This is to certify that the

dissertation entitled

THE EFFECT OF KINSHIP ON THE SETTLEMENT PATTERNS OF THE SOUTHWEST MICHIGN FRONTIER

presented by

Dale Ray Borders

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Anthropology

Major professor

Date April 24, 2003

# THE EFFECT OF KINSHIP ON THE SETTLEMENT PATTERNS OF THE SOUTHWEST MICHIGAN FRONTIER

By

**Dale Ray Borders**

**A DISSERTATION**

**Submitted to**
**Michigan State University**
**in partial fulfillment of the requirements**
**for the degree of**

**DOCTOR OF PHILOSOPHY**

**Department of Anthropology**

**2003**

# ABSTRACT

## THE EFFECT OF KINSHIP ON THE SETTLEMENT PATTERNS OF THE SOUTHWEST MICHIGAN FRONTIER


**By**

**Dale Ray Borders**



This dissertation examines the role of kinship in the social organization and settlement evolution of an agricultural frontier society in nineteenth century North America using a case study of twenty townships from southwest Michigan as an example. Agricultural frontiers are often characterized by restricted contact with the homeland. This in turn leads to specific adaptations of the intrusive population designed to counteract isolation and foster social cooperation. The primary organizational focus of kinship in European and Euro-American society is the nuclear family. Due to low population density, frontier society required the rapid creation of a supportive social network to maintain settlement integrity and hence viability. Nuclear families were capable of supplying that minimum demographic imperative.

Kinship's role as a principal element of social organization on agricultural frontiers generally, and in southwest Michigan specifically, is examined. The nuclear family and larger kin-based organizations known as "kinship clusters" that evolved from nuclear families were a specific social adaptation for settlement of agricultural frontiers.

Others have proposed that this adaptation may have affected settlement patterns on the frontier because in many instances frontier settlements were comprised of these spatially bounded "kinship clusters," not individual households. Several researchers have referred to this as a "clustering phenomenon." These "kinship clusters" could also provide a focal point that would attract other settlers to the area. This proposition was tested against the southwest Michigan agricultural frontier data.

Kinship clusters consisted of groups of interrelated individuals, both affinal and consanguineal kin, that traveled to the frontier of southwest Michigan and settled in agricultural communities. These kinship clusters were often, if not always, the first settlers on this frontier. The significance of kinship clusters as an adaptive strategy in agricultural frontier settlement and the resultant settlement pattern that developed was supported with statistical testing.

Nearest neighbor analysis using census and other records and point data from Calhoun County maps from 1831 to 1840 demonstrated a trend in settlement patterning that showed initial clustering followed by random settlement. This analysis revealed that initial kinship clusters acted as a focal point for subsequent settlement and development on the frontier. As the frontier population increased over time, and population infilling occurred, the kinship clusters tended to have a decreasing effect on settlement patterns. By the final phase of settlement at the end of the pioneer period, and with the coming of the railroads ca. 1840, analysis revealed that settlement patterning was evenly spaced, tending toward a regular pattern, implying that kinship no longer had an effect on the spatial structuring of the settlement pattern.

In sum, this research confirms the importance of kinship in the spatial structuring of initial settlement on the frontier primarily as a vehicle for establishment of spatially constrained cooperative and integrative social networks. As population increases, the importance of spatially discrete kinship clusters diminishes as a magnet for additional settlement. This recognition has important implications for understanding the evolution of settlement systems and patterns on the agricultural frontier.

To my
For

## Dedication

**To my wife, Janet, and our children, Matt, Bryan, Jeffrey and Kate. For putting up with me and my incessant dinner table conversation over the past ten years. I thank you and love you all.**

Thanl

keep to m

(for my f

letting m

and enc

helping

A sp

commit

time wa

A f

invalu

to call

# ACKNOWLEDGEMENTS

**Thank you to all the people who have encouraged me over the past ten years to keep to my goals. Thank you to my guidance committee, Joseph Chartkoff, Ph.D., (for my first interesting exposure to anthropology), Christine Daniels, Ph.D., (for letting me rant and rave when I needed to), William Lovis, Ph.D., (for your insight and encouragement), and especially Kenneth E. Lewis, Ph.D., chairman, for helping me through the rough spots.**

**A special thank you to Janet Brashler, Ph.D., for being a member of my committee and for giving me invaluable experience in the field, when you knew my time was limited.**

**A final thank you to Frank Krist, Ph.D., fellow MSU graduate student, whose invaluable expertise made much of my work easier. Thanks Frank, I promise not to call with any more questions.**

# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

## Images in this dissertation are presented in color.

Figure 6.

Figure 6.

Figure 6.

Figure 6.

Figure 6.

Figure 6.

Figure 6

Figure 6

Figure 6

Figure 6

Figure 6

Figure 6

Recen

an agrari

predictab

agricultu

and refini

with sout

applicabi

identifiab

This

southwe

settlemen

identifie

concerns

factors s

presence

broad sc

through

specifica

primary f

The f

need to b

# Chapter I
# The Southwest Michigan Frontier
# An Introduction

Recent discussions in the archaeological literature deal with settlement processes on an agrarian frontier, that like most cultural processes are governed by many highly predictable factors. The purpose of this study is to examine and test hypotheses of agricultural settlement using data from southwest Michigan. In the process of testing and refining current models of agrarian settlement, a new model specifically associated with southwest Michigan will be formulated and analyzed with respect to its applicability to this region. Specific variables within this hypothesis should be identifiable archaeologically or through historical documentation.

This dissertation will identify the processes at work in agrarian settlement of southwest Michigan as well as help develop new hypotheses about Euro-American settlement of frontiers in similar regions in the early 1800's. Factors which can be identified as affecting frontier settlement patterns include: 1) environmental impacts and concerns of agricultural settlers 2) technology of frontier farm development 3) social factors such as kinship and its relationship to settlement 4) transportation facilitation 5) presence/absence of indigenous peoples and 6) economic factors such as trade. The broad scope of these six factors precludes a detailed examination of each individually through a single vehicle of discussion. Therefore, the impact of social factors, specifically kinship, on agricultural settlement and the settlement process will be the primary focus of this dissertation.

The factors listed previously, that may affect settlement patterns on the frontier, need to be minimized in order to demonstrate the way in which kinship affects

settlement patterns. With respect to the effects of the environment, the areas under investigation will be compared to one another to determine equivalency. Certain environments within the research universe may have been more desirable to agricultural pioneers than other environments. This possibility will be discussed and examined during this investigation. Transportation networks, such as rivers, roads and Indian trails may also have affected settlement processes during the frontier period of southwest Michigan. When at all possible these networks will be examined with respect to their effect on settlement patterning. The impact of trade (Fuller 1916:355) and farm technology should be approximately equal throughout the research universe because most settlers to southwest Michigan came from similar regions in New York and New England (Dunbar and May 1995:170). Pioneer farm technology and access to trade should, therefore, be similar for everyone involved. Finally, the effect of the presence/absence of indigenous peoples should also be the same for all Euro-American settlers to this region. The Native American presence at the time of occupation by Euro-Americans of southwest Michigan was relatively low (Hubbard 1888:179; Clifton 1978:740; Dunbar and May 1995:15). Cultural manipulations of the environment, such as raised garden beds and the Oak Openings, performed by native peoples previous to the entrance of Euro-American pioneers, were ubiquitous throughout the region (Hubbard 1888:243-261; Peters 1970:23).

Through integration of historical documentation and archaeological data a more detailed understanding of the frontier settlement pattern in southwest Michigan will emerge. The regional approach to studying settlement patterns allows integration of

data on a broader scale and should therefore reveal the scope of the processes involved in settlement decisions.

## Theoretical Perspectives

Insular frontier settlement (Steffen 1980:xviii) involved the expansion of agricultural groups or communities into new areas of land suitable for agricultural production. Because most agricultural settlement was thought by participants to be permanent (Lewis 1987:6) and nuclear family based (Jordan and Kaups 1989:3,123), any model of frontier agrarian settlement should involve processes associated with occupation as well as development over time. Insularity is defined by the amount of contact between the homeland and the frontier. The greater the insularity, the more significant the processes of change on the frontier would have been, with resulting differences between the homeland and the frontier (Steffen 1980:xvii-xviii). The amount of insularity and its effect on settlement in southwest Michigan should have been significant in the early period due to the sparse nature of early settlement and the lack of good routes of communication.

John C. Hudson's (1969:367) model of settlement process and change over time defined three developmental stages of agrarian settlement: 1) colonization 2) spread and 3) competition. Stages of development indicated an increasing complexity resulting from specific processes associated with agricultural production. The impact of kinship on this model should emerge as expansion occurs of concentrations of nuclear family settlements.

Cynthia Price and James Price examined Euro-American settlement of the nineteenth century Midwest. Their settlement model (1981:241) involved three types of

settlement: 1) hunter/squatter, 2) subsistence farmer and 3) planter. Michigan's primary settlement group was the subsistence farmer, in the form of nuclear family farmsteads. Price and Price's model (1981:244-248) represented levels of agricultural complexity, economic production and interaction with the world external to the frontier environment. Subsistence farmers depended on their own ability and their nuclear family organization to survive and prosper (Faragher 1986:99-101). Price and Price (1981:246) saw the subsistence farm as being only marginally associated with the world market system. Farming of this nature employed a mixed strategy of multi-crop/animal complexes. Frontier farmers lived in widely dispersed nuclear family settlements employing family labor to exploit their environment for subsistence and local trade. Subsistence farming was the primary mode of agricultural production for the early settlement period of southwest Michigan (Dunbar and May 1995:171-172). The nuclear family farmsteads were the basis for survival in remotes areas of settlement in the frontier period. Dependence on immediate family members and kin affiliations were extremely important (Jordan and Kaups 1989:84).

Kenneth E. Lewis examined the settlement of Lower Michigan in the first half of the nineteenth century. For this region, agriculture was not associated with "specialized commodities with ready export markets" (Lewis 2002:7). Instead, small-scale items and family oriented farms were the primary units of production. Settlers were involved in diversified agricultural production that "encouraged internal economic diversification...creating a new cultural landscape" (Lewis 2002:7).

Robert D. Mitchell (1998:3) defined a frontier as a temporary stage of settlement that "passed through" an area. For him, the concept of "open country neighborhood"

was one of the most important aspects of frontier development. "Open country neighborhoods" facilitated the evolution of settlement systems and were "kin-oriented, economically subsistent [and] loosely governed" (Mitchell 1998:23).

Stanton Green (1979:84) examined the process of cultural adaptation with respect to colonization of temperate forest environments. Cultural ecologists, like Green, hypothesize that pioneer farmers reverted to extensive land use and a young, rapidly increasing population within a frontier environment in order to best exploit that environment. Green's model (1979:78) predicted that settlements were located in areas where expansion was possible, and minimized social, demographic and economic distances. Longevity of the frontier settlement was dependent on production by the population for subsistence. As long as the settlement was able to meet subsistence demands it would continue.

Demographics played a role in colonization (Green 1979:85). Maintenance of a sufficient marriage pool was required for settlements to grow and prosper. Age at marriage also decreased on the frontier as compared to more settled areas (Green 1979:80). The demographics of colonization required a sufficient labor supply of young people who would reproduce quickly in order to prosper and expand. This may have led to kinship relationships and potential "kinship clusters" on the frontier.

Because of the nature of frontier settlement, with highly dispersed nuclear family farms, the most important networks were the local ones that had social as well as economic aspects associated with them. Kin-based cooperative networks integrated social and economic issues and worked together to create a "clustering phenomenon" that affected settlement decisions on the frontier (Price and Price 1981:248).

Kinship's role in the development of culture is relevant to all societies. Robin Fox envisioned kinship as pivotal to modern society. He believed the relationship between ancestors and other kin were key to obligations, loyalties, social and legal claims and sentiments, especially in nonwestern societies and developing countries (Fox 1967:13-15). Burton Pasternak argued that kinship relations were universal and fundamental to all human societies. His premise was kinship was vital to social organization and not just a form of reciprocal obligation (Pasternak 1976:82). More recent interpretations of kinship argue "that in all human societies some people consider themselves to be more closely related to each other than they are to other people, and that this mutual relatedness is the basis of numerous and varied interactions" (Holy 1996:9).

Kinship in western society, especially American society, differs from that in nonwestern society in many respects. David M. Schneider (Schneider and Smith 1973:10-11) argued that American kinship is divided into two groups, the Order of Nature and the Order of Law. One of these groups is a "blood" connection while the other is a "legal" tradition (Schneider and Smith 1973:11). The American cultural system of relatives was built out of these two elements.

Kinship in frontier society emphasized the nuclear family. This emphasis affected settlement patterns, as the primary settlement groups were nuclear families, despite the fact that they were at a distinct disadvantage in a frontier environment. In many instances, frontier settlers included not single households, but groups of households that settled together. Many of these groups were kin groups, consisting of nuclear families related to one another either by birth or marriage. Many scholars have argued that group migration to the frontier led to settlement patterns referred to as a "clustering

phenomer

and settle

grappling

Jordan ar

witnessed

ties." Th

'isolated'

tended to

cabins us

Kaups [9

Roge

brothers

*kinship-l*

affiliation

Cynt

frontier a

century (

by centra

commun

(Price an

This

develope

social fric

phenomenon." James Davis emphasized that "whatever the motive for group migration and settlement, the practice lent assistance, encouragement and companionship to those grappling with known and unknown challenges of the frontier (Davis 1977:45). Terry Jordan and Matti Kaups (1989:84) contended that "the early years of colonization witnessed a high degree of community solidarity, and intermarriage strengthened the ties." They also stated that "for the initial stage of pioneer settlement, the term 'isolated' farmstead may be more descriptive, since backwoods settlers apparently tended to scatter, leaving three to eight or ten miles between dwellings. The individual cabins usually later became the focus of loose family or clan clusters" (Jordan and Kaups 1989:123).

Roger Mason found that "small clusters usually were composed of households of brothers and brothers-in-law, while larger clusters were composed of several smaller *kinship-based clusters* (italics added) that shared a common origin or the same religious affiliation" (Mason 1984:87).

Cynthia Price and James Price examined farmstead settlement patterning on the frontier and noted the "clustering phenomenon" in their research on the nineteenth century Ozarks. They further suggested that this phenomenon had social implications by centralizing activities and cooperative workgroups, while maximizing communication, trade and defense and minimizing competition of critical resources (Price and Price 1981:248).

This dissertation will argue that nuclear family settlement on the Michigan frontier developed localized networks. These networks were comprised of 1) kinship ties 2) social friendships (which may have developed into kinship ties) and 3) neighborhood

trade networks (Faragher 1986:131-135; Perry 1990:90; Mitchell and Hofstra 1995:142-143). This community system included activity areas such as mills, churches, cemeteries, schools and stores. Local networks, therefore, had social and economic, as well as kin-based factors associated with them. These networks may have developed out of or into kin-based networks. Kin clusters were a frequent social phenomenon seen on other frontiers.

## Research Universe

Southwest Michigan was open to Euro-American settlement by the Treat of Chicago of 1821 (Dunbar and May 1995:146). This treaty opened the entire region to settlement. In this respect, all lands "taken up" by agrarian colonists should have had equal availability. If certain areas were, therefore, settled more heavily than others, factors other than availability must be taken into consideration. This dissertation will concentrate on the effects of kinship on settlement patterning.

Political boundaries that help define this geographic region enable the researcher to approach the data systematically. The counties of Jackson, Calhoun, Kalamazoo, Van Buren, Allegan, Barry, Eaton, Branch, St. Joseph and Cass are included in this research universe. One of these counties, Calhoun, will be concentrated on in this study in order to examine the impact of kinship on settlement more precisely. The county can be visualized as a microcosm of the entire region, since all variables that can affect settlement are present in the county. Calhoun County is subdivided into twenty townships that have their own settlement history and pattern. Each of these townships has specific physical characteristics that they share with other townships in the county.

When th

if this ha

**Metho**

The

decision

archival

parcels

be poss

immedi

should

The pr

Since

female

same.

was no

name.

discov

By

should

specifi

Th

local t

culture

When these characteristics do not coincide in all the townships, note will be taken to see if this had an effect on the settlement pattern in that township.

## Methodology

The social factors of kinship clustering should have an impact on settlement decisions. Evidence for this should be available through compilation of data from archival research and land purchase records that list owner's names with specific parcels of land. By comparing these names with census records for the period it should be possible to determine the presence of many kinship relationships that may not be immediately apparent. Qualitative analysis of county histories and other family records should help ascertain the presence of kin groups for any region under investigation. The presence of related individuals with different surnames is a difficult proposition. Since American kinship is bilateral, and kinship is traced through both the male and female line it is important to determine kin relationships when surnames are not the same. This may be particularly difficult when dealing with this time period, since it was not common for women to be acknowledged by anything other than their husband's name. Further investigation of family and county histories may enable the researcher to discover these relationships that are not immediately apparent.

By using the county and township system to ascertain settlement distribution it should be possible to compare settlement distributions to see how non-random or specifically patterned they were.

The social centralization aspect of settlement dealing with family networks and local trade of kinship clustering should express itself archaeologically as material culture sites involving family graveyards, mills, stores, churches and schools.

## Research Implications and Conclusion

This dissertation will examine the settlement of the historic frontier of southwest Michigan. The approach is based on a kinship model associated with settlement clustering and how this "clustering phenomenon" affected settlement decisions.

Research of this nature can have other applications and may not necessarily be considered specific to this region, environment or time period by other investigators. Future endeavors involving this region may include a more focused look and archaeological examination of frontier settlement for a portion of this study area incorporating findings from local data into this regional model. Examination of the impact of one or more of the other previously mentioned variables could be undertaken by future research. Integration of this study with data from other regions to compare settlement decisions and patterns over a larger area is a future goal as well. By comparing one region's settlement patterns with another it may be possible to ascertain patterns and discover solutions that are common to all agricultural frontier settlements.

Envi

To

be pl

of sou

early

occup

with

ago f

arrive

Th

respo

the re

Shiel

and sh

States

retrea

agricu

prospe

The

also cl

their p

# Chapter II
# Southwest Michigan History

## Environmental History

To understand nineteenth century settlement history of southwest Michigan it must be placed in a context from both historical and environmental perspectives. The history of southwest Michigan cannot be examined by starting with the settlement era of the early nineteenth century. It cannot even be started with the British or French occupations of this area of North America. The history of southwest Michigan begins with the distant geologic past, when the last glaciation of approximately 13,000 years ago formed the land into the configurations found by the pioneer settlers when they arrived in the early nineteenth century.

The last glaciation, the Wisconsinan, ended about ten thousand years ago, and is responsible for the geological configuration of southwest Michigan as well as most of the rest of the state (Barker 2001:26). The advance of the glaciers from the Canadian Shield to near Cincinnati swept the shield clean of soils and eroded the softer limestone and shales south of the shield into the northern parts of what would later be the United States. The resultant soils, which were highly fertile, were deposited as the glacier retreated northward. Deposition of these soils resulted in a "belt of fertile land for agriculture in southern Michigan." The glaciers, therefore, provided "the basis for a prosperous agricultural economy in southern Michigan" (Dunbar and May 1995:2).

The Great Lakes, a result of riverine erosion and the processes of glaciation, have also clearly affected the settlement of southwest Michigan. The Great Lakes assumed their present depth and shape approximately 2,500 years ago, after the last Ice Age

(Dunb

devel

Nativ

of the

the op

throu

earlie

furthe

becam

syster

syster

River

throu

consi

the m

part o

225 m

Nativ

River

Kalam

(Fulle

Miam

(Dunbar and May 1995:2). The Great Lakes have helped and hindered Michigan's development. They certainly provided easy transportation routes from the earliest Native American settlements until the present day. The presence of water on three sides of the state, however, has also hindered development by retarding settlement. Before the opening of the Erie Canal, in 1825, most settlers traveled overland from the south through Ohio and Indiana. Both Ohio and Indiana were settled and became states much earlier than did Michigan, Ohio in 1802 and Indiana in 1816. Even Illinois, which was further west than Michigan, was more populous in the early nineteenth century, and became a state in 1818 (Dunbar and May 1995:214).

Along with the Great Lakes and the inland bodies of water, the three large riverine systems of southwest Michigan played an important role in settlement. The river systems were created by the Wisconsinan glacier. The Grand River, the Kalamazoo River and the St. Joseph River all originate in Jackson County. These rivers all flow through southwest Michigan into Lake Michigan. The Grand River forms what could be considered the northern edge of southwest Michigan. The Kalamazoo travels through the middle of this part of the state and the St. Joseph River flows through the southern part of the southwest section of Michigan. The Grand is Michigan's longest river, at 225 miles, and was an important means of travel into the interior of Michigan by both Native American and later European peoples. This was also true of the Kalamazoo River. According to Fuller's work on Michigan history, "the water power of the Kalamazoo made that river the great central agent of settlement for the entire section" (Fuller 1939:157). The St. Joseph, which was originally known as the River of the Miamis because of a Miami Indian village nearby, was considered an important travel

route by Native Americans, fur traders and explorers. With only a short portage, boats from the St. Joseph can access the Kankakee River in Indiana that flows into the Illinois, and subsequently into the Mississippi River (Dunbar and May 1995:4-5). All three of these river systems have numerous significant tributaries making a valuable water resource for the early inhabitants of southwest Michigan.

