The fan was then turned on and the bag of material was carefully poured into the hopper. After all the material had been passed through the unit, the fan was turned off and the two collector cups were examined to see how well the unit performed.

As hoped, the heavier material fell straight down into the heavy material collector cup while the lighter material, including the fish scales, was blown over to the fish scale collector cup where it accumulated as the air blew out the vent outflow. Of course, the separation wasn't perfect as other light material, such as snail shells, were also blown over. However, to everyone's surprise, the experiment had worked well enough to provide help with the initial separation of fish scales from the bulk of material. After some minor modifications, the fish scale separator has been put to use on one of the more difficult jobs, and has found a permanent home in the lab.

# Contributor Acknowledgments

Numerous individuals and institutions have been instrumental in the excavation and analysis of the Cater site over the last twenty-five years. Chippewa Nature Center, on whose land the Cater site is located, has had an ongoing commitment to archaeology with Doreen Ozker, Fel Brunett, James Payne, and Scott Beld undertaking archaeological investigations. The current Chippewa Nature Center staff, particularly Dick Touvell (Executive Director), Dennis Pilaske (Curator of Collections) and Kyle Bagnall (Historical Interpreter) have encouraged and facilitated the Cater site project.

Completion of this project and preparation of this report was facilitated by generous grants from the **Rollin M. Gerstacker Foundation** and the **Midland Area Community Foundation**. Additional financial contributions were received from Chippewa Nature Center and Bill Wang.

The 1974-1976 excavations at the Cater site were sponsored by Chippewa Nature Center and Central Michigan University. These excavations were directed by Fel Brunett (1974 and 1976) and Timothy Klinger (1975). The 1974 and 1975 excavations were described in a previous report by Timothy Klinger (1976) which was printed and distributed by Chippewa Nature Center. We are indebted to Fel Brunett for information of the 1970s excavations and for his visits to the site during the 1990s excavations which helped clarify several important points.

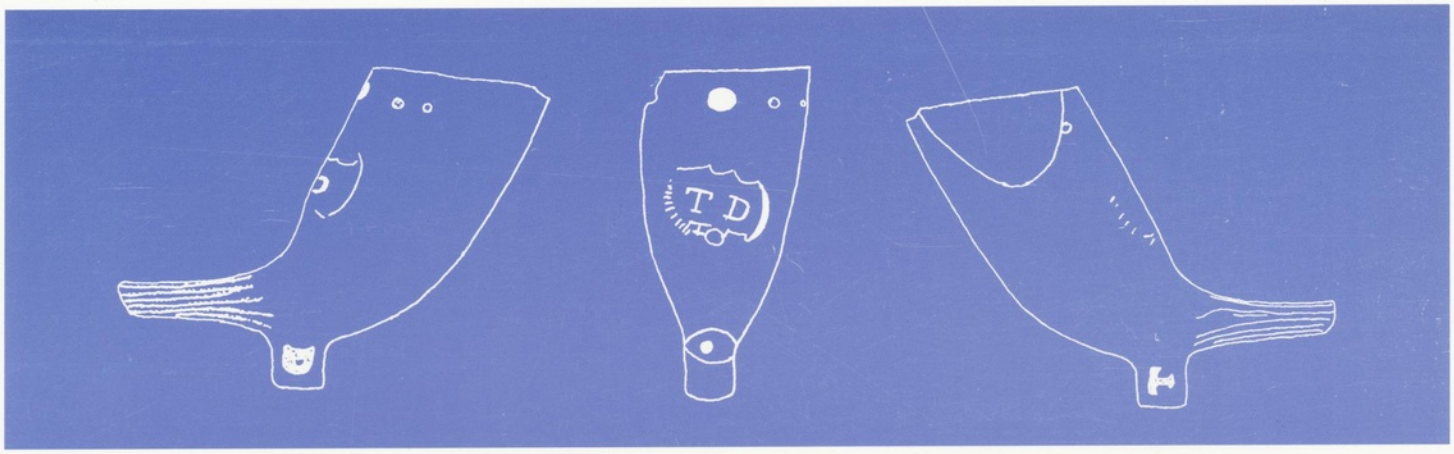
Participants on the 1970s excavations included: in 1974 - Lynda Anderson, David Bruce, Robert Hoxie, Mary Jane Klesney, Jeanne Kuhlman, Helen Ricketts, Ruth Stanton, Gary Veit, Roger Voelker, James Wilber, and Mona Winegarden; in 1975 - Tim Klinger (directed), Pat Koen, Dan Downing, Mary Lou Kriener, Cindy McKee, Kevin Peters, Sarah Prey, Myrtle Salisbury, and James Wilson; and in 1976 - Margaret Bartlett, Carol Churma, Ed Dunn, Tracy Herns, Elaine Makas, Pricilla Nowak, and Stephen Randall.