The last significant environmental factors that played roles in the settlement of southwest Michigan are heavy timber, prairies and oak openings. Most of the southern half of Michigan was covered with heavy timber when white settlers arrived in the nineteenth century. This heavy timber of hardwood species extended south roughly from Saginaw Bay to the mouth of the Grand River. North of this line, the land was heavily forested, also, primarily with White Pine and other soft conifers (Dunbar and May 1995:6-7). Early frontier farmers in southwest Michigan and elsewhere judged soil fertility by the types of tree cover. Soils covered with heavily forested hardwoods were considered more fertile than the prairies and "oak openings" of southwest Michigan (Bartlett 1974:190, O'Brien 1984:4). The best soil was believed to have a covering of black walnut, ash, whitewood or sugar maple. Burr oak was also supposed to be found on good soil. Initially, pioneer settlers avoided the prairies and "oak openings" because they assumed erroneously that the absence of trees indicated poor soil (Dunbar and May 1995:166). They soon discovered that prairies and "oak openings" were highly fertile agricultural land. Settlers who migrated from the states to the south, primarily Indiana and Ohio, were more likely to settle on prairie lands because they had previously lived in this type of environment (Butler 1947:267). But there were problems with prairie land. The soil was heavy clay, there was little good

water, and also no mast (acorns and nuts) for hogs to forage on. Prairie grasses also had heavy root systems that were difficult to break with the plows available at the time. Once the prairies were open to cultivation, however, they were found to be extremely fertile and provided bountiful crops to pioneer settlers (Butler 1947:268-273). According to James Woodruff, the prairies of southwest Michigan were areas "dominated by prairie grasses and herbacious plants with a tree density of less than one mature tree per acre" (Woodruff 1999:11; Brewer, Hodler and Raup 1984:comments). Southwest Michigan's prairies were different from prairie lands found further south and west. While many of Michigan's prairies were large--sometimes hundreds of acres were available for cultivation--they were not the formidable miles of open land found further west. In fact, their size made the prairies more attractive to settlers, because they still needed access to wood for construction, heating and cooking, and water for themselves and their livestock (Dunbar and May 1995:166). There were also different types of prairies in Michigan. Discussions in the literature mention "wet prairies," "dry prairies" and "floating prairies." Dry prairies were "open and rolling, often perfectly flat...possessing a rich soil" while "wet prairies [were] more commonly too level to admit the proper drainage of water [and] generally too moist for grain growing" (Butler 1947:269-270). Floating prairies were probably swampy areas or peat bogs, where the "prairie shakes or trembles when walked upon" (Butler 1947:270).

Scholars have debated the historical causes of Michigan's prairies. Butler believed that Michigan's prairie land was an extension of the prairie that extends westward from western Ohio to Kansas and Nebraska. He argued, despite the fact that the Indian word for prairie was also the word for fire, that fire was not necessarily an integral part of the

prairie's existence. He concluded that prairies exist as treeless expanses due to other contributions from nature (Butler 1947:267-269). According to Woodruff, however, prairies were "primarily the products of fires that burn off shrubs and tree seedlings, keeping forest encroachment in check" (Woodruff 1999:11). In their comments on the "Pre-settlement Vegetation of Southwest Michigan," moreover, Brewer, Hodler, and Raup discuss the effect of the absence of fire on the filling in of the "oak openings" (Brewer, Hodler, and Raup1984: comments). Each of these theories may be in part, relevant to the prairie lands in southwest Michigan. Some areas may have been prairies without interference from man others may have been extended by either natural or man-made fires that kept trees from encroaching upon them. Charles F. Hoffman, a writer and New York magazine editor, who traveled in Michigan in the 1830's, described the effects of a prairie fire on the prairie and surrounding hardwood forest in his article "A Winter in the West"(Kestenbaum 1990:78).

"Oak openings" were almost unique to Michigan. "Oak openings" were defined by Brewer, Hodler, and Raup as "having a density of between one and fifteen trees per acre" (Brewer, Hodler and Raup 1984:comments; Woodruff 1999:11). Butler describes "oak openings" as "tablelands usually studded with occasional oak trees, while timbered openings were thought of as having more timber than the usual openings" (Butler 1947:270). Brewer, et al., described both Bur Oak openings and oak savanna. These categories only differed in their tree makeup. "Bur Oak was restricted to pure stands...and probably had mesic prairie herbaceous vegetation" while oak savanna "probably had ground-layer vegetation of mesic and dry prairie" containing yellow, red and black oak (Brewer, Hodler and Raup 1984:comments). Large parts of southwest

Michigan were covered by these oak openings. As Fuller noted, the "plains covered about a quarter of Jackson County and the rest of its area was largely oak openings. The most of Calhoun was covered with burr and white oak openings, as was also fully two-thirds of Kalamazoo County" (Fuller 1939:157).

**Native Americans and Michigan**

Native Americans probably migrated to Michigan about twelve thousand years ago, after the last glacier receded. There is no evidence of Native Americans in the region before that time. The postglacial inhabitants of Michigan were hunter-gatherers who hunted large game animals, such as caribou (Cleland 1992:14). Later, as the climate and environment changed, these peoples continued to live in much the same manner. In southwest Michigan's Berrien County, a four thousand year old house site was discovered and excavated by archaeologists from Western Michigan University. This site, situated on the St. Joseph River, was radiocarbon dated to approximately 1800 B.C., indicated that subsistence during this time was similar to the earlier hunter-gatherers (Clark 1994:51).

Approximately 2,500 years ago, two cultural changes occurred that signal what has become known as the Woodland period for prehistoric Native American culture. The two elements were pottery of fired clay and evidence of domesticated plants. Cleland concluded that the pottery was of "indigenous invention" while at least some of the plants that were domesticated were the result of cultural diffusion from Mexico. "These developments become both the hallmarks of the Woodland era and the foundation of an agricultural lifeway that replaced hunting and gathering over most of eastern North America" (Cleland 1992:19).

By the beginning of the Christian era, the Woodland sites occupied in southwest Michigan began to show influences from outside the region, the Hopewell tradition from Ohio and Illinois. Some of the Woodland peoples that were living in southern Michigan during this period appear to be heavily influenced by the Hopewell intrusion. This is not, however, the case for all of the river valleys of southern Michigan (Cleland 1992:21-22). The Norton Phase dated from 10 B.C. to A.D. 200 was the initial occupation of west Michigan by Hopewellian populations. The later Converse Phase (A.D. 200 to 400) is the proposed name of the later Middle Woodland culture. Most researchers from the 1960s through the 1990s maintained that occupation of west Michigan was the result of "expansion of Middle Woodland people out of central Illinois" (Brashler 2000:4).

Recent work on Hopewellian Middle Woodland culture expansion into the Grand River area involved a "process of fission" (suggested by Margaret Holman) where successful groups may have split away when group size exceeded capacity (Brashler 2000:11). This may have resulted in the occupations in the Grand River Valley by Hopewellian Middle Woodland that "may be characterized as local population(s) embracing some of the delights of Havanna and Hopewell (ceramic style, mortuary practice and items made from raw materials originating far away) but maintaining a distinctive subsistence strategy" (Brashler 2000:23). Subsistence strategy did not follow the Hopewell models proposed by earlier researchers, but that included seasonal mobility and extensive use of large mammals such as White-tailed deer and anadromous fish (lake sturgeon) (Brashler 2000:22). However, the cultural traditions such as the numerous Indian mounds in the river valleys of southwest Michigan can be traced to the

influence of the Hopewell cultural tradition. This culture spread along the river valleys of southwest Michigan until it finally declined about 500 A.D. (Cleland 1992:21-22).

Charles E. Cleland observed "the Late Woodland peoples who occupied the deciduous forests south of the Great Lakes were certainly serious farmers. It is likely this important feature of their subsistence economy identifies the shift to Late Woodland at about 1500 B.P. (A.D. 500)" (Cleland 1992:24). Four major changes occurred in the Late Woodland culture from A.D. 500 to 1600 that would have extensive effects on later developments. These were: 1) increasing development of an agricultural base, 2) introduction of the bow and arrow, 3) storable agricultural commodities and 4) more sedentary lifestyle and regional specialization. The regional specialization created by the increased sedentism resulted in "the development of several independent cultural complexes that were the product of direct continuity in life-way and artifact style from at least 1200 B.P. (A.D. 800)" (Cleland 1992:27).

The Upper Mississippian tradition in southwest Michigan appears at approximately A.D. 1000 and "appears to be the result of certain cultural traits overlain on a Late Woodland cultural base" (McAllister 1999:254). Shell tempered pottery is a hallmark of Mississippian culture and its identification with southwest Michigan marks the beginning of what has been called the Moccasin Bluff Phase which lasted from A.D. 1050 until A.D. 1300 (McAllister 1999:254-256). A second phase of this tradition, known as the Berrien Phase, appears around A.D. 1400 and continues to A.D. 1600. The Mississippian tradition is indicative that contact of Late Woodland peoples with Upper Mississippian culture from further south occurred during this time period (McAllister 1999:262).

The same culture may have been responsible for the "garden beds" found by nineteenth century pioneer farmers in southwest and western Michigan. These "garden beds" were raised ridges of soil, approximately six to eighteen inches high, arranged in a variety of geometric patterns which resembled formal gardens (Dunbar and May 1995:12). These features were found primarily in the St. Joseph, Kalamazoo and Grand River valleys, located on fertile prairie lands and oak openings. The raised beds were of various sizes and shapes and contained anywhere from a few to over one hundred acres of ridges and furrows (Hubbard 1877:22-23).

By the time the French arrived, in the seventeenth century, however, most of what would become the state of Michigan was devoid of Native Americans, who had been decimated by the attacks of the Neutral Confederacy from the shores of Lake Ontario, and the Iroquois from New York (Dunbar and May 1995:15; Cremin 1992:28). Most of the Native Americans that did live in southwest Michigan, when the French first encountered them in the late seventeenth century, were Potawatomis. These native people occupied three successive territories near the Great Lakes. Their original "protohistoric state" was in Lower Michigan. They vacated this land, after about 1641, a direct result of being invaded by the Neutral Confederacy and Iroquois from New York. The Potawatomi then moved into their "refuge area," the Door County peninsula in Wisconsin and parts of the Upper Peninsula of Michigan. This was the area they initially encountered the French (Cremin 1992:28). By the early nineteenth century, this refuge area expanded to include most of the shoreline of Lake Michigan as far south as what is now Chicago and southwest Michigan, including the St. Joseph and

Grand River valleys, which they had occupied before they were forced out by the Iroquois (Clifton 1978:725-726).

By the middle of the seventeenth century, the Potawatomi were the dominant tribe in the Green Bay area of Wisconsin. Much of their dominance derived from the relationship the Potawatomi cultivated with French fur traders. The Potawatomi also acted as arbiters between French fur traders and other Native American peoples. Alliances between the Potawatomi and the French resulted in the Potawatomi providing warriors for French wars against the Iroquois and the British (Clifton 1978:728).

By the beginning of the nineteenth century, the Potawatomi were forced to decide between two adversarial countries, Great Britain and the United States. After the War of 1812, when the territory began to be settled by Euro-Americans, most Potawatomi chiefs recognized the United States as the dominant power (Clifton 1978:736-737). Most of the area considered in this study was ceded by the Native American tribes in the Treaty of Chicago of 1821. The Chicago treaty provided that certain areas were to be reserved for Native Americans. The Potawatomi and the Ottawa were also to receive annuity payments for twenty years. The population of Native Americans in the study area by 1830, the beginning of settlement by Euro-Americans, was estimated at 2,500 Potawatomi (Tanner 1987:135). By the 1830's, most treaties provided for removal of the Native Americans to lands west of the Mississippi River. Indian removal policy was implemented in southwest Michigan between 1838 and 1840. A large number of Potawatomi remained in Michigan after the removals, however. They either eluded the government agents rounding them up or escaped and returned to southwest Michigan where their descendants remain to the present (Dunbar and May 1995:149-151).

**The French in Michigan**

The first Europeans to come to Michigan were the French during the early years of the seventeenth century. The French came to Michigan for three reasons: to discover, to trade for furs, and to convert the Indians to Christianity. Jean Nicolet was the first European to reach the Straits of Mackinac in his search for a water route to the Far East (Dunbar and May 1995:19). While he did not find the fabled Northwest Passage, he led other explorers to search for the route. When Jolliet and Marquette explored the Mississippi River in 1673, for example, they hoped that it flowed westward into the Pacific (Dunbar and May 1995:19). Another French explorer, Robert Cavelier, Sieur de LaSalle, explored the Mississippi and is credited with being the first European to have crossed the interior of southern Michigan in 1680. He did this in an effort to hurry to the Niagara country. The route LaSalle took across the Lower Peninsula evidently crossed the southwest portion of Michigan through Van Buren, Kalamazoo, Calhoun, and Jackson Counties. He finally arrived at the Detroit River, and crossed into Ontario (Woodruff 1999:7-8).

The French directed their efforts at their second goal, fur trading, at the Straits of Mackinac. Native Americans were formidable traders who usually traded on their own terms. According to Dean Anderson (1995), Native American participants "expected the French to become military allies to aid them in conflicts with their enemies [and] conceptualized trade in kinship terms, referring to the French as fathers and to themselves as children" (Anderson 1995:29). This construction of a kinship relationship required the French to be generous and give the Native Americans trade goods as gifts in order to bind them into a trading relationship.

dev

For

at D

fou

Riv

prir

reg

imp

for

abe

des

stra

Det

ass

The

unre

200

hun

the c

were

The French established three posts in Michigan to deal with Native Americans and develop the fur trade. The first post was at the Straits of Mackinac; the second was at Fort St. Joseph, in southwest Michigan near the present city of Niles; and the third was at Detroit; founded by Antoine de la Mothe Cadillac in 1701. In 1684, the Jesuits founded a mission at Fort St. Joseph. The mission was on what was then known as the River of the Miami's, which had been explored earlier by LaSalle. This site was primarily a mission-trading post complex that served as the center for the Illinois region's fur trade for over seventy years. Fort St. Joseph was a much smaller, less important fur trade center, on the periphery of the fur-trading world. It was occupied for a short period of time after the French and Indian War by the British, but was abandoned by the mid 1780s (Nassaney 2001:40-41).

Detroit, founded by Cadillac in 1701, was the only French settlement in Michigan designed to be more than a fur trade center. While originally founded by Cadillac as a strategic point between the Great Lakes and the eastern North American continent, Detroit was the first area to have agricultural settlers. French farming was not associated with production of a marketable surplus, but was barely above subsistence. The isolation of the area from economically viable agricultural markets and the chronic unrest and warfare conditions favored a flexible, unspecialized type of farming (Lewis 2002:23). The "Ribbon Farms" of the French settlers were narrow strips of land, four hundred to nine hundred feet wide, which fronted on the Detroit River and ran back into the countryside for one to three miles. The river acted as the main thoroughfare as there were no roads in the early years of French settlement (James 2000:30). The post at

Detroit remained a small French enclave until the beginning of American settlement in the nineteenth century.

The French presence in the Upper Great Lakes was primarily centered around the Straits of Mackinac and Sault St. Marie, and was associated with the fur trade and a Jesuit mission. This area was referred to as St. Ignace by the Jesuit priests who established a mission here in 1671. It was called Michilimackinac by the local traders and in official documents (Dunbar and May 1995:42). Cadillac served as the commandant at the fort at Michilimackinac from 1694 to 1697 where he amassed a fortune in the fur trade. This area was the center for the fur trade in the Upper Great Lakes, "with thousands of Indians and hundreds of fur traders and their employees flocking to the settlement in the summer months" (Dunbar and May 1995:42-43).

French emphasis on exploration, the fur trade, and missionary work caused the economic development of early Michigan to stagnate. The only viable settlement not primarily a fur trade outpost was Detroit and it developed very slowly in the eighteenth century. The population of Detroit actually declined after Cadillac left and then only slowly climbed to about two thousand people by the end of the French occupation of Michigan in 1760 (Dunbar and May 1995:49). The French influenced the Upper Great Lakes region primarily through the two main outposts at Detroit and Michilimackinac, and through the fur trade associated with those outposts. The French were interested in Michigan as a source of fur, not as an area to colonize. The British, however, were also interested in settling the land.

**The British Come to Michigan**

Britain and France had a long history of conflict that was also played out on the American frontier. The period between 1689 and 1815 was known as the Second Hundred Years War. The most important conflict for the history of Michigan was the Seven Years' War, known as the French and Indian War in the colonies, fought between 1754 and 1763, for control of the continent. At the end of the war, the French were expelled from North America, including their forts in Detroit, Michilimackinac, and St. Joseph. When the war ended, France had lost its empire in the New World, ceding all of its possessions east of the Mississippi to Great Britain and New Orleans and all lands west of the Mississippi to Spain (Dunbar and May 1995:56-63). After the surrender of Quebec by the French in 1760, the British controlled the Great Lakes region until 1796.

Throughout the period of British control, events in Michigan reflected political events and processes far removed from this area. During the eighteenth century, the British tried to increase their influence with Native Americans in the region, and to acquire more of the fur trade the French had monopolized. The British paid more for furs than did the French, and provided the Native Americans with alcohol. Liquor was highly prized by the natives, and the French had tried to deny them this commodity (Dunbar and May 1995:64). When the British gained control of the Great Lakes region, they reversed their previous generosity and tried to confine the fur trade to specific forts, where it could be better controlled. Agricultural settlers also began to encroach on the Indians' hunting grounds in Kentucky, Tennessee and western Pennsylvania. All of this alarmed native inhabitants to such a degree that they revolted against the British in what has come to be called Pontiac's War (Dowd 1990:35). This war was named in

honor of the Ottawa chief, Pontiac, who laid siege to Detroit for several months. Pontiac's actions inspired other Native American groups to attack British outposts as well. Michilimackinac and Fort St. Joseph as well as every other British post west of Niagara were captured by the natives. Pontiac, however, was unable to capture Detroit despite the siege, and the uprising failed. In 1766, a council negotiated a peace, and the Indians pledged their support to the British and King George III (Dunbar and May 1995 65-67, 70-71). After the uprising, no permanent British outposts were reestablished at Sault Ste. Marie or Fort St. Joseph, leaving only Detroit and Michilimackinac as British strongholds in Michigan (Dunbar and May 1995:71).

The British also had to learn how to govern the vast new territory they had acquired through the Treaty of Paris, at the end of the Seven Years' War. In 1763, the British government issued a proclamation that tried to address the problem of settlers' encroachment on Indian hunting grounds. This proclamation reserved all lands west of the Alleghenies for the Indians; no lands were to be purchased for settlement except through imperial agents. This proclamation nullified the claims of the thirteen original colonies to land west of the Alleghenies. Many colonial charters included vast areas of land west of this line. This proclamation invalidated claims by land speculation companies to areas in Virginia and Pennsylvania (Dunbar and May 1995:72-75). As a result, Michigan and the Great Lakes region remained in Indian control, except for the British outposts in Detroit and Michilimackinac.

The American Revolution was in a large part a direct result of the policies the British government set into action after the Seven Years' War. The war cost the British government hundreds of thousands of pounds. The British government attempted to

force the colonies to pay for part of the cost of the war as well as the cost of administering the western lands acquired after the war. The colonists, including those who had been denied access to western lands protested the taxes the British government imposed (Dunbar and May 1995:78-79). During the American Revolution, the British used the outposts at Detroit and Michilimackinac as staging areas for attacks on settlers in Kentucky and Illinois. George Rogers Clark, a Kentuckian, led offensive attacks into Illinois and hoped eventually to reach Michigan and the British outposts there. Clark's success led to decreased support for the British on the part of Native Americans. The British, in turn, built stronger defenses at both Detroit and Michilimackinac. A new fort was constructed at Detroit and named Fort Lernoult. The new commandant of Michilimackinac decided a more strategic fort should be built on Mackinac Island and spent two years constructing it between 1779 and 1781 (Dunbar and May 1995:78-82). Of more interest to southwest Michigan, the Fort St. Joseph site, which had not been garrisoned since 1763, was plundered by a Spanish/French contingent from St. Louis and held for 24 hours before the raiding party departed and returned to St. Louis. This attack may have been fueled by the Spanish desire to lay claim to part of the continent east of the Mississippi River (Dunbar and May 1995:83-84 and Nassaney 2001:41).

**Michigan after the Revolution**

At the end of the American Revolution, the British continued to control the Great Lakes region. After the revolution, the British "agreed to cede all the region between Canada and Florida east of the Mississippi to the United States" (Dunbar and May 1995:86). Great Britain and the former colonies agreed to divide the Great Lakes region through the middle of the lakes, thereby allowing the British to retain access to

water routes for the fur trade. The British agreed to withdraw all troops from its garrisons in the Great Lakes when the Treaty of Paris was signed in 1783 (Dunbar and May 1995:87-88).

In fact, however, the British refused to relinquish control of their outposts, including those at Fort Miami in Ohio, Fort Lernoult at Detroit, and Fort Mackinac, after the Revolution. They continued to use these forts to control the fur trade, regulate traffic on the Great Lakes and maintain alliances with Native Americans. The former colonies still held theoretical jurisdiction over the land north of the Ohio River via land ordinances. This area became known as the Northwest Territory, which would later become the states of Ohio, Indiana, Illinois, Wisconsin and Michigan (Porter 1996:12). The Ordinance of 1785 provided for surveys of this land before it was settled. These surveys divided the land into townships six miles square. Each township contained thirty-six sections one mile square. The land was to be auctioned for a minimum price of $1.00 per acre and sold in blocks no smaller than 640 acres, i.e. one section. While this policy has changed since it was first adopted, this ordinance established the process still followed by the United States for all land sales. (Dunbar and May 1995:93).

The Northwest Ordinance of 1787 established provisions for the development of this vast territory. It provided that the Northwest Territory would be divided into states whose citizens would eventually have the same rights as the original thirteen states. The ordinance also outlined the stages of development required of the territories before they became states, including the requirement for a minimum population (Dunbar and May 1995:95-96).

Agricultural colonists who tried to settle the Ohio River Valley in the 1780s encountered hostile Indians. The British supplied these natives with guns to drive the colonists out of the area. The Indian tribes maintained the upper hand until 1793 when General Anthony Wayne defeated them at Fallen Timbers, in Ohio (Porter 1996:12).

Two diplomatic treaties signed in the 1790s resulted in significant changes in the Great Lakes region. In Jay's Treaty, approved by the Senate in June 1795, the British agreed to honor the Treaty of Paris and relinquish the forts they had held since 1783. In the Treaty of Greenville, also in 1795, the Indians in the Northwest Territory ceded all their lands in Ohio, as well as parts of Indiana and Michigan, including Detroit and Mackinac Island (Porter 1996:14). These were the first lands in what would be the state of Michigan to join the United States, which still retained a large a French-speaking population at Mackinac and Detroit.

After the Treaty of Greenville, settlers began to settle in what later would become the state of Ohio. This population increase led to a division of the Northwest Territory from the Indiana Territory. The Indiana Territory comprised all the land west of a line drawn north through present day Michigan, approximately where the modern state line exists between Ohio and Indiana. The southeastern part of the Northwest Territory became the state of Ohio in 1802. Its northern boundary was a line drawn due east from the southern tip of Lake Michigan. The territorial capital, formerly Chilicothe, now became Vincennes. As a result of their distance from the new capital, people living in Detroit requested that a new territory be set off with the capital at Detroit. The Territory of Michigan was created in 1805 (Dunbar and May 1995:106-110).

In 1805, William Hull was appointed governor of the Michigan Territory. When he arrived in Detroit he found a city recently leveled by a devastating fire, and few other settlements in Michigan. The other settlements included Fort Mackinac on Mackinac Island and Frenchtown (later Monroe), the second largest settlement in the region, after Detroit (Gilpin 1970:12-13). Few settlers arrived in the early nineteenth century. This was due primarily to the lack of clear title to land in Michigan and the absence of government surveys of the land for which title was obtained. Both Indiana and Ohio became states much earlier than Michigan. It would be another twenty years before Michigan lands would be "taken up" with fervor (Dunbar and May 1995:119).

The War of 1812 was a significant turning point in Michigan's history. While this war had many causes, the settlers in western regions of the country, including the Great Lakes, wanted war with the British. The settlers blamed the British for the long-standing Indian conflicts in the region, which spurred the desire for war. They may also have wanted to acquire Canadian land. The former colonials were also distressed over British interference with trade and American shipping (Dunbar and May 1995:122).

Despite westerners' willingness to fight, however, the United States was poorly prepared for war with Great Britain, and nowhere was this more evident than in the Great Lakes region. Great Britain had used the time since Jay's Treaty of 1796 to increase its naval strength in the Great Lakes region, while the United States had not. The Americans also encouraged the Native Americans to remain neutral, while the British pursued them as allies. Additionally, the United States did not strengthen its military in the region, while the British maintained a sizeable force (Gilpin 1970:55). For these reasons, when war did break out, the Michigan outposts at Fort Mackinac,

Detroit and Fort Dearborn were captured by the British almost immediately. Fort Mackinac was captured without a fight, while Fort Dearborn's troops and civilians were attacked by Potawatomi after they tried to escape to Fort Wayne. Detroit, as well, was surrendered without a fight, because Governor Hull was unable to get supplies and support from the Ohio forts (Dunbar and May 1995:127-129). Michigan was once again in the hands of the British. In January 1813 the Americans tried to retake Detroit from the British. They fought a battle at the River Raisin where they were badly defeated by the British, who took between 30 and 100 prisoners. The prisoners were killed the next day by the Indian allies of the British, and the affair became known as the Massacre at River Raisin.

Commodore Perry defeated the British at a decisive naval engagement later that year. The British no longer controlled the upper Great Lakes, which enabled General William Henry Harrison to invade Canada in the fall of 1813. Harrison occupied Upper Canada, and appointed Lewis Cass as the military administrator of the region. Later that fall President Monroe appointed Cass as Governor of the Michigan Territory (Gilpin 1970:61-63).

In 1814, Cass signed a peace treaty with the tribes in the Michigan Territory. The Native American signatories, did not cede land, but agreed to help the United States against the British, if so requested. Cass, however, had only limited success in using the Indians against the British. The British repulsed an American attack on Mackinac Island, which left them in control of the upper Great Lakes until the end of the war (Gilpin 1970:64-65).

The fate of Michigan was ultimately decided on European battlefields. The British had retained Mackinac Island and captured American ships in the Great Lakes, even though they had lost control of the lakes to the Americans. Once they defeated Napoleon, however, they agreed to peace on the conditions that prevailed before the war. This restored northern Great Lakes sites, such as Mackinac Island, as well as Prairie du Chien, in Wisconsin to the United States. After the Treaty of Ghent was signed in 1815, Michigan remained a United States possession (Dunbar and May 1995:136-138).

Once peace was restored, Michigan's major concern was attracting settlers. The government needed surveys of the public land so the land could be sold to farmers. By 1818, 68 townships had been surveyed and were offered at auction. Until this time, no legal titles to Michigan land were available except around Detroit and Mackinac. Governor Cass persuaded Native Americans to sell their lands to the government, so they could be offered for sale to American settlers. In the Treaty of Chicago of 1821, the Ottawa and Potawatomi ceded most of southwest Michigan to the government, in return for a cash settlement plus an annual annuity for twenty years (Dunbar and May 1995:146-149).

After the surveys were completed, land could be sold to the public. The first land office was established in Detroit in 1804, with a second at Monroe (Frenchtown) in 1823. The first sales of land in southwest Michigan were registered at the Monroe office. A land office was established in Western Michigan in 1831 at White Pigeon and moved to Kalamazoo (then Bronson) in 1834. Only small portions of land were sold at first. Several early sources reported Michigan as a poor agricultural area. The first

surveys covered very wet areas with poor soil. Therefore, many prospective settlers assumed much of Michigan was poor farm land, but officials, including Governor Cass, made a great effort to dispel this negative attitude about Michigan's agricultural potential. Michigan also had a reputation as unhealthy, because many soldiers had died during the War of 1812 from malaria and other disorders (Dunbar and May 1995:155-157).

Lack of adequate transportation also delayed the early settlement of southwest Michigan. Prospective settlers had to either travel over land or via Lake Erie, which was very hazardous. The Erie Canal opened in 1825, connecting Lake Erie to the Hudson River. This "greatly facilitated the transportation of passengers and freight between the eastern seaboard and Michigan ports" (Dunbar and May 1995:159). Many New Englanders and New England Yankees who had previously settled in western New York and Pennsylvania traveled the Erie Canal into Michigan. The Erie Canal alone, however, cannot explain the massive migration to Michigan. The sale of public lands in Detroit, for example, were highest in 1825, the year the canal opened, and declined over the next several years. In 1829, land sales in Indiana, Ohio, Illinois, Missouri, Mississippi and Alabama outstripped those in Michigan (Gilpin 1970:138). The Erie Canal became the main conduit for pioneers to Michigan only after the eastern economic situation improved (Dunbar and May 1995:160)

Michigan claimed only one road until after the War of 1812. The first road, from Detroit to Frenchtown, was completed just as the war broke out. This was "Hull's Trail," a corduroy road. Logs filled in the road in low, wet areas that left an uneven surface (Halsey 2000:25-26). The government proposed three roads into the western

interior of Michigan. All three were considered military roads, because of potential military uses and significantly affected the settlement of southwest Michigan. The Chicago Road connected Detroit with Fort Dearborn (Chicago) in 1825, and ran in the general direction and vicinity of the Old Sauk Trail, which had been used by Native Americans for centuries. This road "became practically an extension of the Erie Canal and ...a great axis of settlement in southern Michigan." (Dunbar and May 1995:161). The Territorial Road, laid out in 1830, branched off the Chicago Road at Ypsilanti and ran through the second tier of counties to the north. It terminated at St. Joseph on Lake Michigan. The third road, the Grand River Road, ran from Detroit to Grand Rapids. These main roads, and the trails which branched off them, were extremely important to the future settlement of southwest Michigan (Dunbar and May 1995:160-162).

A great upsurge in settlement to Michigan in general and to southwest Michigan in particular occurred during the third decade of the nineteenth century. In 1830, 147,062 acres of land sold in Michigan. This total more than doubled in 1831 to 320,476 acres. Numerous towns in southwest Michigan were platted in 1831, including Marshall, Battle Creek (Milton), Kalamazoo (Bronson), Albion, Cassopolis and Grand Rapids. By 1835 and 1836, land sales in Michigan were booming. Land sales in 1835 totaled 1,817,248 acres, a seventh of the national total. The peak of the land boom occurred in 1836, with sales of 4,189,823 acres, more than a fifth of the sales for the entire country. Speculators bought much of this land, but census data for these years shows spectacular growth in the population as well. The Federal Census for 1810 enumerated a population of 4,762 in Michigan. That of 1820 showed only slight growth; the population stood at 8,896; Ohio in comparison, claimed 581,434 inhabitants in the same

year. By 1830, Michigan's population increased to 31,460, which included part of the territory west of Lake Michigan. A territorial census in 1834 counted 85,856 people living in the Lower Peninsula. The first state census in 1837 counted a population of 174,543 and although the flood of pioneers decreased in the later years of the decade, Michigan's population on the Federal Census of 1840 listed 212,267 seven times more than the 1830 census (Dunbar and May 1995:165; Gilpin 1970:19,80,133-134,171).

The first settlers to Michigan were neither very rich nor very poor, they tended to be young men and women who wanted to get ahead in life. Easterners who were wealthy or comfortable were unlikely to move west. Nor did the poor, those without capital, leave older areas and travel to the new frontier. Most of the pioneers who settled southwest Michigan were farmers, just as they had been in the East. Most were from New England or were second generation New Englanders from western New York. Michigan's frontier population had a higher percentage of Yankees than any other state. This affected Michigan's history throughout the rest of the nineteenth century. Michigan's early settlers also included a significant population from Ohio and Indiana. These people settled in certain areas of the state, especially the southern tier of counties, because they migrated from the areas contiguous with these counties. Detroit and its environs retained a significant number of French-Canadian speaking people up to 1837 (Dunbar and May 1995:169-170).

**Conclusion**

The history of Michigan to the United States pioneer period illustrates historical changes taking place in the region, the nation and the world. The first human inhabitants, of course were Native Americans; these peoples continued to influence the

region throughout the nineteenth century. Their interactions with encroaching Europeans, first the French and then the British, shaped the way they perceived, and were perceived by Americans. Beginning with the earliest agriculturalist groups, Native Americans found a home where they could reap bountiful harvests. This experience served as testimony to the agricultural abundance that early United States farmers found when they arrived at the beginning of the nineteenth century. Michigan's slow development into an agricultural frontier resulted from the beliefs and actions of the people who succeeded the Native Americans. French and British interests lay almost completely in their quest for extractive wealth through the fur trade. The fur trade was not labor-intensive, and, as a result, Michigan was slow to develop a significant population. Even Detroit did not prosper as an agricultural settlement as Cadillac hoped it would. The dominance of the fur trade deterred settlement for more than 100 years. Once Michigan's agricultural potential was discovered, however, agricultural pioneers flocked to the region and established nucleated family farmsteads.

# Chapter III
# Frontier Theoretical Perspectives

## Introduction: Early Perspectives

Before discussing the settlement of a frontier, such as southwest Michigan in the second quarter of the nineteenth century, one must first define the term. Scholars have wrangled more than one hundred years over a definition for frontier. No discussion of frontier theory can begin without discussing the seminal work of Frederick Jackson Turner and his effect on later research by historians, geographers and anthropologists. According to Turner in his paper, "The Significance of the Frontier in American History", the frontier was "the outer edge of the wave - the meeting point between savagery and civilization." (Turner 1893:81). Referring to the 1890 Federal Census reports, moreover, Turner claimed the frontier was a "margin" of a settled area that changed from decade to decade as the frontier advanced. As western civilization came to a region, the adjacent frontier shifted to an adjoining region.

Turner believed that much of the Midwest in the 1820's constituted a frontier. Settled areas included Ohio, southern Indiana and Illinois, while the frontier region ran along the Great Lakes, including Michigan (Turner 1893:84). Ray Allen Billington, one of Turner's biographers and most staunch supporters, disagreed with Turner as to the definition of frontier. Billington argued that two definitions were necessary, one defining a frontier as a geographic area (unlike Turner's margin) and the other as a process. Billington defined the geographic area of frontier as "the area adjacent to the unsettled portions of the continent in which a low man-land ratio and abundant natural resources" (Billington 1958:9) provided emigrating people with an area different from

their home environment but similar in its physical makeup. During the 1820's, one such area was the frontier of southwest Michigan.

Billington also believed the frontier was a process. The frontier experience provided opportunity for self-advancement unavailable elsewhere. Individual's socioeconomic experiences and standards were altered by the environmental exposure of the frontier, and amplified institutions and characteristics of the Old World (Billington 1958:17-19).

Other theorists also have discussed the frontier. J.R.V. Prescott, a political geographer, argued that the term frontier had two different meanings, neither of which constituted an area. Prescott's frontier was a political division between two states, or a division between the settled and unsettled parts of a single state (Prescott 1965:33). These divisions could be either political frontiers or settlement frontiers. Political frontiers were divisions between states; while settlement frontiers were only possible where "boundaries have been established to define the state area." Consequently, the frontier "marks the limit to which the state's authority has extended in occupying its legally defined territory." (Prescott 1965:34). Prescott also made a distinction between primary and secondary frontiers. He believed primary settlement frontiers to be geographic historical features that developed haphazardly and often advanced rapidly across the landscape. Land acquired by treaty, such as southwest Michigan in the first half of the nineteenth century, was an example of a territory that could be considered a primary frontier. Secondary settlement frontiers demarcated areas where adverse environments, low population or inadequate technology hindered settlement. Secondary settlement frontiers were very different from their primary counterparts.

Secondary frontiers required capital, planning and communication networks to develop (Prescott 1965:35). In either case, Prescott still defined a frontier as a line or boundary, much like Turner.

Turner and Prescott both believed the frontier was a margin that could be visualized as separating "savagery" from "civilization." This concept is both ethnocentric and inappropriate when discussing the idea of frontiers today. Aspects of both Turner's and Prescott's work, however, remain relevant. While Turner envisioned the frontier as a fluid, changing, margin that advanced over time, this is not necessarily the case. The intrusive Euro-American agricultural community certainly affected a profound change seen in southwest Michigan, however. Prescott's definition of primary settlement frontier more accurately described the southwest Michigan frontier. Ray Allen Billington does not believe the frontier to be a line of settlement, but a geographic area and a process. He identified the geographic area, as more than a line, which is important when discussing regional settlement processes. Billington also argues that the frontier had a profound effect on the Euro-Americans who settled in this area as well as the Native Americans already present on the land.

**Frontier as Process and Zone**

More recently, archaeologists, geographers, and historians have all tried to delineate frontiers. For example, Kent Lightfoot and Antoinette Martinez have broken away from earlier core-periphery perspectives, such as Wallerstein's that stresses internal developments within colonial populations and a relationship between the core and periphery (Lightfoot and Martinez 1995:475). They have also rejected Turner's ideas that the frontier was the confrontational zone between civilization and savagery.

Instead, they examined the concept of frontier as a "socially charged place where innovative cultural constructs are created and transformed" (Lightfoot & Martinez 1995:472). They envisioned the frontier, not as a line, but as "zones of cultural interfaces" where creolization and syncretization blended cultures of contact into new social orders (Lightfoot and Martinez 1995:474). Furthermore, they believed these "zones of interaction" are not peripheries and edges of societies, but were central to the development of new syncretized cultures. They refuted the concept that colonizing peoples spread rapidly into empty space as "colonizer-centric." Indeed, they argued that core/periphery models identified frontiers as passive recipients of the "superior" culture from the core state (Lightfoot and Martinez 1995:475). Instead, they viewed frontiers as crosscutting social networks where natives are not subordinate to the intrusive culture, and where "the varied backgrounds, interests, and motivations of individuals on all sides of the frontier" were crucial to its development (Lightfoot and Martinez 1995:483).

The historian Stephen Aron defined a frontier as more than a line or zone as well. He argued that, during the early 1800's, the frontier, was "the periphery of Anglo-American colonization." At the same time, the term referred to the contested territory between "Indian Country" and "backcountry"(Aron 1996:3). Aron identified the frontier as an area where "cultures collided;" as a borderland and a crossroads.

Geographers Terri Jordan and Matti Kaups defined the frontier as a habitat and a social process. They recognized any frontier, but especially the American backwoods frontier, not only as a zone of contact between alien cultures where ethnic mixing occurs, but also the frontier was a spatially and temporally impermanent fringe area of a

culture (Jordan and Kaups 1989:19-20). Their study of the American backwoods frontier development blended two theoretical approaches, diffusionist theory and particularistic cultural ecology. In diffusionist theory, one first sees a simplification of the colonizing culture, in this case European. There were multiple causes for this simplification, according to Jordan and Kaups. First, the culture is reduced at the time of departure from the homeland because not all segments of the home culture were usually transmitted to the new area. Second, pioneers were usually not a typical cross section of the entire population. The frontier was also selective, environmental pressures do not allow all segments of the culture to survive (Jordan and Kaups 1989:19-20). Besides the simplification process associated with diffusionist theory, there was a fusion seen of the ethnic stock of the European emigrant populations with the Native Americans. According to Jordan and Kaups, the processes of simplification and fusion were linked at the frontier.

Unfortunately, according to Jordan and Kaups, diffusionist theories did not explain the process of settlement. For that, they looked to cultural ecology, especially what they termed particularistic cultural ecology, to explicate the process of settlement on the frontier. They believed that there is more than one path of adaptation and that the choice of path was associated with functions of culture (Jordan and Kaups 1989:32). A non-specialized culture was more efficient in dealing with extensive open frontiers, as diversification and open-mindedness proved adaptive on the frontier. According to Jordan and Kaups (1989:32-33) particularistic cultural ecology theory was best suited for identifying adaptive strategies associated with frontier agriculture. This approach emphasized the importance of the environment to frontier theory. For example, new

environments, such as prairies, were something settlers had not experienced before. Adaptive strategies that led to the invention of the type of plow suitable to break up the prairie sod were dependent on exposure to that particular type of environment.

Another geographer, Robert D. Mitchell, defined a frontier as a temporary stage of settlement that "passed through" an area. This stage was associated with movement, instability and repetitive stages of occupancy. According to Mitchell, all interior areas went through these stages over time (Mitchell 1998:3). For Mitchell, the concept of "Open Country Neighborhoods," was one of the most important aspects of frontier development. Colonists occupied the "backcountry" at "points of attachment," which they deemed suitable settlement sites. At these sites, they cleared land, constructed houses and barns and cleared paths linking farms, mills and churches into loosely organized communities (Mitchell 1998:22). These "open country neighborhoods" facilitated the evolution of settlement systems and the development of regional economies. According to Mitchell, these widely dispersed "backcountry neighborhoods" were "kin-oriented, economically subsistent, loosely governed, and dependent upon itinerant peddlers and preachers for contact with the outside world" (Mitchell 1998:23).

Modern historians have also weighed into the discussion of frontiers. John Mack Faragher, for example, defined frontier as a relative term. "Frontier" and "west" were used interchangeably in his discussion of Frederick Jackson Turner's work. For Faragher, the "west" was a region as well as the process of migration. The frontier was a loosely bounded and historically changing area. As one moved back through time the frontier or west moved back as well. Over time, the "west" was anywhere west of

Europe, west of the Appalachians, west (and north) of the Ohio River, west of the Mississippi and even east of California (Faragher 1994:238).

Other historical definitions did not depend on population density. Frontiers have been defined as borderlands between peoples or nations; as a region of encounters between peoples; and as the merging of people and cultures all over North America. Richard White employed these definitions in his "Middle Ground" concept. Historian Gregory H. Nobles also examined the definition of frontier and discussed the effect of the frontier on American history. For him, "the frontier - this important, albeit imprecise, zone of initial interaction between cultures - represents an excellent setting in which to examine them" (Nobles 1997:16).

Finally, Michael J. Puglisi, an ethnohistorian, also emphasized the complexity of the frontier in America's history. He conceptualized the frontier as a cultural contact zone that emphasizes the integrity of all cultures involved in the contact process. He discovered cultural mixing and mutual exchange crucial in frontier studies. He also argues that all researchers should take an interdisciplinary approach to the study of the frontier because of the region's cultural diversity (Puglisi 1998:38). Only a multidisciplinary approach allows us to examine and explain the frontier. Puglisi argued that trade relations are a link that tie cultures together in a system of mutual exchange. The exchange of information, moreover, between colonizers and their metropole caused preconceived ideas about the frontier, and consequently affects the settlement that occurred (Puglisi 1998:40). Puglisi believes that this interdisciplinary approach has led to a search for community on frontiers. Puglisi stated that Nobles saw communal relations as the most important source of identity and conflict on the frontier.

He also stated that Warren Hofstra and Robert Mitchell described these "backcountry communities" as the birthplace of "hybrid settlement" and social systems that influenced the formation of all later frontiers (Puglisi 1998:40-41).

So what do these theorists suggest that the frontier is or was? First, the frontier clearly cannot be defined for research purposes as the "line" or "margin" of an intruding culture. Frontiers were zones of contact between existing cultures. Whether one wishes to examine the intrusive or native culture, the frontier must be seen (as Stephen Aron calls it) a "crossroads" or an area of cultural contact. This contact was the most important aspect of cultural syncretization. When two or more cultures came in contact with one another changes occurred in all peoples involved. The changes could be slight or very profound, but usually involved fusion and hybridization to create a new culture. Diffusionist theory embraced cultural simplification. This was simplification, because all aspects of a culture were not transmitted, nor were the colonizers a "typical cross-section" of the home culture. The richest and poorest segments of a culture, for example, usually did not migrate to the frontier. The rich had no incentive to move, while the poor had little capital to make the move.

There were, of course, different types of frontiers. The frontier in southwest Michigan was an agricultural contact zone, according to Prescott, a primary settlement frontier, where intrusive agricultural colonizers met an extant agricultural society. Frontier farmers brought with them certain aspects of their cultural background. Most of Michigan's colonizers were from New England and New York (Dunbar and May 1995:91). These specific cultural regions, therefore, were ubiquitous on Michigan's frontier.