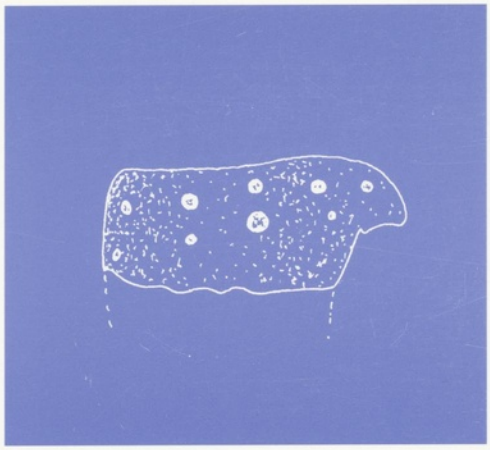
James Payne (University of Michigan Museum of Anthropology), Dave Frurip (Michigan Archaeological Society member from Midland, and Jeff Graham (MAS member from Midland) are largely responsible for the renewed interest in the Cater site. Dave and Jeff were responsible for reorganizing an archaeology group at Chippewa Nature Center and re-forming a chapter of the Michigan Archaeological Society in the Midland area. In 1994, James conducted a field school at the Cater site to train the newly formed Oxbow Chapter and brought students from Saginaw Valley State University and the University of Michigan to excavate at the Cater site in 1994 and 1995. From 1993-1999, over one hundred individuals have been involved in the Cater site excavations. These individuals are listed below. (Special thanks to Cathy Devendorf, Volunteer Coordinator at Chippewa Nature Center, for assisting in compiling this list). Sincere apologies are offered to anybody missing from the list and for any misspelled names. Although the list below does not include the Alma College students who have participated in the annual Field School, their assistance is also greatly appreciated.

Alice Adams
Chris Anderson
Dr. Dean Anderson
Kyle Bagnall
Jai Bailey
Katherine Bandemer
Holly Bark
Robert Barnes
Lisa Bean
Terry Bedore
Scott Beld
Andrew Bieski
Tom Bieski
Prof. Mary Theresa Bonhach-Freund

Robert Bonhach-Freund
Becky Bonham
Jeff Bowen
Ken Brehm
Melissa Bruker
Fel Brunett
Ron Burk
Diana Burnett
Margaret Clark
Robert Cluney
Gordon (Mick) Cochran
Jon Cowan
Darci Cronk
Ryan Davenport
Justin Devendorf
Marcia Dilling
Jennifer Donahue
David Fox
Dr. Kevin Frazier
Sarah Frazier
Bill Fritz
David Frollo
Dr. David Frurip
Al Getzin
Erin Getzin
Kristin Getzin
Bridget Glaser
Jeff Graham
Joe Gregoria
Ann Grimaldi
Rachel Hakken
Nona Harris
John Heintz
Donna Hiser
Brian Johnson
Chris Julien
Laura Keene
Gregg Kelly
Gui Kelley
Lynda Kennard
Chad Kilbourn
Peter Kirchner
Tim Klinger
Vic Knowlton
Randy Kursinsky
Evette Lamont
J. Lance
Bill Lang
Conrad Latuszek
Chuck Lentz
Dan Little
Maynard Lockwood
Katherine Marsden
Dr. Terry Martin
Tim Martin
Janet Martineau
Karla Mattsson
Kay Mattsson
Mike Mauer
Marsha McDonald
Alex McKelvy
Dr. Marianne McKelvy
Erin McMillen
Ed Morelli
Ralph Naveaux
Joan Nielsen
Dr. John Osborne
James Payne
Joe Peselenck
Dennis Pilaske
Barbara Richards
Carol Ryal
Elaine Saby
Jordon Saby
Myrtle Salisbury
Jen Sanford
Jessica Sansone
Alice Sias
Catherine Sias
Don Simons
Jeff Sommer
Denise Spann
Al Stark
Mary Street
Blair Templin
Frank Towsley
Marge Towsley
Joe Veselenak
Mary Wackerle
DeeDee Wacksman
Bill Wang
Lois Wang
Jim Woodgate
Amy Zell
James Zender

Finally, we'd like to add to Dick Touvell's dedication of this report to long time Michigan Archaeological Society member Lois Wang. In addition to activities at Chippewa Nature Center and the Cater site, Lois actively recorded sites and collections in Midland County. Her collections and notes are now curated at the State Museum in Lansing. Her activities epitomize the role of avocational archaeologists in investigating, recording, and preserving local archaeological resources.




ISBN 0-9707225-3-2