**The Agricultural Frontier**

The Michigan territory was part of the trans-Appalachian western frontier. This region can be defined as the area of the United States, developed after the American Revolution, west of the Appalachian Mountains and east of the Mississippi River. This area included the Old Northwest Territory, of which Michigan was a part. Jerome Steffen (1977:xii) believed that this frontier region was the only insular frontier in American historical development. He used the term "insular frontier" to explain the relative social and economic isolation of the Old Northwest Territory. Few links connected the east coast of the United States with the Northwest frontier (Steffen 1977:xii). Steffen argued that the Old Northwest developed a diverse agriculture, and was briefly self-sufficient with a non-market pioneer economy where frontiersmen relied on themselves for success. Environmental surroundings determined agricultural success on an insular frontier, and family needs determined future crop production (Steffen 1977:xviii). Self-sufficiency resulted from the high cost of labor, and the high cost of transporting goods to markets. Frontier farmers also were occupied in clearing the land to increase its value. The extensive nature of frontier farming emphasized time management (Steffen 1977:23-25). Family based economy, with self-sufficient groups producing for their own consumption, remained viable on the insular frontier long after internal improvements made it possible to ship goods to market for a reasonable cost (Steffen 1977:25-26).

Jordan and Kaups also discussed the development of frontier agricultural regions as insular frontiers. Frontier agricultural regions were settled by individuals and were

distant and non-contiguous with the home region. They settled these meso-thermal woodlands as small-farm or agrarian frontiers (Jordan and Kaups 1989:19).

Roger D. Mason, in his study of pioneer settlement in northeast Missouri, argued that pioneer families produced enough to supply the needs of their families. Most farms, he argued, were self-sufficient entities (Mason 1984:88). Mason stated that settlements were situated based on the type of crops to be grown and on the social variables of the pioneer population. Diverse flexible agricultural systems allowed pioneer farmers to be self-sufficient. The basic units of settlement of the Missouri frontier were families, usually large and complex ones. This provided labor to develop farm sites for production (Mason 1984:91).

According to Jordan and Kaups, backwoods farming used land extensively, and reaped abundant yields for the first three to five years of use with a little labor. Farmers cleared land chopping trees down, girdling them -- that is removing a ring of bark from the tree so that is dies -- and chopping brush, the resulting woodpile was fired to create a layer of ash which resulted in good fertility. This fertility declined over time. Eventually, shifting cultivation practices led to the deterioration and destruction of the environment (Jordan and Kaups 1989:135).

Frederick Jackson Turner in his essay "Midwest Pioneer Democracy" also stated that the pioneer settlements of the upper Midwest were a peculiar type of frontier. Upper Midwestern farmers, hailed from predominantly older parts of the Midwest, New York and New England, these were areas of declining agricultural prosperity. When confronted by the abundant fertility and cheap land of the Old Northwest, they followed wasteful agricultural practices (Turner, in Faragher 1994:169).

The agricultural frontier of the upper Midwest, including Michigan, therefore, was an insular frontier, which was long term, economically diverse and family oriented. The regions first agricultural settlements were self-supporting and not market based. The primary reasons for this self-sufficiency were the high costs of labor and transportation. Additionally, the labor requirements of farm-building left little time to seek markets. Such farms were also self-sufficient and family oriented in terms of crop production. Agricultural practices and other social variables, determined settlement locations and led to extensive farming practices in the upper Midwest.

**Settlement Patterns on the Frontier**

The main type of permanent settlement on the Mid-western frontier was insular and agricultural. Theoretically, these settlements were adapted to the natural environment, which is cultural ecological in scope. According to Cynthia R. Price and James E. Price, who studied early nineteenth century agricultural settlement, three types of agricultural settlements existed on the United States Frontier: 1) hunter/squatter, 2) subsistence farmers in dispersed nuclear family farms and 3) planters (southern Midwest) (Price and Price 1981:241). Each settlement system utilized the environment differently. Each was settled via different networks and patterns, and each was distributed differently in space. Hunter/squatter settlement preceded other forms, its practitioners based their livelihood on hunting, trapping and trading with the native populations. They placed little emphasis on agriculture. The second group, which usually followed the hunter/squatters, was subsistence farmers. This was the most widespread group. The individual farmstead was the basic unit of settlement in this system, located in a larger community with specialized activity areas such as mills,

churches, stores and cemeteries. Environmental variables and social variables were equally important in the location of the settlement sites. These were the same types of settlements described by Robert Mitchell (1995:124) as "open country neighborhoods." Price and Price proposed a farmstead settlement model that dealt with subsistence activity and procurement. Subsistence farmers required access to critical resources such as fresh water, firewood, arable land and food for the livestock (Price and Price 1981:244-245). These early frontier farmers produced their own food. Access to local trade and communication routes indicate that these settlements were active participants in trade networks (Price and Price 1981:245). Price and Price also observed a phenomenon that obtained in southwest Michigan as well. This was a "clustering phenomenon," or an indication that family groups moved into areas together. According to Price and Price, "family units moved together with parents and married sons and daughters or sets of brothers settling adjacent to one another...produced small clusters of settlements" (Price and Price 1981:248).

Kenneth E. Lewis argued that agricultural settlements were a major form of colonization of the frontier of North America (Lewis 1984:xxiii). His model of permanent agricultural settlement for South Carolina is applicable to other areas as well. He stated that permanent agricultural settlements, "introduced complex economic, social, and political institutions that permitted the development of a distinct colonial society" (Lewis 1984:5). Lewis based much of his discussion on the development of trade and communication routes. Using John C. Hudson's model -- which defined three developmental stages of settlement as colonization, spread and competition -- Lewis described the settlement as an insular frontier. His processual model, listed six

characteristics of insular frontier change. These characteristics were: 1) Establishment: the colony was established as a permanent settlement which was sustained by agricultural production; 2) Transport and spatial patterning: the transportation network linking the agricultural settlement with the parent state established the form of the colonial area. This was normally dendritic in character. 3) Expansion: there was a regular process of expansion over time which was an adaptive response to increasing demand for the export crop; 4) Settlement patterning: the pattern changed through time in response to increased population and economic complexity; 5) Organization of activities: initially the settlement was dispersed with frontier towns as loci and nucleated, semi-nucleated and dispersed settlements occurring around these frontier towns, with what was called a pioneer fringe on the outer edges of settlement; 6) Colonization gradient: a hierarchy was seen in which a pattern of increasing socioeconomic complexity was visible spatially and even temporally as roles of settlements change in response to the region's development. This expansion of the frontier was associated with an increasing complexity of trade and communications networks (Lewis 1984:25-26).

Applying this approach to development of the early nineteenth century Michigan frontier, Lewis witnessed similar changes occurring. Michigan's agricultural frontier developed in a peripheral region of the world economy with an associated high cost of transport of raw materials that resulted in grain production and other extensive crops (Lewis 2002:7).

Lewis argued that as agriculture developed, increased demand and resulting increased price extended the distance that transport was profitable. The transportation

network of roads and water routes assumed a dendritic form centered on Detroit. This network evolved as the frontier expanded with dependence on Detroit as the entrepot resulting in geographical insularity that "discouraged external connections and focused trade inward" (Lewis 2002:8). Commercial trade and the increased importance of export markets altered transportation during the 1840s. "The new network of trade and communications underwrote changes in production and land use to accommodate increasing demand from commercial markets, and marked the closing of the frontier" (Lewis 2002:8).

Southwest Michigan should be considered an insular agricultural frontier. The same types of settlement patterns proposed by Price and Price and Lewis, therefore, should be visible on the landscape of this frontier. The subsistence settlement system described by Price and Price with scattered nuclear family farms should be visible archaeologically as well as in historical records. Furthermore, the settlement system should follow a similar developmental cycle with increasing formation of activity areas.

Social and environmental variables were crucial in determining the settlement patterns in southwest Michigan. All of the preceding theorists placed significant emphasis on the social aspects of settlement. Settlement on the frontier was not an isolated process.

**Evolution of Settlement Systems on the Frontier**

Gordon Willey initiated the study of settlement archaeology in his *"Prehistoric Settlement Patterns in the Viru Valley, Peru (1953)."* Willey's examination of the settlement pattern of the Viru Valley was "a strategic starting point for the functional interpretation of archaeological cultures" (Trigger 1989:282). Willey hypothesized that

while ecological factors had a significant role in the development of settlement patterns, many social and cultural factors affected it as well. He treated "settlement patterns as a source of information about many aspects of human behavior" (Trigger 1989:282). By systematically studying settlement patterns, he believed archaeologists could study the economic, social, and political organization of ancient societies (Trigger 1989:284).

Bruce G. Trigger expanded the study of settlement archaeology, defining it as "the study of social relationships using archaeological data" (Trigger 1967:151). According to Trigger, settlement archaeologists can employ three basic levels of analysis: 1) individual structures, 2) settlements, and 3) settlement distributions. He further argued that structures reveal a great deal about the nuclear family. The settlement, according to Trigger, corresponded to a community (i.e. culture) and the pattern of individual buildings within this community may "indicate something about the government, religious and other socially integrating institutions of the community." Finally, Trigger suggested that settlement distributions "reveal something about ecological and political arrangements" (Trigger 1967:150).

Roger D. Mason examined the ways in which settlement patterns and settlement systems develop over time in his examination of frontier Missouri. A settlement pattern is "the geographic and physiographic relationships of a contemporaneous group of sites within a single culture, while settlement system refers to the functional relationships among the sites contained within the settlement pattern" (Mason 1984:3-4).

To explore this theme in more depth, Robert Mitchell and Warren Hofstra examined the progress of dispersed agrarian communities into town-based settlement systems over time in the Shenandoah Valley. First, they believed that settlement systems fall into

regional patterns. The three types of regional settlements described by Mitchell and Hofstra were: 1) New England, 2) Middle Colonial and 3) Southern Colonial. Each of these types had distinctive characteristics. The Middle Colonial system was a transitional system that combined characteristics of both the New England system and the Southern Colonial System (Mitchell and Hofstra 1995:123). Mitchell and Hofstra defined a settlement system as "the totality of sites, structure, and routes of human activity organized across a territory and shaped by environmental, social and economic processes..." (Mitchell and Hofstra 1995:124). This was a broader and more encompassing definition of a settlement system than was Mason's. It included social and economic processes as well as the impact of environmental variables on the settlement pattern. Mitchell and Hofstra also believed that there was little distinction between urban and rural communities in early America. They also argued that settlement systems were politically and legally associated with the local governmental units, such as counties, but were not limited socially or economically by this same defining unit of measure. While they were primarily interested in the Shenandoah Valley during the late colonial period much of their research could be applied to other regions and time periods (Mitchell and Hofstra 1995:126).

According to Mitchell and Hofstra, there are three separate theories of settlement evolution. Central Place Theory was based on the concept of centrality. Central places, in this model exert control over a trade network hinterland. Mitchell and Hofstra assumed that places other than towns or villages act as central places. They also questioned exactly when central place systems evolved on an agricultural frontier. They also cited examples of dispersed settlements and lower order places which existed

for years after settlement without a central place ever evolving (Mitchell and Hofstra 1995:127-128).

The second theory they discussed was James Vance's long distance trade theory. Vance argued that long distance wholesaling was the first economic activity to occur in newly settled areas and that this wholesaling was instrumental in spreading settlements in the colonial world. Vance appeared to equate "unraveling points" with Kenneth Lewis' "frontier towns" which Vance defined as "the last point common to a sufficient number of supply lines to the frontier" (Mitchell and Hofstra 1995:129). Mitchell and Hofstra believed that both of these models presented incomplete answers for the settlement of frontier regions. They suggested this was particularly due to the models' inability to explain the importance of agriculture, the role of preexisting rural communities and marketing and distribution networks (Mitchell and Hofstra 1995:129).

The final theory they associate with settlement system development focused on the production and transportation of staples. The staple theory of Carville Earle and Ronald Hoffman proposed that urban development was associated with the type of staple crop being produced and exported. For example, low bulk staples, such as tobacco, with few processing and storage requirements caused only small to medium centers to develop. Most of the economics of tobacco production and distribution occurred on individual plantations and farms. Wheat, however, had much greater processing and storage requirements. Wheat's weight and bulk led to the development of larger urban centers due to the demands of transportation, storage, and related industries associated with processing this staple (Mitchell and Hofstra 1995:132). This theory, however, does not explain the origins of individual towns -- it was a regional theory explaining processes

on a regional basis. In conclusion, Mitchell and Hofstra believed that existing settlement system theories failed to explain the settlement systems of the interior frontier regions. What was seen were self-sufficient farms in open country neighborhoods.

Mitchell and Hofstra argued instead that government policies of selling land inexpensively was key to the formation and timing of the settlement systems. Social functions were important and focused on churches or meeting houses. The frontier economy, they claimed, was not tied to the staple crop production of tobacco, like the eastern parts of the country, but was dependent on small grain and livestock production, which created more integrated settlements. In the Midwest in particular, they hypothesized that settlement systems evolved through market towns which had emerged out of pre-existing agricultural open country communities (Mitchell and Hofstra 1995:142-143).

By applying the theoretical concepts of settlement archaeology proposed by Willey and Trigger for prehistoric archaeology to historical archaeology in general, and the nineteenth century settlement frontier in particular, it may be possible to create a better understanding of the effects of kinship, a cultural concept, on settlement patterns.

The settlement system on Michigan's frontier may be closely aligned to Mitchell and Hofstra's New England settlement type. Most of the Michigan frontier colonists, after all, either came directly from New England or were from western New York that had been settled by New Englanders in the later part of the eighteenth century. Mitchell and Hofstra's "open country neighborhoods" with emphasis on small grain (wheat and corn) and livestock agriculture, and the integration of services were reflected in

settlement patterns seen on the frontier of southwest Michigan. The emphasis placed on schools, churches and mills during settlement was an important aspect of Mitchell and Hofstra's model and played a vital role in the study of settlement of southwest Michigan in the early nineteenth century.

**Frontier Development**

According to Jordan and Kaups, the most common initial settlements in the backcountry of the United States were nucleated farmsteads scattered three to eight miles apart. These homesteads and individual family farms used land extensively, with slash and burn agricultural techniques. Later, as the population increased, family and kinclusters were often as close as a mile apart. These scattered farmsteads were the most effective form of rural settlement (Jordan and Kaups 1989:121-125).

In his examination of the northern Shenandoah Valley, Robert Mitchell saw a sequential or generational development. The first fifteen years or so of development were characterized by a dispersed, decentralized system of open country neighborhoods. This gave way to a cattle driving economy and town founding over the following decade. Finally, crop specialization and central place development occurred approximately twenty five to forty five years after initial settlements (Mitchell 1998:25). The sequential development in the Shenandoah Valley raises two comparative issues relevant to the study of Michigan frontier settlement. First, to what extent did other areas follow this sequence? Second, how well can town development be extrapolated from this region to other regions? Mitchell believed that new approaches are crucial to understanding patterns of social organization and change over time. Nonetheless, he asserted that agricultural frontiers everywhere had similar

economic foundations. Mitchell also envisioned the social cohesiveness of migrant groups as a significant factor in frontier development. He also argued that the egalitarian classlessness of the frontier of Jordan and Kaups did not endure for very long. He believed that power relationships were important for early development. Initially, the access to land was a source of power. Those frontiersmen who did not have early access to land, for whatever reason, did not prosper. Mitchell also stated that social stratification increased over time. Finally, the early settlement clusters of family and kinship associations did not endure long. By the third generation after settlement, outselling changed the social composition of pioneer neighborhoods (Mitchell 1998:25).

This dissertation will examine the earliest period of frontier settlement in southwest Michigan. Like Mitchell's discussion of the sequence of settlement of the Shenandoah Valley, the early years in southwest Michigan were characterized by a dispersed, self-sufficient, kin based, system. While it took many (25-45) years for the Shenandoah Valley to develop specialization and central places, this study argues that by the early 1840s, the frontier period had passed with the coming of the railroads.

**Social, Biological and Ecological Influences on Settlement**

Most of frontier settlement was agricultural. Other factors, therefore, affected peoples' decisions to settle where they did. Roger Mason argued that specific ecological factors associated with settlement patterns were crucial to settler's decisions. He hypothesized individual farmers' decisions about land desirability created land ownership patterns. These decisions, in turn, resulted from settlers' cultural background and previous experiences. Most frontier farmers sought a land type familiar to them. They used climate and tree species as important guides to soil fertility. In the area

Mason examined, for example, the preferred habitat appeared to be zones of mixed tree and prairie (Mason 1984:4). As with Mitchell, Mason also saw changes in social stratification. Land again was a factor in the economic development of the frontier. Land ownership was consistently related to increases in economic complexity. The frontier provided accessibility to land, and helped create a large middle class. Mason also found, however, that as land availability decreased over time, due to increasing population, social stratification occurred (Mason 1984:5). Mason further examined the social process known as the "clustering phenomenon" and hypothesized that clusters of related families with common religious affiliations or origins would be found most often during the early period of settlement. These clusters grouped along roadways and consisted of households of brothers or brothers-in-law. Larger clusters composed of several smaller kin-based groups usually shared a common religious affiliation or origin (Mason 1984:87).

Maxine Margolis examined the processes associated with agricultural adaptations. She hypothesized that frontier agriculturalists behaved similarly because they adapted to similar sets of ecological and economic variables. Their exploitive behavior was an adaptive response to the economic and ecological conditions of the frontier (Margolis 1977:43). Margolis' cultural ecological approach equated frontier agriculturalists with "fugitive species strategies" in a biological analogy. The biological concept of fugitive species, stated that the first species to arrive in a new environment take advantage of opportunities via a quick exploitation of favorable localities (Margolis 1977:60). These strategies for frontier agriculturalists however were cultural not biological. The consequences of this adaptive strategy destroyed the natural resources (as per Billington

1966:41 and Jordan and Kaups 1989:100-101) with exploitation, lack of conservation and use of certain crops that exhausted the soil fertility (Margolis 1977:43-44). While this applied most obviously to cash crop exploitation, inexpensive land, large harvests, scarce labor and high market values all played a role in the exploitation of the frontier. Frontier land was seen as more fertile and more reliable, as well as less costly than farmland in settled areas. This, along with accessibility to markets, was an important influence on the behavior of frontier farmers (Margolis 1977:48-50).

Jordan and Kaups discussed the social aspects of frontier life in their work on the American backwoods frontier. They stated that the social aspects of community are important in the frontier period even though mobility and individualism disrupt that community during the frontier period. They argued that social cohesiveness is evident in mutual dependence and cooperation. Such activities as work gatherings (burning brush, raising cabins and barns, and harvesting crops) created cohesiveness on the frontier. Chronic labor shortages instigated much of this mutual cooperation and dependence. Intermarriage between frontier families strengthened these social ties of friendship and cooperation (Jordan and Kaups 1989:84)

The specific ecological factors associated with settlement of any frontier were also crucial to the development of southwest Michigan. Riverine transportation and waterpower for mill sites and consumption were key ecological factors in settlement. The first two settlements in Calhoun County were associated with rivers where mills were constructed. The need for arable land also played an essential role in the settlement patterns of this frontier. The environmental exploitive behavior so prevalent on frontiers was also common in Calhoun County and southwest Michigan.

Family and kin structures were vital social factors in the settlement of Michigan's frontier. Due to chronic labor shortages socially cohesive kinship clusters had to work together to develop land holdings. This cohesion resulted in specific land use patterns associated with the "clustering phenomenon."

**Motivation for Emigration to the Frontier**

Countless historians, geographers and archaeologists have hypothesized a plethora of theories concerning individuals' motivations for moving to the frontier. Early frontier historians -- Turner, Webb and Billington – for example, argued that the frontier helped develop individualism and nationalism. While this romantic (and ethnocentric) view of the frontier has been discredited, more recent scholars have considered alternate motivations. J.R.V. Prescott envisioned the frontier as a combination of advancements and regressions over time. Prescott suggested that settlers were attracted to the frontier based on environmental perceptions, usually accompanied by some pressure to leave their home regions. He also envisioned periods of stagnation and even retreat from the frontier due to environmental constraints, armed native resistance, politics and technology that was inadequate to overcome the frontier environment (Prescott 1965:36-37).

Jordan and Kaups defined four elements as essential to frontier development. These were 1) availability of abundant cheap land; 2) dominance of the nuclear family unit; 3) preexisting desire for private control of land, and 4) the absence of good commercial markets. They viewed frontier culture as embodying the desire of colonizers to succeed via capitalistic, family-based agricultural pursuits on empty land (Jordan and Kaups 1989:28-29).

Gregory Nobles dismissed Turner's examination of the frontier as Eurocentric and chauvinist. From the Native American point of view, Euro-American advance meant displacement, destruction and death. Other ethnic groups, moreover, were also involved in the frontier experience and Nobles argued that Turner ignored these groups completely. He took Turner to task for ignoring the role of women on the frontier (Nobles 1997:12).

**The Frontier and Land Speculation**

Land speculators were an important and sometimes misunderstood part of the frontier experience. There are almost as many opinions about land speculation and its role in developing the frontier as there are researchers who discuss it. Land speculators played a specific role in the settlement of the frontier. First, they affected development by withholding large tracts of land. Second, they provided credit to frontier farmers seeking to buy land.

Archeologists such as Jerome Steffen and Roger Mason recognized the role of the land speculator as having varying impacts on settlement. According to Steffen, land speculators often overestimated the development of the lands they were trying to sell (Steffen 1977:26). Mason argued the impact of speculation varied by area. The timing of speculation in relation to the beginning of settlement also affected the settlement process. For example, in the Missouri frontier Mason examined, settlement preceded the extensive period of land speculation in 1835-1836. Therefore, only areas that the first settlers avoided were available to speculators (Mason 1984:90).

Land speculation retarded the development of agriculture and settlement in Kalamazoo County in southwest Michigan. In the "fever period" of 1835 to 1837, over

sixty percent of the land in Kalamazoo County was taken up, much of it in large blocks, by land speculators. Speculators held much of this land for years hoping that the value (and their profits) would increase. "This delayed for many years the occupation of this land by actual settlers." (Peters 1976:299)

In certain areas speculators capitalized on the desire of families to settle together. Some frontier families paid more for land where other relatives could settle as well. In this respect, land speculators affected settlement patterns, kinship networks, community formation and even the economics of a developing area. Therefore, land speculators, at least in some regions of the frontier, were powerful controllers of initial settlement (McClesky 1998:56).

Finally, Gregory Nobles argued that there were two groups on the frontier, the prosperous and powerful and the poor and vulnerable. This dynamic had real effects on settlement on the frontier. According to Nobles, most people came to the frontier poor and stayed poor. Land speculators and the government found the early squatters to be both bothersome and unproductive. Speculators and proprietors wanted to develop the frontier in an orderly fashion, and squatters challenged their economic aspirations and political designs. Proprietors and land speculators wanted development of the frontier to proceed in an orderly fashion so that the areas could be brought into the market economy of the eastern states. Squatters, on the other hand, would clear five to ten acres, burn it off, built a cabin and plant a garden and corn. Corn was an easy crop to grow, but it was not as marketable as wheat (Nobles 1997:107-108).

Land speculation and speculators had an essential role on the frontier. Insofar as they made smaller parcels of land available to settlers with extended purchase terms,

people with little capital could acquire a suitable piece of land. In other instances, however, speculators bought large quantities of good land and held it until they could obtain a sizeable profit. When speculators demanded a higher price for land on which groups of related people could settle, so that the group could maintain its cohesiveness, they also affected settlement.

**Politics and the Frontier**

Because the frontier was an economically vital area for speculators and settlers, it became an important political arena as well. At the end of the American Revolution, the former colonies acquired trans-Appalachian lands. At this time almost half of the country was made up of lands which were unsettled. The acquisition of a large unsettled land mass prompted serious political questions regarding settlement. The first question concerned the ownership of the lands. The federal government, the states and the Native Americans all had a claim to them. Native Americans felt they held title to their traditional lands that they had occupied for centuries. The former colonies assumed that the victory over the British entitled the government to the lands.

Individual states had their own agendas. Seven of the former colonies had western boundaries by colonial charter that extended as far west as the Mississippi river. They wanted control of these lands for their own development. The former colonies with no western lands, six, held up ratification of the Articles of Confederation until the seven land holding colonies agreed to cede their lands to the federal government for the good of the whole (Faragher 2000:105-106). After the federal government controlled the lands, it was still unclear on a way in which to develop them. Different regions of the original thirteen states had developed different land use patterns. The new land

ordinance developed to divide the frontier included ideas from the northern and southern states. The government wanted professional land surveys and orderly development, which was a characteristic of New England. But the ordinance also proposed the sale of lands directly to individuals, which was a southern concept.

The Land Ordinance of 1785 measured land and allocated it to individuals. The traditional land measurement system of metes and bounds, which described the parcel by distinct features and contiguous plots, was rejected in favor of township boundaries. All land was divided into townships six miles square by lines running in a grid due north and south, and due east and west. These meridians and baselines divided the frontier into numbered ranges and townships. Each township was further divided into thirty-six one square mile sections of six hundred and forty acres. The sections were then subdivided into half sections (320 acres), quarter sections (160 acres), half-quarter sections (80 acres) and quarter-quarter sections (40 acres). All western lands were transferred into private ownership by this ordinance (Faragher 2000:107-109).

Initially, land sales were to be no smaller than 640 acres at one dollar or more per acre. This was done in the hope of generating revenue for the government of the United States. The government anticipated that land speculators would purchase lands and sell them in smaller parcels to frontier farmers. This, however, did not happen. Squatters settled north of the Ohio River without title and had to be removed forcefully by the federal government. Several groups of influential people, moreover, tried to claim large parcels of land without paying the minimum one-dollar per acre. This led to large quantities of land being acquired by a very few people at a fraction of its proposed value (Faragher 2000:111-113).

Finally, the federal government had to decide the relationship between the old states of the federal union and the new states to be developed from frontier lands. Thomas Jefferson assumed that statehood would become the norm once a certain population threshold was reached. Congress rejected this idea, which argued that the region west of the original thirteen states needed to be controlled more rigorously. The Northwest Ordinance of 1787 divided the area north of the Ohio River into a number of territories. The territories were to have complete equality with the original states, as well as with all other areas admitted to statehood. The Northwest Ordinance has been called "one of America's greatest contributions to political theory" (Faragher 2000:115) but Faragher disagreed. He argued that the negative attitude of the east toward the west (frontier) motivated the passage of this ordinance. The eastern states were autocratic and excluded self-government until a minimum population threshold had been reached (Faragher 2000:115).

The frontier areas themselves, at least according to Robert Mitchell, should continue to be reevaluated in a manner that emphasized their marginality. Furthermore, Mitchell believed that it is important to interpret frontier communities on their own terms with respect to perceptions of political representation and responses to changing circumstances. He stated that frontier politics were local in nature with a lack of deference to national political authority and status. This led to a different political climate on the frontier (Mitchell 1998:27).

In a completely different tone, Jerome Steffen argued that political change occurred in insular frontiers due to their separation from the home culture (Steffen 1977:xiii). Steffen also visualized the rise of the common man as part of the frontier experience.

He particularly locates this change in American religious beliefs. While this was not necessarily a political process, "The Great Awakening" of the late eighteenth and early nineteenth centuries has been interpreted as a new commitment to both religious freedom and political awareness (Steffen 1977:18-19).

The effect the development of the frontier had on the rest of the United States was, and is, profound. The Land Ordinances of 1785 and 1787 had significant effects on the development of the frontier of the Old Northwest, as well as subsequent frontiers during the nineteenth century. The manner in which the federal government removed and excluded native peoples from an active role in the development of the frontier has had profound effects on Native American communities until the present day.

**Conclusion**

Therefore, the "frontier" of this dissertation was agricultural in scope and insular in nature. Changes occurred on the frontier that did not occur in the older settled regions of the east. Adaptation was the key to frontier life, whether it was as a "tramp" species, in the cultural ecological context, or by the extensive nature of slash and burn agriculture. A young, rapidly growing population expanded into agricultural lands that were already being exploited by the Native American population (Jordan and Kaups 1989:65). For, the "vacant land" of Turnerian history did not actually exist. Native Americans had been present on the land long before Anglo-American colonization. This Native American presence, while small, still had an impact on frontier development.

The frontier was a zone of contact where Native American, Euro-American and other ethnic groups developed a syncretized cultural complex. This creolization process

helped create an adaptive strategy for effectively exploiting the agricultural habitat of southwest Michigan. The syncretized culture used agricultural techniques adapted to the environment that was being exploited. The culturally complex agricultural practices of eastern states, notably New England and New York, were not efficient on a frontier that was not linked initially to an external market. These adaptations led to a specific type of short-term settlement that Mitchell has described as "Open Country Neighborhoods." These neighborhoods were gathering points for settlement. This dissertation will argue that "Open Country Neighborhoods" were in actuality kin-based clusters of related individuals. This "clustering phenomenon" was a cultural ecological adaptive strategy for the settlement of the frontier of southwest Michigan in the first half of the nineteenth century.

# Chapter IV

## American Kinship on the Frontier

### Introduction

This chapter explores the role of kinship on settlement and development of the frontier of southwest Michigan. First it is necessary to discuss the role of kinship in society in general and Euro-American society in particular. Many different aspects to kinship are important when discussing its effects on society and how different societies deal with interpersonal relationships. In anthropological terms, all societies have specific "building blocks" of which the culture is constructed. For over one hundred years, kinship has been considered by many theorists to be one of those "building blocks." The other cornerstones of cultural construction are economics, politics, and religion (Holy 1996:151; Schneider 1984:187). As a central aspect of cultural construction, kinship engendered a great deal of debate about its significance.

Kinship's significance in the development of a culture is a subject with relevance for examination of all societies, western or non-western. As a vital component of cultural construction, it has an effect on the development of a new society from its inception. As a major social factor, kinship and its role in melding groups of people into a cohesive unit is crucial to the development of a frontier society.

The institution of kinship, in western society, and in this particular instance, frontier society, with its emphasis on the nuclear family, has relevance to the study of frontier settlement. The primary settlement groups on the frontier were nuclear families, despite the fact that they were at a distinct disadvantage in a frontier environment such as southwest Michigan. They had few support groups, nor was there easy access to a labor

pool which was required to establish a permanent residence in the wilderness. Settlements on the early frontier tended to be widely scattered - sometimes many miles apart. What this meant for the pioneer settlers was that they had to be self-sufficient. They depended on their own resources to settle, clear, plant, build shelter, harvest and prosper in their new environment. In many instances, frontier families included not single households, but groups of households that settled together. Many of these were kin groups, consisting of nuclear families, related to one another, either by marriage or blood ties. This dissertation seeks to examine the significance of kinship to settlement on the Michigan frontier during the nineteenth century.

**Kinship defined**

No single definition can illuminate either kinship or kinship studies. Different theorists defined kinship differently, due to differing reference points. Robin Fox (1967) identified kinship as pivotal to interaction even in modern society. He believed the relationship between ancestors and other kin were key to obligations, loyalties, social and legal claims and sentiments, especially in nonwestern societies and developing countries (Fox 1967:13-15).

For Linda S. Cordell and Stephen J. Beckerman, kinship "defines the basic patterns of social inclusion and exclusion with respect to obligations" (Cordell and Beckerman 1980:3). They viewed kinship as an adaptive strategy in which people manipulate kinship for specific purposes. This manipulation is a different aspect of kinship relations. Manipulation of kinship can have significant social consequences, whereby certain people are recognized as kin, and therefore engage in socially defined sets of rights and obligations, while others are excluded.

Burton Pasternak, in his work on social organization identified kinship relations as universal and fundamental to all human societies. "No matter how they conceive of relatedness, human beings everywhere recognize kinship and use it as a basis for defining the content of relationships between people and very often as a basis for forming social groups." (Pasternak 1976:82). He saw kinship as a basic concept associated with the integral formation of social organization, not just reciprocal obligations.

More recent interpretations of kinship considered the various ways in which kinship may be conceptualized in different societies. The critiques of kinship studies by David M. Schneider (1984) and Ladislov Holy (1996) emphasized the importance of understanding kinship not only as a biological relation, but as a cultural application of relationships that may or may not be biological. Schneider's critique of kinship studies argued that "kinship exists or not depends on how it is defined by the observer, which in turn states the observer's conception of 'it' and his relationship to 'it'" (Schneider 1984:vii). He also believed that any scholar doing ethnography defined kinship in relationship to him or herself, and that this ultimately affected the results of the fieldwork and the ethnographic material that resulted from it. Schneider also stated "the term kinship is used to refer to both the biological system of relations, quite apart from any sociocultural aspects, and also to the sociocultural aspects" (Schneider 1984:97). He argued that it might be impossible to separate the sociocultural aspects of kinship from the biological aspects of kinship. Ladislov Holy noted "that in all human societies some people consider themselves to be more closely related to each other than they are to other people, and that this mutual relatedness is the basis of numerous and varied

interactions" (Holy 1996:9). Most modern theorists, like Holy, believed that kinship cannot be adequately separated from other aspects of cultural investigation. That is, it is impossible to separate the study of kinship from economics, religion, and politics (Holy 1996:3).

**History of Kinship Studies**

Lewis Henry Morgan is credited with the first significant interest in kinship studies. His late nineteenth century investigations of kinship terms used by the Iroquois for their interpersonal relationships established the study of kinship. Morgan believed that kinship terminology reflected a society's understanding of its biological relationships. He argued that the Iroquois system (and others) were ones of "primitive promiscuity." In these societies, Morgan stated, people did not understand the biological relationship associated with sexual reproduction and therefore did not know whom their genetic fathers or mothers were. He envisioned an evolutionary scale from primitive to complex, in which (of course) the Euro-American or Western system was the most highly advanced. This Eurocentric conclusion has been refuted; as all kin classificatory systems exist at all levels of cultural "development", whether "primitive" or "advanced". Morgan's most important contribution to anthropological theory was the concept that kinship terminology recognizes biological relatedness, and that cultural recognition follows this biological recognition secondarily (Schneider 1984:99). This theory has engendered a significant amount of debate and research over the past century.

Despite Morgan's examination of the Iroquois and his conclusion that kinship terminology was recognition of biological relatedness, Emile Durkheim in contrast

argued that kinship cannot be recognition of a biological relationship, but was entirely a social concept. He used the example of the "natural child" to illustrate his point. An illegitimate child was not recognized as kin to his ascendants and was not considered related to them unless acknowledged by society. Durkheim also used the example of ancient Roman society, in which a child was not recognized as a member of the family unless his or her father received the child into the group with an appropriate ceremony. According to Durkheim "kinship is constituted of the jural and moral obligations that society imposes" (Schneider 1984:99-100).

The debate about whether kinship was biological or social or a combination of both continued throughout the early twentieth century. Throughout this debate, the social aspect of kin recognition was defined in terms of physical kinship. Social kinship was not defined except by reference to rights, privileges, duties or obligations. Kinship in the social sense "is not described, it is not distinguished from anything else in its essential character or by contrast with what it is not" (Schneider 1984:110).

Bronislaw Malinowski rejected this argument in his work among the Trobriand Islanders. He emphasized that consanguinity was a sociological concept and not a physical (biological) bond. Among the Trobriad Islanders, at least, kinship was more social than biological in nature (Holy 1996:15).

In the latter part of the twentieth century, Harold W. Scheffler and Floyd G. Lounsbury defined kinship with respect to a native or folk theory of reproduction. Scheffler noted a wide variation in folk theories of reproduction but concluded that the mother-child connection was a human universal and based his definition on this. According to Linda Stone, Scheffler's position on kinship emphasized the importance

of the way in which people drew connections among themselves based on their concept of reproductions, not how they are "biologically" related. Their emic view of biological reproduction was the foundation for their kinship relationships. Stone argued that Scheffler's position, was the way most anthropologists were probably viewing kinship anyway, but "his explicit attention to emic views contributed to new debates over what kinship is" (Stone 2001:4).

Schneider, in his critique of kinship studies, nearly agreed with this folk-cultural definition. He concluded Scheffler's definition of kinship had certain advantages for cross-cultural examination of kinship. Scheffler's definition of kinship with its reference to reproduction and geneology, i.e. the mother-child relationship as universal, "means that there is a relationship of parent and child (no matter how this may be defined in any specific culture), which gives rise to all other genealogical relations. By thus separating the fact of genealogical relationship from the details of each specific native theory, the highly variable folk theories become comparable" (Schneider 1984:127). Linda Stone also supported Scheffler's view in assuming the mother-child is a universal relationship and used this concept in her work, *Kinship and Gender*, when she discussed the roles played by both women and men in reproduction and kinship (Stone 2001:8).

In recent discussions on the theory of kinship relations, neo-Darwinian evolutionary biology engendered a debate among theorists, especially feminist anthropologists interested in gender. Robin Fox recognized kinship systems as the answer to survival and reproduction as well as having "much to do with the 'facts of life' (gestation, impregnation, domination, and the avoidance of incest)" (Stone 2001:9). Stone

suggested that the Neoevolutionist's position is "comparable to Gellner in that they are interested in the overlap between "social kinship" and (etically) presumed biological relationships" (Stone 2001:10). Many feminist anthropologists believed that the combination of gender inequality with biology was an attempt to "naturalize" that inequality and thereby perpetuate it (Stone 2001:10).

The constitution of the basic unit of kinship has also become a hotly contested topic. According to Ladislov Holy, kinship theorists have adopted two positions. Many theorists, including Meyer Fortes, R.N. Adams, Paul Bohannan, Ward H. Goodenough, and especially Robin Fox "consider the woman and her dependent children the 'nuclear' or 'elementary' familial group in all human societies...the attachment of the child's genitor to this basic unit is highly variable" (Holy 1996:30). This implied that the family can be identified with the relationship between a woman and her child, no matter how that child was created, for any society in the world. The recognition of filiation -- the concept of being a child of a specific parent -- implied certain recognized sets of relations. These included "four sets of relationships: those between the woman and the man who engendered the child, between the child and its mother, the child and its father, and between siblings." This creates eight 'primary kin types': father (F), mother (M), husband (H), wife (W), son (S), daughter (D), brother (B), and sister (Z). This has been referred to as the nuclear, elementary, individual or conjugal family (Holy 1996:31).

These 'primary kin types' can be extended, according to Holy's interpretation of A. R. Radcliffe-Brown, to connect these individuals with 'relationships of the second order.' In such relationships two families are connected through a common member and

beyond this to the 'tertiary kin group' that are the primary kin of the secondary kin group (Holy 1996:32). Geneological connections and the nuclear family concept, while best exemplified by western society, can be seen in non-western societies as well. But nuclear families are not universal; in many societies nuclear families do not exist as in western society. Claude Levi-Strauss, for example, argued that the nuclear family is not the basic unit of kinship. He argued that unit was the avunculate, in which a brother, his sister and the sister's husband and her son form the elemental unit of kinship. This elementary group, when expanded formed more complex systems. The avunculate was also associated with the universality of the incest taboo, seen in all societies (Holy 1996:35-37).

Robin Fox also envisioned the avunculate arising from the mother-child bond to which males still need to be attached for the protection of the infant. "It seems to be a peculiarly human thing to allow the asexual brother-sister tie to take over certain aspects of the parental role from the husband-wife tie. This gives rise to avuncular responsibilities that may flower into full-blown matrilineal succession and inheritance, or to the classical indulgences of the patrilineal avunculate" (Fox 1993:227).

In summary, kinship as a theoretical concept has a myriad of aspects. From the earliest theories to modern feminist interpretations, debates on kinship are evident. What seems to be universally accepted, is that the biological bond of mother-child is seen in all societies, but how those societies deal with it differs by the society in which it occurs. The importance of the cultural recognition, per Scheffler, of these biological bonds varies from society to society. The importance of cultural recognition of kinship, whether biological or not, has been accepted by most theorists as the defining concept

for kinship studies of every culture which has been examined. This emic conceptualization of kinship makes it possible to examine kinship cross-culturally and therefore allows anthropologists to further their knowledge of kinship in many different societies.

Furthermore, the basic unit of kinship has to be recognized as the mother-child bond, whether this includes the genator of the child, or the mother's brother as the associated male personage depends on the individual cultural recognition of this bond.

**Kinship's Role in Society**

When kinship units (whether nuclear or avunculate) combine into groups, the combinant groups become important organizational units for various societies. These groups have many different roles and can accomplish more than can individuals. One group, for example, may be able to claim reciprocal support or protection from another group. In some cases, for example, the economics of production necessitates larger units of land and labor than a nuclear family can provide. It can be more economically rational to maintain the land and the group rather than dividing the whole. This is particularly important in agricultural societies where land is scarce and may only be divided to a limited extent. Cooperative groups of people also may be needed for a particular task, only able to be accomplished by a group larger than a household. A common way to deal with these social difficulties, especially in non-western societies, particularly pastoralist and horticulturalist, is through the development of kinship groups.

A common way for societies to organize kinship groups is as descent groups. Descent groups are "any publicly recognized social entity in which being a lineal

descendant of a particular real or mythical ancestor is a criterion for membership" (Haviland 1995:274). Descent can be defined in one of two ways. The biological meaning of descent, whereby one is considered part of a particular descent group by birth or association, or the jural meaning of descent, a method for determining succession to property, social position or rank. Biological and jural meanings usually, but not always, coincide with one another. Anthropologists usually employ the jural meaning rather than the biological meaning (Pasternak 1976:101). Descent groups can assume a variety of forms. Descent groups can be organized either unilineally, ambilineally, or through parallel or double descent (bilaterally). Unilineal descent is divided into two groups as well, either matrilineal descent, whereby the kinship relationship is traced through the female line, or patrilineal descent, whereby the relationship is traced through the male line. Ambilineal descent traces inheritance through either the male or female line while parallel descent traces females through the female line and males through the male line. In double descent, descent is traced through both the male and female line, with some aspects of the social structure traced through the male line, while others are traced through the female line (Pasternak 1976:101-103). Groups may also be affiliated as a "kindred." A kindred is a kinship group having one person in common to which all people in the kindred are related. No two people, except siblings, have the same kindred to which they are related in the same way. All persons in the kindred are related to Ego, but not necessarily to each other. Ego is the referrant in this relationship, which is defined laterally or bilaterally. Kindred groups can play important roles in some societies (Haviland 1995:304).

In nonwestern society, kinship systems assign status, which can be defined as a collection of rights and duties. They also assign social roles, which are representations of the dynamic aspect of that status. Human behavior cannot be seen as random or unpredictable, according to Pasternak, and this behavioral regularity endures over time. For nonwestern societies, most important statuses are defined in terms of kinship position. The way in which people refer to their relatives has long interested anthropologists because these terms can illuminate other aspects of the society being studied, especially culture and behavior (Pasternak 1976:124-125).

Robin Fox (1967:18) noted that "Kinship systems, unlike technological inventions, cannot be ranked as better or worse, higher or lower; they simply represent alternative ways of doing things." Anthropology recognizes six kinship nomenclature systems. These are: Iroquois, Omaha, Crow, Sudanese, Hawaiian and Eskimo kinship. The Iroquois, Omaha, and Crow systems are all a subset of a system known as Bifurcate Merging terminology. This type of system equates (merges) some uncles and aunts with the parents' generation, while others are distinguished from them (bifurcated). These systems are frequently associated with unilineal descent groups. Iroquois terminology is the most common bifurcate merging terminology and is used in many areas of the world, not just North America. Sudanese is the second terminological group, known as Bifurcate-Collateral. In this system all relatives are referred to in different terms. Collateral relatives are distinguished (bifurcated) from lineal relatives as well as from one another. Generational terminology, otherwise known as Hawaiian, is most often associated with bilateral or ambilineal descent groups and uses the fewest terms. It is called the generational system because all relatives, male or female of the

same generation, are referred to by the same term. This system is indicative of an absence of strong unilineal descent, as well as the recognition of relatives as equivalent to one another. Lineal terminology, also known as Eskimo or Inuit, is a system that emphasizes the nuclear family, and distinguishes it from Ego's other relatives. Societies that use Eskimo terminology are usually ambilineal or bilateral in nature. The Eskimo system is also almost always associated with either very simple societies or very complex ones, where economics encourage emphasis on the nuclear family. The Inuit, or Eskimo people, and western societies such as European and American societies all follow the Eskimo terminological system (Pasternak 1976:130-138, Haviland 1996:291-292).

**Kinship's Role in American Society**

Kinship in western society, especially American society, differs from kinship in nonwestern society in many respects. First, what anthropologists call kinsmen in nonwestern societies, Americans refer to as folks, family, people, kinfolk, or relatives (Schneider 1968:21). But there is a difference between relatives and family when one is discussing kinship in American society. The family refers almost exclusively to the nuclear family of immediate relatives, that is the father, mother, children and siblings, while relatives are those people related to the family member either by blood (consanguineal) or marriage (affinal). This emphasis on the nuclear family is based on the Judeo-Christian notion of creation. As Kuper noted, "God the father, the priest as father, Mary mother of God, and so forth, are all very closely involved with ordinary fatherhood and motherhood" (Kuper 1999:141). But the nuclear family is only one aspect of American kin relations.

American kinship is divided into two units. Different theorists refer to these two units of kinship by different terms, but Schneider's distinctions are clear enough and used often enough to be appropriate here. According to Schneider, American kinship is divided into two groups, the Order of Nature and the Order of Law. The Order of Nature includes relationships based on a blood tie (consanguineal relations). This is the biological, geneological connection that Americans have with one another. This Order of Nature is distinguished by "blood" connections to relatives, the sharing of a biogenetic substance, "the same flesh and blood" (Schneider and Smith 1973:10-11). The Order of Law (affinal), according to Schneider, is a family relationship that is "a code of conduct" imposed by law, not nature, and consists of rules and regulations, customs and traditions (Schneider and Smith 1973:11). The Order of Law can be broken or dissolved, and terminated by death or divorce, whereas the Order of Nature cannot because it is a relationship built first on blood ties and then on cultural connections. The American cultural system of relatives is built out of these two elements.

One aspect of this system, which can have an important effect on the kin relationship, is the concept of collaterality. Collaterality refers to kinship ties associated with geneological distance among relatives. Collaterality is an important concept in many cultures and plays a role in American kinship. In American kinship, collaterality "rests on the biological fact that among consanguineal relatives of the same generation and sex, some will be more closely akin to Ego than others. A direct ancestor, for example, will be more nearly related than his sibling or cousin" (Murdock 1949:103).

Additionally, "collaterality appears to be a basis for mobilization of action by relatives" (Farber 1981:ix).

Another aspect of American kinship that affects familial ties is the symbolic recognition of filial relationships. The term "relative" is an indistinct set of people for many Americans. The further one goes from Ego, the less likely geneological ties are to be included into one's "set" of relatives. Linda Cordell and Stephen Beckerman refer to this phenomenon as a close-distant dichotomy. This "fading-out" principle depends on two factors; first, the geneological tie and second, the behavior associated with a particular relative (Cordell and Beckerman 1980:19). For example, one may acknowledge one's first cousins as relatives, but may or may not acknowledge their children's relationship to the referent (or perhaps that of their grandchildren). It is also common in American society for a person to be more closely associated emotionally with one side of the family over the other side. An example here may be helpful. If a person associates with either the maternal or paternal side of the family more than the other, it is common for that person to recognize relatives from the preferred side as further from ones self than from the other side of the family.

Western models of kin relations have legal aspects associated with them that have developed over hundreds -- sometimes thousands -- of years. There are four primary models of kinship for Western culture. The model employed in any situation will vary according to the demands of that situation. The Parentela Orders Model, for example, is derived from traditional Jewish law of intestate succession. It refers to legal rights and obligations of relatives in relationship to Ego. Each Parentela is headed by an ancestor of Ego, with Ego heading the first Parentela. With each Parentela, relatives are located

with respect to the number of generations one is removed from the head of the Parentela. In this kinship model, all lower ranked members have priority over higher ranked members with respect to rights and obligations to Ego. For example, Ego's children would inherit from Ego before Ego's parents or Ego's siblings. This kinship model is in use for Laws of Intestacy in Germany, Israel, and the United States (Farber 1981:4-6).

The second model, known as the Civil Law Model, was developed in Ancient Rome and is used to compute generational distances. For example, a parent is one link, from Ego, a grandparent two links, a child one link, a grandchild two links. This system is used by most Western civilizations for defining intestacy and what constitutes incestuous marriage (Farber 1981:6-8).

The Canon Law Model is similar to the Civil Law Model, because it also counts generational links. It differs from the Civil Law Model in the manner used to determine collateral relative linkages. For example, when determining the distance between Ego and his great nephew, one counts the generational links to the nearest common relative, i.e. Ego's parents and then counts the links from Ego's parent to Ego's great nephew. The geneological distance is determined by taking the larger of the two distances when determining distance from Ego, instead of adding all distances from Ego to the collateral relative, as one would in the Civil Law Model. This model was first developed for the Roman Catholic Church and made its way into English Common Law (Farber 1981:8-10).

The Genetic Model, described by David M. Schneider in his discussion of American kinship, refers to kinship relationships in a biogenetic distance formula. This distance is

associated with the degree two people share a common heredity. The "degree of parentage" decreases exponentially with the number of generations between two people. This model is primarily applied to laws pertaining to "prohibited marriages, inheritance of property, and even royal succession." Unlike the other models, a precise mathematical geneological map can be completed for anyone by determining their "degree of parentage" (Farber 1981:10-11).

In his early work on American kinship, Schneider proposed that there were three meanings of distance in American kinship. These distances are 1) physical distance, 2) socio-emotional distance and 3) geneological distance. It is Schneider's interpretation that these meanings of distance "need not all apply in the same way or at the same time. A person who is genealogically close may be physically distant and neutral on the socio-emotional dimension" (Schneider 1968:72-73). This connection of distance with the concept of kinship suggests for Bernard Farber that the legal codes (models) can be regarded as spatial metaphors for social structure (Farber 1981:40-41).

Socially, American kinship systems follow one of two basic patterns of kinship organization. These forms are also associated with the legal system. The two patterns are known as; first, the Western American System and second, the Biblical System. Both patterns refer to lines of descent and affiliation with kin groups, and emphasize the nuclear family. These two patterns are found primarily in the Midwest and Western states for the Western System, and the Northeast and Southern States for the Biblical System (Farber 1968:29).

The Western American System is found in seventeen of the twenty-two western states, however, excluding Texas, which follows the Biblical system. Michigan does

not conform to this pattern. It is the only state east of the Mississippi in the north-central region that does not follow the Western American System. Under this system, first cousins may not marry, but affines may, as well as second cousins. The referent in this system, Ego, maintains a stable bilateral affiliation with his kingroup, both before and after marriage (Farber 1968:29-33).

Eleven states, including Michigan, conform to the Biblical System. Ten of these are located east of the Mississippi. In this system, first cousins may marry, and in certain instances are considered preferable partners. Affines -- people who are related by marriage -- are not allowed to marry in certain instances. This prohibition is related to the importance of the unity of the nuclear family in this system. The Biblical System "can be described as a cumulative bilateral affiliation of an individual with virilateral descent...[by which] an individual belongs only initially to the kin groups of his father and his mother, and after marriage he gains membership also in his spouse's father's kin group" (Farber 1968:33). This creates a linkage between three families, Ego's own family, his spouse's family, and his family of procreation. These linkages may play an important role on the frontier, especially where more than one family is associated with settlement.

The geographical distribution of these two systems is related to settlement patterns associated with westward expansion in the nineteenth century. The Biblical System is concentrated in the Northeast and the South. These areas were settled early and are usually considered to be ethnically homogeneous. Michigan is included in this group, because, it was settled almost exclusively by people from New England (Dunbar and May 1995:91). In Farber's opinion, this system is associated with the geographical

regions mentioned because these regions have a long established tradition and were already highly stratified by the time of the Revolutionary War. In New England and the Southeast, family norms were transmitted from generation to generation, and exerted maximum control over individual nuclear families (Farber 1968:39).

American kinship emphasizes the nuclear family, but family relationships can be extended by blood (consanguineal) or marriage ties (affinal). Schneider's Order of Nature and Order of Law discusses the ways in which Americans identify their relatives. Farber's (1981:ix) concept of collaterality also refers to kinship ties beyond the nuclear family. These geneological distances may play a role in the ways in which Americans associate with one branch of their family versus the other. Farber's argument resembles the close-distant dichotomy of Cordell and Beckerman (1980:19), whereby some relatives are considered more closely related than other relatives, simply by the fact of their behavior.

The legal ramifications of the different models of American kinship are important for inheritance, succession, rights, obligations and marriage availability. These models have resulted from hundreds of years of common usage. Property ownership and marriage availability are also legal questions in American society. The American legal system has very specific ways to define the rights and obligations of relatives.

The legal aspects of the Biblical System of American kinship played an important role in kinship and settlement patterning on the Michigan frontier. This system tends to emphasize the importance of the nuclear family when investing in kinship relationships. Michigan is the only state in the north-central Midwest that follows the Biblical System of kinship.

**Kinship on the Frontier**

When examining the effect of kinship on the frontier, it is first important to discuss who were the people who came to the frontier of Michigan in the early nineteenth century. The household was the basic unit of settlement on the frontier (Davis 1977:37). Almost no one lived or traveled alone to the frontier. Very frequently, households (nuclear families) traveled to the frontier in groups. This approach eased the difficulty of travel to the frontier areas. Families, friends, church members and others "banded together into groups, sometimes makeshift in nature and sometimes highly structured" (Davis 1977:42). Group migration not only provided security along the way, it also provided "instant community" at the end of the journey. Group settlement patterns have been studied and documented for many areas of the frontier. "Virtually every frontier county received at least one group of migrants sometime during its existence" (Davis 1977:44-45).

Group settlement led to what has been called a two-stage migration. One or two adult males would search for land on the frontier. When they found an appropriate site, they would lay claim to it and then return east for the rest of the group or family. Another form of two-stage migration occurred when part of a family would migrate, leaving the rest in the East. Once the initial group became established, within a few months or years, they would then send for, or return and accompany, the remainder of the family on the journey westward.

Population levels and demographics also played a role in frontier settlements, as Stanton Green (1979:85) suggested. Both labor demands and a sufficient marriage pool required minimum population levels. While Green and Davis noted that age at marriage

also decreased on the frontier when compared to more settled areas (Green 1979:80, Davis 1977:51), the demands of a marriage market still required a sufficiency of potential males.

Green's cultural ecological approach hypothesized the need for a young, rapidly expanding population in order to maintain settlement continuity. The demographics of colonization required a sufficient labor supply of young people who would reproduce quickly in order to prosper and expand. This may have contributed to potential "kinship clusters" on the frontier. Sex ratios on the frontier of Michigan were approximately equal: 53% males vs. 47% females for Calhoun County. The largest age group for both males and females in the 1840 Calhoun County Census was between twenty and thirty years of age. These facts suggest that nuclear families primarily settled Calhoun County (Federal Census Records 1840:Calhoun County). The 1840 Census also revealed a very large proportion of young children (under age ten). They comprised about thirty percent of the total population (greater than 3,000 in a total population of just over 10,000). These children could only have accompanied a parent or another adult relative to the frontier. This is another fact that lends support to the idea that nuclear families were the primary settlement group on the frontier.

Many scholars have argued that group migration to the frontier, led to a settlement pattern referred to as a "clustering phenomenon". James Davis believed "whatever the motive for group migration and settlement, the practice lent assistance, encouragement, and companionship to those grappling with known and unknown challenges of the frontier" (Davis 1977:45). Jordan and Kaups (1989) examined the idea that communities on the frontier had a kinship basis to them on the American backwoods

frontier. They contended that "the early years of colonization witnessed a high degree of community solidarity, and intermarriage strengthened the ties" (Jordan and Kaups 1989:84). They also stated that "for the initial stage of pioneer settlement, the term 'isolated' farmstead may be more descriptive, since backwoods settlers apparently tended to scatter, leaving three to eight or ten miles between dwellings. The individual cabins usually later became the focus of loose family or clan clusters" (Jordan and Kaups 1989:123).

Roger Mason, in his work on pioneer settlement of northeast Missouri, found settlement clusters common in the early period of settlement. "Small clusters usually were composed of households of brothers and brothers-in-law, while larger clusters were composed of several smaller *kinship-based clusters* (italics added) that shared a common origin or the same religious affiliation" (Mason 1984:87). Mason emphasized that it was the social interaction, so important for success on the frontier, demanded these clusters and that "initial settlement was composed of discrete clusters of related families" (Mason 1984:5).

Cynthia R. Price and James E. Price examined farmstead settlement patterning in the Ozarks in the early nineteenth century. They concluded that the archaeological data from this region "suggest the presence of an as yet little understood 'clustering phenomenon'...in which family units moved together with parents and married sons and daughters or sets of brothers settling adjacent to one another" (Price and Price 1981:248). Price and Price further suggested that this "clustering phenomenon" witnessed in their research area had social implications as well. By centralizing activities and workgroups for cooperation, it maximized communication, trade and

defense, while minimizing competition for the resources critical to survival on the frontier (Price and Price 1981:248).

The nature of frontier settlement, therefore, with highly dispersed nuclear family farms, helped create local networks with social as well as economic aspects. Kin-based cooperative efforts involved everything from clearing land of trees, plowing and planting, to construction of houses and outbuildings - all necessary elements of a successful settlement (Jordan and Kaups 1989:84). The integration of friendship, (which may have developed into kinship) kinship ties, and other social aspects such as schools, and churches all contributed to the "clustering phenomenon," which affected settlement decisions for not just one or two families, but entire groups of people.

**Settlement Model for Southwest Michigan**

In order to understand the settlement patterns associated with kinship and nuclear family farmsteads in southwest Michigan, a model that encompasses social effects on settlement needs to be developed.

The phenomenon of American kinship with its special emphasis on the nuclear family should have significance to the processes of settlement on the frontier of southwest Michigan. The primary unit of settlement on the frontier was the nuclear family as a household unit. Some of these household units were known to have grouped together for travel as well as "instant" community when they arrived on the frontier. This group travel also occurred in a two-stage process, whereby part of the group would travel to the frontier and the remainder of the group would follow after the initial settlement had become established.

If some of these groups that traveled to the frontier were kin related groups, then one would expect to see evidence of "kinship clusters" in southwest Michigan. Kinship clusters should be visible in the historical record as discrete groups of interrelated individuals, either consanguineal or affinal, which settled in proximity to one another on the frontier.

American kinship is known to emphasize the nuclear family, as previously stated, but the extended family of relatives should also play an important role since Americans do recognize, as well, the importance of extended families (brothers, sisters, parents, in-laws, uncles, aunts, cousins, etc.) to the well being of the group. The importance, recognition and dependence on one's relatives outside the nuclear family should become more critical when dealing with a hostile environment such as the frontier of southwest Michigan. American kinship, especially the Biblical System, which is known to have operated in Michigan, emphasizes the nuclear family as well as bilateral affiliation of family members, extended by blood or marriage. The linkages this can create for an American kinship group could have significant effects on the settlement patterns seen during the frontier period.

According to Jordan and Kaups, the settlement pattern on a frontier was initially discrete scattered farmsteads often miles apart. These scattered farmsteads would later become the focus of a kinship cluster and stand no further than one mile apart (Jordan and Kaups 1989:123). This scattering effect made it difficult to have any type of significant social interaction. This dissertation argues that the "clustering phenomenon" seen on frontiers were actually discrete kinship clusters of interrelated individuals and that these clusters acted as a social integrating factor. Consequently, the nuclear family

clusters may have acted as a focal point for future settlement on the frontier. These clusters of nuclear families would then be responsible for the development of the initial organization or "settlement."

The "open country neighborhood" phenomenon that Robert Mitchel and Warren Hofstra examined for Virginia's Shenandoah Valley, in the early frontier period of the eighteenth century, may also have played a significant role in the early period of frontier settlement of southwest Michigan. The dispersed family farms of the Virginia backcountry did not lose their social cohesiveness. In this region several family farms were dispersed one half to one mile apart within settlements several miles long and wide. The individual family continued to fulfill labor requirements. "Land, kinship and ethnicity formed the elements of neighborhood and transcended the geographical and social barriers created by dispersed settlement patterns" (Mitchell and Hofstra 1995:133).

This dissertation argues that nuclear family settlement on the Michigan frontier developed localized networks, as did other frontier settlements (Farragher 1986:57-60). These networks were comprised of 1) kinship ties 2) social friendships (which may have developed into kinship ties) and 3) neighborhood trade networks (Farragher 1986:131-135, Perry 1990:90, Mitchell and Hofstra 1995:142-143). While the nuclear family was the most elementary unit of this hierarchy, it provided the base for a larger community system (Price and Price 1981:242). This community system included activity areas such as mills, churches, cemeteries, stores and schools. Development of these networks between small groups of people over time is an aspect that needs

integration into the settlement pattern seen in southwest Michigan. Local networks, therefore, had social and economic, as well as kin-based factors associated with them.

This model of settlement in southwest Michigan generates four hypotheses that this dissertation will investigate:

1. IF southwest Michigan can be considered an insular frontier as described elsewhere by Jerome Steffen and Price and Price, THEN settlement patterns seen on the frontier of southwest Michigan should follow a similar development cycle as seen on other insular frontiers.
2. IF the nuclear family farms were the primary settlement mode for this region, as presented in this settlement model, THEN one should see evidence of an extensive kin based "clustering phenomenon" in southwest Michigan, as seen elsewhere in early frontier settlements.
3. IF the southwest Michigan frontier developed a settlement pattern associated with self-sufficient farmsteads in open country neighborhoods, THEN these open country neighborhoods should be visible archaeologically as areas of social interaction. They should manifest themselves in such material culture activity areas as stores, mills, schools, churches and cemeteries.
4. IF Calhoun County, during the frontier period of settlement, shows evidence of the clustering phenomenon, as seen on other frontier settlements, THEN this kinship clustering phenomenon may be deemed a prevalent source of settlement on frontiers in general and southwest Michigan in particular.

# Chapter V

## Kith and Kin

### Introduction

Calhoun County in the early 1830's and 1840's was an agricultural frontier as defined in the previous chapters. This frontier was settled primarily by agriculturists who were moving west from New York and New England. They were looking for good quality land where their families could prosper. Families, as stated previously, were the primary settlement group on the frontier. This pattern holds true of Calhoun County as much as it is typical for the rest of the state of Michigan. The nuclear family household was the primary settlement group on the northern frontier, according to Davis (Davis 1977:36). It is the premise of this dissertation that there were groups of interrelated households that made up settlement clusters on the frontier. Significant settlement occurred through clusters of kin groups that presumably modified the pattern of nuclear family settlement suggested by Davis. The processes leading to settlement clustering observed in Calhoun County may also account for settlement patterns seen on other frontiers.

The kinship clusters present on the frontier of Calhoun County were similar in many respects, and yet there were some interesting dissimilarities that will be discussed. Three types of kinship clusters were observed in this research. The most common type was the multigenerational cluster. Parents and their adult children moved together to the frontier to form a kinship cluster. Another common kinship cluster observed was the sibling cluster. Siblings, but especially brothers, and their associated extended families, frequently settled together on a particular parcel of land in the county. The third type of

kinship cluster encountered in this research was an extended family cluster. These extended family clusters consisted of affinal kin as well as consanguineal kin. Another example of an extended kinship cluster combined a multigenerational cluster and a sibling cluster. Several different types of extended family clusters were discovered in this research and were grouped together under this category.

Kinship clustering and settlement distribution are discussed in the following sections in a chronological order, starting with the earliest settlements in the townships by kinship clusters. Each township is discussed separately, except where kinship clusters were found which extended past township boundaries. It is the story of these groups of pioneer families, i.e. the kinship clusters, which will be examined in this chapter.

**Pioneer Kinship Clusters of Athens Township**

Athens Township was one of the first areas settled in Calhoun County. The township originally consisted of the four townships of Athens, Burlington, LeRoy, and Newton and was organized, including Townships 3 and 4 South, Ranges 7 and 8 West, as this township in March 1835. Previous to this point Athens Township was part of Milton Township, which was comprised of the eight townships 1,2,3, and 4 South, in Ranges 7 and 8 West (History of Calhoun County 1877:18).

In the summer of 1831, a group of eight men and their families arrived in the area of Athens Township known later as Dry Prairie. One of these men discovered the prairie, which was not on surveyor's maps, and the group then located (purchased) most of this parcel of land, including most of sections 27 and 34 as well as parts of section 35 (GLO Records 1994). Three of the men were brothers, Warren, Ambrose and Othorial Nichols, comprising a sibling cluster. At least two of the brothers, Warren and

Ambrose, were already married when they arrived in Athens Township and brought their families with them. It is the recorded death of much of the Warren Nichols family; Warren, his wife and three of their eight children, in the cholera epidemic of 1832, which brings this family into prominence in the history of Calhoun County (History of Calhoun County 1877:116). Three of the other men, who were also a kinship cluster, and arrived with the Nichols families, were Benjamin F. Ferris, Alfred Holcomb and Asahel Stone and their family members. This is an affinal family cluster, in that Asahel Stone and his wife, Rebecca Guernsey Stone, had three daughters. Two of these daughters were married to Benjamin F. Ferris (Sabria) and Alfred Holcomb (Ann). The third daughter, Laura, was married, also probably before coming to Athens, because there is no record of her marriage, after arrival, to Norton P. Hobart, who is listed on the 1840 Federal Census as having a wife and daughter. Norton P. Hobart came to Athens Township, in 1835, with Mr. Stone when he returned from New York with his family. Mr. Norton P. Hobart was accompanied to Athens in 1835 by his younger brother, Malin W., who was only seventeen years old at the time (History of Calhoun County 1877:117). Of the two remaining original pioneers of Athens township, Isaac Crossett and a Mr. Brown, little is known, other than that Isaac Crossett was married and had children (at least two sons) when he died in the cholera epidemic with the Nichols family. Another interesting kinship note regarding the Nichols family is the fact that two of the surviving children of Warren Nichols, i.e. Mary and Lydia, married brothers, Robert McCamly and Milton McCamly, part of the pioneering family cluster of Burlington township, who settled there in 1832 (History of Calhoun County 1877:116).

**Pioneer Kinship Clusters of McCamly Prairie**

The McCamly family, a generational kincluster, is credited with the first settlement of Burlington Township. Eleazor McCamly arrived in the summer of 1832, after having sent his second son, Milton, and a man named Richard Tuck, to locate land in the township. Richard Tuck is listed in the 1840 Federal Census as a bachelor and head of household. The McCamly family consisted of Eleazor, his wife, three sons and two daughters. Robert and Milton were both adults when they arrived in Burlington Township, because Milton, the second son, was married in 1834 to Lydia Nichols as previously discussed. The area the McCamly family settled became known as McCamly Prairie (Federal Census Records, Calhoun County 1840; History of Calhoun County 1877:157). Other family clusters settled in Burlington Township as well. The founders of the village of Burlington were brothers William and Ansel Adams who arrived in 1834 with their widowed mother. Another group of siblings, the Sanders, are recorded as arriving in Burlington Township in 1835. Joseph Sanders arrived first in 1833, and what appears as the other brothers, Zebina, John and Wooster Sanders arrived in 1835. Joseph and Wooster Sanders are listed as joint owners of land in Section 24 of the township in 1833. According to the Federal Census of 1840, on which all four of the Sanders' clan members are listed, all four men, three in their thirty's and Zebina in his forty's, were married and had young children at this time (Federal Census Records, Calhoun County 1840; History of Calhoun County 1877:157).

**Pioneer Kinship Clusters of LeRoy Township**

The earliest kinship cluster to arrive in LeRoy Township, in 1836, was the Sprague clan. This group consisted of Jonathon Sprague and Margaret Sprague and their six

sons and two daughters, another generational cluster. The sons were named, Phelitus, Levi C., Argallus, Thomas, Vedder, and Caleb M. By the 1840 Federal Census, all six sons are listed as heads of separate households, but Jonathon is not listed in the census. The Sprague's settled in the northeast section of the township in sections 1,2,11, and 12 on adjoining parcels of land (Federal Census 1840,Calhoun County; History of Calhoun County 1877:166,171; GLO 1994).

Additional siblings also arrived early in LeRoy Township. The Bushnell's, Dudley N. and John H., arrived in the summer of 1837 and settled in section 28 on adjoining parcels. Both Dudley N. and John H. were married with young children at the time they settled in the township. The interesting note about this cluster is that Dudley and John Bushnell were not brothers, but brothers-in-law. Dudley was married to John's sister and they were also probably cousins since they had the same last name (Lewis 2001:79). John's brother, Asa arrived in LeRoy Township in 1840 and settled next to the rest of the family.

Another cluster in LeRoy Township was the Wilson kinship cluster. Thomas Wilson arrived the same year as the Bushnells. He is known to have arrived with a large family and there are four Wilsons listed in the 1840 Federal Census as heads of households in LeRoy Township. Thomas Wilson is over fifty years old on the 1840 Federal Census and the other three adult male heads of household, Roger, William, and James, are in their twenties. The Wilsons all owned adjoining parcels of land in sections 19, 20, 21, 28, 29, and 30 (Federal Census 1840, Calhoun County; GLO 1994).

The Kelseys are another group of kinsmen who arrived early in LeRoy Township. Silas Kelsey accompanied the Bushnells when they arrived in LeRoy Township.

Timothy Kelsey was already present in the township, having arrived in 1836, although Silas had been present in the township since at least 1835. Silas and Timothy settled on adjoining parcels of land in sections 7, 8 and 17. Asa P. Kelsey and Ansel W. Kelsey are also listed on the census of 1840 along with Timothy and Silas Kelsey. Asa P. Kelsey owned land in section 8 as well, although the exact familial relationship has not been determined, one source listed Asa P. and Ansel W. as younger brothers of Silas and Timothy Kelsey (Federal Census 1840,Calhoun County; History of Calhoun County 1877:166; Lewis 2001:281; GLO 1994).

**Pioneer Kinship Clusters of Newton Township**

The fourth township in this group of townships, Newton, also received groups of related individuals as early settlers. The pioneer settler of Newton Township, Granville Beardslee, was not involved in a kinship cluster, arrived in the fall of 1834. Asa and Jeremiah Woodward arrived in 1835, the first sibling kinship cluster to arrive in this township, and settled on section 3. They are both listed in the 1840 census as being over thirty years old with separate households and multiple offspring. Another group which arrived in 1835, the Smith kinship cluster, included the father, George, and his sons, Stephen, George and Henry, a multigenerational cluster, all settled near one another in the southwest side of the township in section 31. John and George Cameron, a sibling cluster, also came to Newton Township and settled parcels in section 17 in 1835. Two more people arrived in Newton together with their families. Stephen Graham arrived in 1836 and settled in section 7. John Pearl, his son-in-law, also arrived in 1836 and settled adjoining land in the same section in Newton Township. Both families had

additional members in their households (Federal Census 1840, Calhoun County; History of Calhoun County 1877:172; GLO 1994).

**Table 5.1: Kinship Clusters of Athens Township**

| Family Name | Settlement | Township | Cluster type | # of members |
|---|---|---|---|---|
| Stone/Ferris/Holcomb | 1831 | Athens | Extended | 14 |
| Nichols | 1831 | Athens | Sibling | 16 |
| McCamly | 1832 | Burlington | Generational | 8 |
| Adams | 1834 | Burlington | Generational | 13 |
| Cameron | 1835 | Newton | Sibling | 3 |
| Sanders | 1835 | Burlington | Sibling | 27 |
| Smith | 1835 | Newton | Generational | 7 |
| Woodward | 1835 | Newton | Sibling | 12 |
| Cole/Lay | 1836 | LeRoy | Extended | 33 |
| Graham/Pearl | 1836 | Newton | Extended | 10 |
| Sprague | 1836 | LeRoy | Generational | 33 |
| Kelsey | 1837 | LeRoy | Sibling | 16 |
| Wilson | 1837 | LeRoy | Generational | 17 |
| Bushnell | 1837 | LeRoy | Extended | 11 |
| Roblyer | 1838 | Athens | Generational | 12 |
| Libhart | 1839 | Athens | Sibling | 8 |
| Bush | 1839 | Burlington | Generational | 9 |
| Miller | 1839 | LeRoy | Generational | 5 |
| Wright | 1839 | LeRoy | Generational | 10 |
| Edmonds | 1840 | Burlington | Generational | 5 |
| Palmer | 1840 | Burlington | Sibling | 9 |
| Smith | 1840 | LeRoy | Generational | 9 |

Table 5.1 (above) lists all the kinship clusters associated with Athens Township settlement in the years from 1831 to 1840. This table lists the family name, year of land acquisition, which township they settled in, type of kinship cluster and number of family members involved in the kinship cluster. Twenty-two kinship clusters are associated with the settlement of the four townships of Athens, Burlington, LeRoy, and Newton. Not all of these kinship clusters had information other than census data available for

them. By correlating the 1840 Census information and land purchase records it was possible, in most cases, to determine the location of these kinship clusters. Some of the kinship clusters were estimated as to their relationship with each other by the ages of the heads of household listed on the Census of 1840. Most information was gathered from historical documents, such as the tax records of 1844, historical biographies, and county histories.

When examining the pioneer settlement of this group of townships it is imperative to be able to visualize how these kinship clusters settled the area and in what ways other non-kin settlers were attracted to and settled in the area. The maps, Figures 5.1 to 5.3, on pages 101, 102, and 103 show the four townships of Athens, LeRoy, Burlington, and Newton with their respective settlers. The red, green, and yellow parcels are those occupied by kinship clusters. The outlined parcels are those parcels of land that are occupied by non-kin pioneers. These non-kin settlers may have been nuclear families, individuals or small groups of unrelated individuals. They do not, however, fit the criterion of a kinship cluster and are therefore not considered one of the three types of kinship clusters as previously described that were associated with settlement of Calhoun County in the early years of settlement. The range in years of these three maps is from 1831 to 1834, 1835 to 1837, and 1838 to 1840. The criterion for dividing the settlement phase into three phases and consequently into three maps was to allow the effect of kinship on settlement to become more apparent.

Examining Figure 5.1 on page 101, for the years 1831 to 1834, it is evident that in the first few years of settlement, the kinship groups appear to have a greater effect on settlement than in the later years of settlement for this group of townships. From 1831

to 1834, it is possible to visualize that most of the settlement of these townships was by related individuals (Figure 5.1). The settlers that were not associated with the kinship clusters frequently settled next to kinship clusters that were already present on the frontier. The two primary areas of settlement during this early phase were associated with what would later become the two village sites of Athens and Burlington in each of the two most southern townships. Very few people settled in LeRoy Township, actually only one family, and they were from Kalamazoo County. The pioneer family in Newton Township was not a kinship cluster.

As the population increased in the later years of settlement, 1835 to 1837, (see Figure 5.2 on page 102) the effect on settlement patterns by the kinship clusters appears to be having less effect on the settlement pattern for some of the four townships, especially Burlington. What is evident is that much of the settlement pattern is still associated with kinship clusters, especially in LeRoy and Newton Townships that had little settlement in the initial period. As people began to settle the areas with low previous occupation they tended to cluster around the existing settled areas. Very little additional settlement occurred in Athens Township and when it did it was close to the existing settlement. Burlington Township shows less of this clustering pattern at this period of settlement. There are numerous outlying settled homesteads, almost none of which are associated with a kinship cluster.

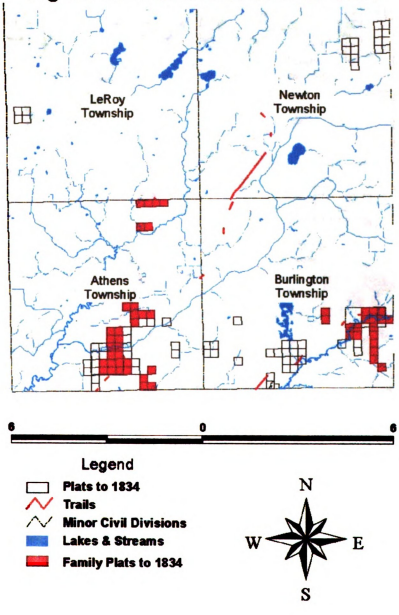
A general filling in of land parcels appears to have occurred in the last three years of the settlement phase for this portion of the county. Though the population and consequently the occupation of land parcels were still very scattered, even in the later years of settlement, it is much more evident that kinship and the clustering phenomenon

associated with it, appears to play a less significant role later in the settlement process. LeRoy Township still tended toward a clustered settlement pattern even at this late date. This was also true for Athens Township. Both of these townships had relatively low population density up to the point of the Federal Census of 1840.

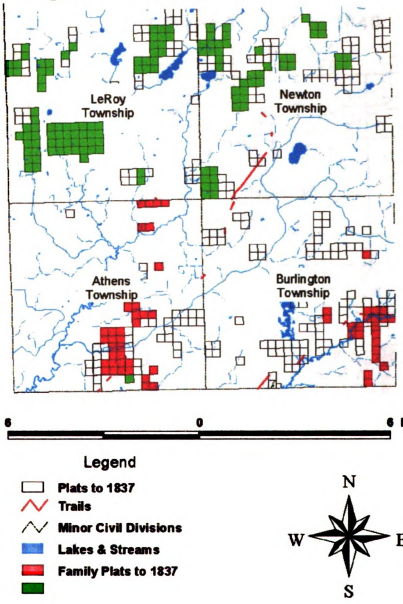
With respect to the presence of cemeteries, mills and other indications of social centralization, the maps also lend credence to the idea that kinship played a role in their development over time. Of the six cemeteries in these townships that have origin dates from 1831 to 1837, four cemeteries are either located on land or next to land which is associated with a kinship cluster (see Figure 5.3, page 103). The remaining cemeteries came into existence during the later settlement period and do not have a consistent association with a kinship cluster.

Five mill sites can be seen on the map in Figure 5.3 for these townships. Mill site locations were determined by gathering information from a map produced in 1842 by Douglass Houghton, State Geologist. The mill site in Athens Township proper was not started by a member of a kinship cluster, and was established in 1835 (History of Calhoun County 1877:117). In 1837, William and Ansel Adams established the first mill site in Burlington Township. These men were the founders of Burlington village, and members of a generational kinship cluster (History of Calhoun County 1877:157). LeRoy Township had three mill sites within its borders, all three of which were associated with kinship clusters (see Figure 5.3, page 103). Exact dates of establishment could not be determined for the three mills in LeRoy Township, but all three were in existence by the time Houghton's map was printed in 1842. Newton Township was without any mills during the early pioneer period.

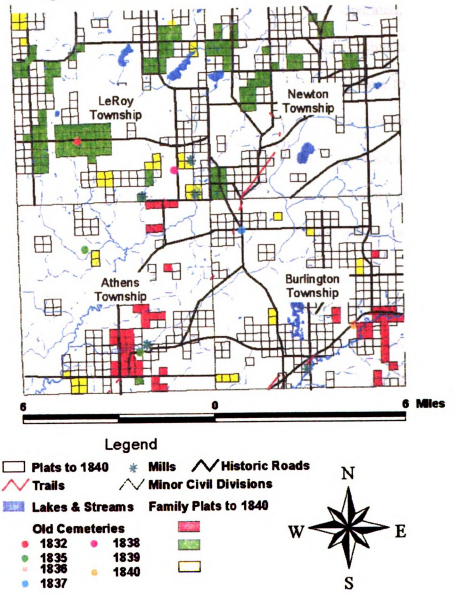
## Figure 5.1: Athens T. 1831 to 1834



## Figure 5.2: Athens T. 1831 to 1837



## Figure 5.3: Athens T. 1831 to 1840



**Pioneer Kinship Clusters of Homer Township**

Turning to Homer Township, or in this case the group of townships in the southeast corner of Calhoun County, it is possible to see a very distinct pattern of settlement by groups of related individuals, over a very short period of time. Homer Township was originally "set off," or may be more properly described as politically separated, from the rest of Calhoun County in 1834. It would eventually be divided into the four townships of Homer, Clarendon, Eckford, and Albion. The early development of these townships was intimately connected and can be examined as one township. The numerous kinship clusters that are found in this group of townships developed into settlements, some of which became village sites, and others that more properly could be described as open country neighborhoods. See Table 5.2 on page 114 and 115 for a listing of the pioneer kinship clusters of Homer Township.

The first settlement in each of the four townships was by a group of interrelated individuals. Homer Township's first pioneer settlers were a group of three bachelors, two of whom were brothers, Richard and Henry McMurtrie. William Wintersteen was married to Margaret McMurtrie. The McMurtrie's and the Wintersteens were accompanied by Powel Grover, an acquaintance from Luzerne County, Pennsylvania. These four men arrived in Homer in the spring of 1832 from Luzerne, Pennsylvania and are credited with being the first settlers of Homer Township. William and Margaret (McMurtrie) Wintersteen arrived in Homer with their four children, and Margaret's brothers, Richard and Henry, and Powel Grover all settled in sections 1,2,11, and 12, Township 4 South and Range 4 West. This kinship cluster became known as the Pennsylvania Settlement (Lane 1888:41-43; History of Calhoun County 1877:121).

The Fisher family migrated to Calhoun County in 1834. Cornelius Fisher and his six sons, Philip, Matthias, John, Benjamin, Enoch, and Joseph settled in what was to become known as the Fisher Settlement. Philip, Benjamin and John are all listed in the GLO records as original land purchasers in sections 13 and 24, Township 4 South and Range 4 West, which adjoin each other in the township. The Federal Census of 1840 lists both Philip and Benjamin as still in the township, Philip being over forty years old and Benjamin between twenty and thirty (Federal Census 1840:Calhoun County; History of Calhoun County 1877:121).

The Janes Settlement was begun by four brothers who settled in the southwest portion, section 19, of Homer Township in 1838. The four brothers were David, John, Huntington, and Eleazor. David and Eleazor were both married at the time of their arrival in Homer Township. Huntington, over thirty years of age, appears on the 1840 census with a wife and one child under five years of age and was therefore also married when he arrived in 1838. The history of Homer describes how the brothers came to Homer Township in 1834 and located land and returned in 1836 with their families. John Janes does not appear in any of the land records or the Census of 1840. A Benj[amin]. Janes does appear in the 1840 census next to Huntington and David. Benj[amin]. Janes is listed as being over sixty years of age, with a wife over fifty and one son who was between fifteen and twenty years old. It is likely that John was this son listed under Benj[amin] in the federal census records (History of Calhoun County 1877:121; Lane 1888:92,94-95; Federal Census 1840: Calhoun County).

The founder of Homer village, at first known as Barneyville, was Milton Barney. While Mr. Barney was not a agricultural pioneer, and is best known for the founding of

Homer, he was also involved in a kinship cluster, that settled in the Homer village area in the early 1830's. The kinship cluster involves the affinal family of Mrs. Sophia (Dorsey) Barney. Mrs. Milton (Sophia) Barney's brother, Andrew Dorsey came to Homer in 1836, accompanied by his wife, Ruth, and their children. Andrew and Ruth Dorsey's oldest daughter was married to James Parsons when they arrived in Homer. Daniel and Thomas Dorsey, sons of Andrew and Ruth Dorsey, were adults when they arrived with their parents as well. Mr. Dorsey's other sister, Lydia (Dorsey) Miller and her husband, Michael Miller, a Methodist minister, followed in the fall of 1836. This affinal kinship cluster thus included Milton Barney, the founder of Homer village, and his wife's family of two sisters and a brother, with their associated husbands, wife and offspring and son-in-law (Lane 1888:44,49-51).

Another group of early Homer pioneers were also related. Frederick R. Hatch Sr. was a house builder who arrived in Homer in 1832. He was already married at this time to Mila A. Hamilton, who with her brother Samuel W. Hamilton and his family arrived in Homer in 1835. Mr. Hamilton was a stonemason and followed that trade for several years in the early part of the settlement of Homer village (Lane 1888:45-46).

Immigrants from other countries were also among the family clusters that arrived in Homer Township in its formative years. John and George Ballentine emigrated from Ireland to the United States in 1833 and to Michigan in 1835. Both men were bachelors when they emigrated from Ireland, but both men married after their arrival in Homer and remained in the general vicinity for the remainder of their lives (Lane 1888:51-52).

**Pioneer Kinship Clusters of Eckford Township**

The first settlement in Eckford Township was by Oshea Wilder and his family. This occurred in 1831-32, when he purchased all of section 8 except the northwest quarter section. His family consisted of six sons and one daughter when he arrived, a generational kinship cluster. The area the Wilders settled was known as "Lower Eckford" or later the "Wilder Creek" area. Mr. Wilder was over fifty years of age when he settled in Lower Eckford with his family. On the 1840 census Oshea Wilder is enumerated as head of household with eight additional males and three females. The males range in age from under five to twenty to thirty years of age. Daniel Wilder is known to have arrived later at Wilder Creek than the rest of his siblings, but was probably included in his father's household in this census (History of Calhoun County 1877:134; Federal Census 1840).

Cook's Prairie or Cook's Plains, as it is referred to in the local histories, was settled early in the history of the township. Henry Cook and Anthony Doolittle are credited with being the pioneer settlers of this area and purchasing a total of 480 acres of land. Cook's Plains is located in the area where the four townships of Albion, Eckford, Clarendon and Homer adjoin and this settlement was therefore associated with all four townships. In May 1832, Henry Cook and Anthony Doolittle arrived and purchased land, Henry Cook in section 36 in Eckford and Anthony Doolittle in sections 1, 11, and 12 in Clarendon. This area is still known as Cook's Prairie more than one hundred and seventy years later. Mr. Doolittle is credited as being the first settler in Clarendon Township. Mr. Doolittle does not appear to be related to Henry Cook, but two of his

brothers, William and Benjamin, settled in Clarendon Township within a few years of his settlement (Rust 1869:155; GLO 1994; History of Calhoun County 1877:134).

Henry Cook, while not the first settler in Eckford Township, is still credited with settling Cook's Prairie and being the first settler in that part of the township. Henry arrived with his wife and eight children, the oldest, John, being seventeen years of age when they arrived (Calhoun County History 1877:135).

In 1834, Elijah Cook, Jr., Daniel Dunakin, his son-in-law, Eli T. Chase, and Samuel Whitcomb, a friend of Elijah Cook, Jr. settled on Cook's Prairie. Daniel Dunakin was married to Eliza Cook and Eli T. Chase, a bachelor, settled a farm next to the Dunakins on Cook's Prairie. Elijah Cook Jr. returned in 1835 with his wife and the rest of his family, including Elijah Cook Sr. who died there in 1839. Eli T. Chase was a bachelor when he accompanied the Cooks and Whitcombs to Michigan, but soon married Samuel Whitcomb's oldest daughter, Margaret. Chase purchased 80 acres of land adjoining Daniel Dunakin's 80 acres on the south, in section 25. Elijah Cook, Jr. and Samuel Whitcomb purchased adjoining farms in Eckford Township in section 35 and 36 (Lane 1888:69; History of Calhoun County 1877:136).

The John Lusk kinship cluster arrived in Calhoun County in the fall of 1836. John Lusk, his wife and ten children, six sons and four daughters, some of which were already married, settled in Marengo and Eckford Townships. John Lusk, Sr. settled in Marengo, but at least four of his sons, Augustus, John, Jr., Thomas and Frederick located land in Eckford Township. Thomas, Frederick, Augustus, and John Jr. all owned land in section 11 of Eckford Township. Listed on the 1840 Federal Census as separate heads of households, all four brothers were married and Augustus and

Frederick both had children on this census. John Lusk, Sr. is listed on the Marengo Census of 1840 as head of household, over fifty years of age, with five males under thirty years of age, two in the twenty to thirty age range, and two females under twenty, and his wife, living with him. This means two of his daughters were also married by this time and living elsewhere (Federal Census 1840; History of Calhoun County 1877:137).

A smaller kinship cluster involved the Freeds. Samuel Freed arrived in Eckford Township in 1838 with his wife. He was listed on the 1840 census as sixty to seventy years of age. His son, John W., arrived in 1840 with a wife and six children. Samuel and John W. purchased land on section 6 in the township and John W. purchased additional lands after his arrival (History of Calhoun County 1877:137; Federal Census 1840).

Another example of sisters affecting kinship clustering patterns are the wives of Elisha Gilbert and Edward L. Rogers. Elisha Gilbert was married to Jeanette Baldwin, whose sister was Mrs. Edward L. Rogers. Edward L. Rogers settled in Eckford in 1833 with his wife and one son, on section 19 and 20. Elisha Gilbert settled in 1835 on section 20, adjoining the land owned by Edward L. Rogers. Mr. Gilbert was married with one son, aged 10 to fifteen years of age on the 1840 census. An Oliver Baldwin, possibly their father-in-law, owned adjoining parcels of land owned by Gilbert and Rogers. Mr. Baldwin was over sixty years of age on the 1840 census, while Mrs. Rogers and Mrs. Gilbert were over thirty and twenty respectively. It is easy to visualize the couples, Rogers and Gilbert, settling on section 19 and 20 with their elderly parents nearby (History of Calhoun County 1877:135,137; Federal Census 1840).

**Pioneer Kinship Clusters of Clarendon Township**

The Rogers kinship cluster was an early settler of Clarendon Township. This Rogers family does not appear to be related to the Rogers family of Eckford Township, because they originated from different states. Anthony Rogers came to Clarendon in the fall of 1832, purchasing land on section 2. His son, Alonzo H. Rogers followed in 1833, with a wife and a child. Anthony's older son, Calvin, also arrived in 1833 with his wife and five children. An additional older female person was a member of Calvin Rogers' household, over fifty years of age, possibly Mrs. Rogers' mother. Calvin and Anthony Rogers owned adjoining parcels in sections 1 and 2 (History of Calhoun County 1877:187; Federal Census 1840).

John Heath, John Heath, Jr. and Cyrus Heath all arrived in 1834. John, Jr. and Cyrus were brothers. They all located land on sections 2 and 3 in 1834. At the time this kinship cluster settled in Clarendon Township, Cyrus Heath was married with a young son. There is no mention of John Sr. or Jr. being married at the time of their arrival (History of Calhoun County 1877:187).

The Knapp kinship cluster is a good example of how one member of the family settled in an area and was followed within a short time by additional members. John S. Knapp settled in 1835-36 on section 10 of Clarendon Township. By 1837, Samuel Knapp came west from New York and brought his son Jonas with him on a "land hunting tour." Samuel Knapp purchased three parcels, eighty acres each, on section six. He returned to New York for his family, which consisted of eight children, five sons and three daughters and settled in Clarendon in June 1837. They stayed with John S. Knapp until they could get their log cabin built. Samuel purchased more land in section six and

some of his children, Jonas, Jared and David, remained on this land as late as 1877. By the Federal Census of 1840, Levi, Jared, and Lorin Knapp were all married, some with children, as well as Samuel Knapp and are listed as heads of household. Samuel Knapp still has three young sons and two daughters in his household on the 1840 census (History of Calhoun County 1877:188; Federal Census 1840).

The Blashfield family started arriving in the western part of Clarendon Township in 1835. Peter is recorded as arriving first, followed in 1836 by Iddo Blashfield. From the census data and the E.G. Rust History of Calhoun County, it appears that Iddo, who is listed as over sixty years of age in 1840, was the patriarch of this kinship cluster. He is recorded as having five sons living close to one another in the township. Peter Blashfield purchased land in section18, Mossema and Iddo purchased land in section19, adjoining Peter, and William purchased a quarter section of section 20, adjoining Iddo's land in section 19. The Blashfield generational kinship cluster appears on the 1840 Federal Census all living in separate households. Peter is over thirty years of age, with a wife and two sons; Mossema Blashfield, over twenty with a wife and one son; William Blashfield, over thirty with a wife and two sons, and Iddo Blashfield with a wife and two teenage daughters (Federal Census 1840; Rust 1869:244; History of Calhoun County 1877:188).

As stated previously, Anthony Doolittle is credited with the initial settlement of Clarendon Township, when he arrived with Henry Cook and settled on Cook's Plains. Anthony's two brothers, Benjamin and William, followed him to Clarendon Township and settled there in 1837 and 1838. By the 1840 census, Anthony is listed as over fifty years of age, with a wife and children, Benjamin is over forty with a sizable family and

William is also listed as over forty with at least eight children ranging in age from under five to under twenty years of age. Benjamin and William purchased adjoining quarter sections of land in section 30 of Clarendon Township (History of Calhoun County 1877:188; Federal Census 1840).

James and Artemus Humeston, a sibling cluster, settled in Clarendon Township. Artemus purchased numerous tracts in section 19 and 20 in 1834. James came west from New York in 1838 and settled on section 19 as well. They both purchased land in section 19, next to the Doolittles and Blashfields (History of Calhoun County 1877:188-189).

**Pioneer Kinship Clusters of Albion Township**

Tenney Peabody is credited as being the first settler of Albion Township. He purchased land from speculators at the "Forks of the Kalamazoo" intending to begin a village site there. Mr. Peabody arrived in Albion in March 1832 accompanied by his nephew, Charles Blanchard, a son of Mr. Peabody's sister. Mr. Peabody's family followed them within a week's time (History of Calhoun County 1877:105,113).

The man who is considered the co-founder of Albion was Wareham Warner. Mr. Warner also arrived in Albion Township in 1832, and purchased land adjoining Mr. Peabody's. Mr. Warner was the father of ten children. At least three of his children were adults when they arrived in Albion Township. Asahel Warner was thirty-one years of age and settled in Marshall. William A. Warner was married to Mary J., the daughter of Asahel Finch, the second person to arrive in Albion Township, in 1839. Mr. Wareham Warner's daughter, Lura, married Chandler M. Church, the pioneer settler of Sheridan Township in 1829, before coming west to Michigan. They immigrated to

Michigan in 1834 and settled on section 33 of Sheridan Township. Wareham Warner is listed on the 1840 Federal Census as living in Albion Township with a wife and four sons (History of Calhoun County 1877:111,145; Federal Census 1840).

The village of Albion lies on the border of Sheridan and Albion Townships. Therefore, the early settlers of the Village of Albion are listed as residents of either Albion or Sheridan Townships depending on which side of the village their land was located. Other early settlers of Albion Township did not settle in Albion village, but were farmers and purchased land elsewhere in the township. One group of interrelated individuals was the Holmes family. Peter Holmes arrived in Albion Township in 1833, accompanied by his sons Charles D. and Patterson P. Holmes. They purchased land on section14, 15 and 23 and the rest of the family arrived that fall. Charles D. Holmes was married in 1836, the first marriage in the township, to Nancy Young, who had arrived with her family in Albion Township in 1835. Charles D. Holmes is listed on the 1840 census as having a wife and two children, both of whom were under five years of age (History of Calhoun County 1877:105; Federal Census 1840).

Initial settlement in the southwest part of the township also included brothers. John and James Vanderburg settled on section 29. They are listed on the 1840 census as having wives and small children (History of Calhoun County 1877:105; Federal Census 1840).

Ashbell and Hiram Howell (also spelled Hewell) settled in the southeast portion of Albion Township on sections 23 and 24. According to the 1840 census Ashbell and Hiram were both over 40 years of age with seven and six children respectively in each

household. They purchased their land in these sections directly from the government, in 1838 (GLO 1994; History of Calhoun County 1877:105; Federal Census 1840).

Several kinship clusters are found in the southeast portion of Albion Township. The Knowles, who also owned land in Homer Township, and the Benhams were early settlers of Albion Township. Seth Knowles is listed on the 1840 census as being over 50 years of age, head of household, with a wife and four children. Ruel Knowles, probably his son, is listed as a separate head of household, over twenty years of age, with a wife and a young son. Seth purchased multiple parcels of land in Albion and Homer Townships in 1833 and later. Ruel Knowles purchased land in 1835. They own adjoining parcels in Albion Township in section 35 and 36. The Benhams, Norman and Eliakim, also owned land in section 35. They are listed on the 1840 census, Eliakim over fifty years of age, and Norman over forty years old, as separate heads of household, with multiple children in each household, ranging in age from under five to over twenty years of age (GLO 1994; Federal Census 1840).

**Table 5.2: Kinship Clusters of Homer Township**

| Family Name | Settlement | Township | Cluster typ | # of Members |
|---|---|---|---|---|
| Wilder | 1831 | Eckford | Generational | 12 |
| McMurtie/Grover | 1832 | Homer | Extended | 26 |
| Barney | 1832 | Homer | Extended | 14 |
| Hatch | 1832 | Homer | Sibling | 8 |
| Cook | 1832 | Eckford | Generational | 26 |
| Doolittle | 1832 | Clarendon | Sibling | 26 |
| Rogers | 1832 | Clarendon | Generational | 18 |
| Peabody/Blanchard | 1832 | Albion | Extended | 13 |
| Warner/Church | 1832 | Albion | Generational | 14 |
| Jones | 1833 | Eckford | Generational | 9 |
| Rogers/Gilbert | 1833 | Eckford | Generational | 11 |
| Holmes | 1833 | Albion | Generational | 12 |
| Vanderburg | 1833 | Albion | Sibling | 7 |
| Knowles | 1833 | Albion/Homer | Generational | 9 |

| | | | | |
|---|---|---|---|---|
| Kennedy | 1833 | Clarendon | Generational | 6 |
| Failing | 1834 | Clar/Homer | Sibling | 13 |
| Fisher | 1834 | Homer | Generational | 9 |
| Heath | 1834 | Clarendon | Generational | 11 |
| Humeston | 1834 | Clarendon | Sibling | 7 |
| Palmer/Pendleton | 1834 | Eckford/Fred | Sibling | 8 |
| Hopkins | 1835 | Albion | Generational | 23 |
| Ballentine | 1835 | Homer | Sibling | 3 |
| Knapp | 1835 | Clarendon | Generational | 20 |
| Blashfield | 1835 | Clarendon | Generational | 18 |
| Letts | 1835 | Homer | Generational | 24 |
| Udell | 1835 | Eckford | Generational | 8 |
| Burt | 1835 | Homer | Generational | 18 |
| Bartlett | 1835 | Clarendon | Sibling | 12 |
| Blair | 1835 | Clarendon | Generational | 6 |
| Champion | 1836 | Homer | Sibling | 25 |
| Hazen/Rogers | 1836 | Eckford | Extended | 33 |
| Lusk | 1836 | Eck/Marengo | Generational | 23 |
| Benham | 1836 | Albion | Sibling | 23 |
| Babcock | 1838 | Ablion | Generational | 8 |
| Welch | 1838 | Homer | Sibling | 13 |
| Eslow | 1838 | Homer | Unknown | 10 |
| Crandall | 1838 | Homer | Generational | 17 |
| Budd | 1838 | Clarendon | Generational | 11 |
| Janes | 1838 | Homer | Generational | 12 |
| Fried | 1838 | Eckford | Generational | 11 |
| Howell (Hewell) | 1838 | Albion | Sibling | 17 |
| Hinckle | 1838 | Eckford | Sibling | 9 |
| Cooley | 1839 | Eckford | Generational | 18 |
| Vreeland | 1839 | Clarendon | Generational | 10 |
| Putnam | 1840 | Clarendon | Generational | 10 |
| Smith | 1840 | Clarendon | Sibling | 7 |
| Ostrom/Nelson | 1840 | Albion/Homer | Extended | 25 |
| Woolever | 1840 | Albion/Homer | Generational | 15 |
| Vandewater | 1840 | Homer | Generational | 14 |
| Demming | 1840 | Homer | Generational | 19 |
| Brotherton | 1840 | Eckford | Generational | 9 |
| Chapman | 1840 | Eckford | Generational | 10 |
| Prior | 1840 | Eckford | Sibling | 13 |

The earliest settlers of Homer Township (Albion, Eckford, Clarendon and Homer) were all involved in some type of kinship cluster. The pioneer settlers of Homer

Township proper, the McMurtries, were an extended cluster. Albion Township's pioneer settlers were the Peabodys, an extended cluster and the Warners, a generational cluster. Eckford Township was first settled by the Wilder kinship cluster and this was also a generational cluster. Anthony Doolittle was the first settler of Clarendon Township and his brothers followed him within a few years. The majority of settlers to Homer township were involved in a kinship cluster relationship (Figure 5.4, page 121). The Pennsylvania Settlement, in the eastern section of Homer Township proper, was a large parcel of land settled by the McMurtrie extended family cluster. Several parcels of land in the Pennsylvania Settlement area were purchased later by non-related individuals. The Fisher Settlement, on the south side of the Kalamazoo River, and south of the Pennsylvania Settlement, was a large generational cluster with several non-kin settlers associated with it.

During the second phase of settlement from 1835 to 1837, (see Figure 5.5, page 122), many kinship clusters settled in the Homer Township quadrangle. These kinship clusters are displayed in green to distinguish them from the earlier settlers in the townships. Many people who were not associated with a kinship cluster also settled during this time period and are displayed on the map as outlined forty-acre parcels. Much of the settlement was still associated with the kinship clusters that were present in the township at that time, although it is possible to see that people were once again beginning to dissipate throughout the townships, as was seen in the Athens Township group during the same time framework.

Much of the settlement of Albion Township, during this second period, (see Figure 5.5, page 122) does not appear to be based on a relationship with kinship clusters. By

examining the map, it is possible to see many settlers do not appear to have settled close to kinship clusters at this time.

The trend of settling near kinship clusters does continue, however, in Homer Township (Figure 5.5, page 122). Perhaps it is because there are more kinship clusters in this township to begin with that the effect of kinship on settlement patterns is still very prominent during the second phase of settlement for this township. Almost all parcels of land which were settled in Homer Township, even as late as 1837, show a close approximation to land settled by a kinship group during that same period.

The pattern of settling near kinship clusters is also true for Eckford Township. In the first phase of settlement, (Figure 5.4, page 121), Eckford was almost entirely settled by kinship clusters. Even when the pioneer settlers were not associated with a kinship cluster, the settlement pattern is still very compact, with no one living far away from anyone else. During the second phase, (Figure 5.5, page 122), from 1835 to 1837, this trend continues, with very few non-kin settlers associated with the settlement of the township. When these non-kin settlers did purchase lands in the township, they tended to purchase land either adjoining or very close to existing kinship cluster settlements.

Clarendon Township settlers followed a similar pattern. In the very earliest years, almost all of the settlers were associated with a kinship cluster and when they were not related to someone they settled near a kinship cluster anyway. During the second phase of settlement, as seen on Figure 5.5 (page 122), most of the settlement was still clustered around or near original settlers to the township. This left large areas of the township unsettled.

The last phase of settlement for Homer Township (see Figure 5.6, page 123) shows the same type of filling in that was seen in Athens Township during the later frontier period. The population increase associated with the later years of settlement, appears to somewhat overwhelm the effect of kinship on the settlement pattern for these four townships. What had begun during the second phase of settlement in Albion Township, with dispersal of settlement, is even more evident in the later years. The majority of land in the township was settled by 1840. That settled land was for the most part owned by non-related individuals. Kinship appears to have little effect on the settlement pattern in Albion Township in the last half of the settlement phase.

A strong association of people with kinship clusters in Homer Township exists, even during the final phase of settlement. While evidence suggests lands were purchased away from kinship groups, (see Figure 5.6, page 123), it is also possible to see that most of the settlement in the township was directly associated with people who were in some type of kinship cluster relationship. While this may have much to do with the number of kinship clusters in this particular township, it is also likely that the presence of these kinship clusters acted as a focal point for settlement in such places as Homer Village, the Pennsylvania Settlement, the Janes Settlement, and the Fisher Settlement. The large groups of people associated with these kinship clusters would have made instant community on the frontier, something that has been proven to be so important in the early years of settlement.

Eckford Township in the last phase of settlement also shows a strong association of settlers with kinship clusters. The numerous non-kin settlers to the township in the later years tended to settle where other people were already settled. The fact that many of

these people were involved in a kinship cluster strengthens the argument for the effect of kinship on settlement patterns. Numerous settlers were not associated with kinship clusters, however, the majority of settlers did purchase adjoining land to a kinship cluster.

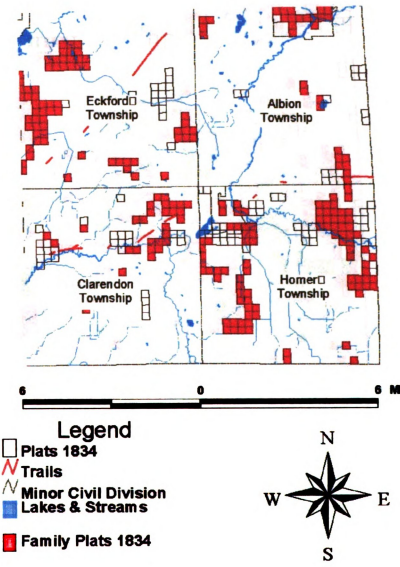
The pattern of settling adjacent to kinship clusters can be seen when examining Figure 5.6 on page 123 for the last phase of settlement for Clarendon Township. The trend toward clustering continued in the later phase, with some indication that kinship had less effect on settlement patterns in this phase than it had in earlier phases for this particular township. Many settlers during this phase purchased land not associated with a kinship cluster, while the presence of multiple kinship clusters still made it likely that many pioneers ended up settling near an already established family cluster.

When examining the maps of Homer Township during the pioneer phase of settlement it is possible to see evidence of social centralization associated with kinship clustering. By 1842, there were seven mill sites in these four townships. Milton Barney, the founder of Homer, is credited with building the first sawmill in 1833, in the village (History of Calhoun County 1877:121). Wareham Warner and Tenney Peabody collaborated in the construction of the first sawmill in Albion Township in 1833. This mill was located at the site of Albion Village (History of Calhoun County 1877:105). Homer and Albion, both founded by people associated with kinship clusters, are obvious areas of social centralization. These two pioneer villages grew and prospered in the early years of settlement and became important social and economic centers in the nineteenth century. Other mill sites were also associated with settlement areas with kinship ties. Oshea Wilder was the patriarch of a kinship generational cluster, and is

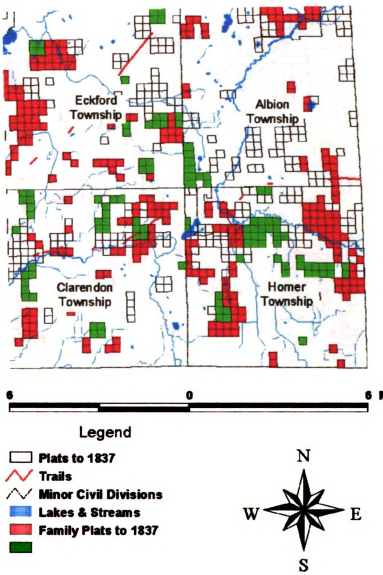
credited with building the first sawmill in Eckford Township on section 8, in 1833 (History of Calhoun County 1877:134). The Pennsylvania Settlement was also the site of a sawmill, constructed by Powell Grover, on the Kalamazoo River, in 1835 (Lane 1888:20). The one mill site in Clarendon Township was associated with land owned by a kinship cluster. This mill was located on the St. Joseph River, on the road from Jackson to White Pigeon that would later become known as M-60. This road was in existence as early as 1833 (History of Calhoun County 1877:14).

Cemeteries are associated with areas of social centralization in these four townships. The first cemetery in Albion was Riverside Cemetery established in 1837. The Village of Homer established its first cemetery in the early 1830's. Fisher Cemetery, located at the Fisher Settlement of Homer Township, had its first interment in 1837. Cook's Prairie Cemetery is associated with the settlement of the same name and was established as early as 1836. The other cemeteries in this group of townships do not appear to have a specific correlation with kinship clusters. The village cemeteries of Homer and Albion have more to do with the village development and settlement than they do with kinship clusters, but the cemeteries at Cook's Prairie and the Fisher Settlement are very much associated and involved in the early pioneer development of this area. Eckford's two cemeteries do not appear to be associated with any particular kinship cluster, although both were established in the late 1830's. Clarendon Township's other two cemeteries are associated with early settlement by pioneer families, but they do not have a specific association with any particular kinship cluster.

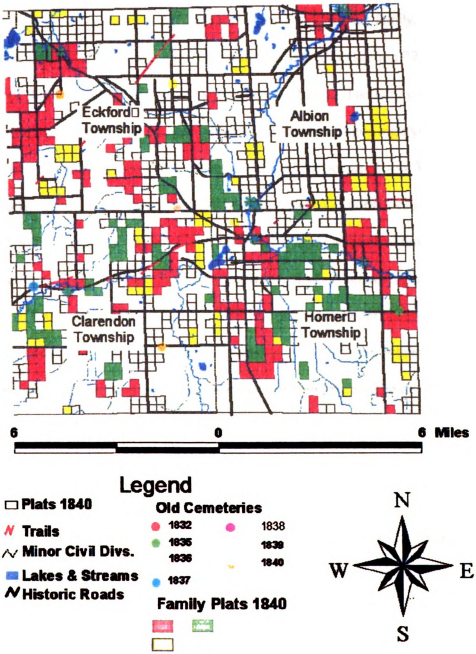
## Figure 5.4: Homer T. 1831 to 1834



## Figure 5.5: Homer T. 1831 to 1837



## Figure 5.6: Homer T. 1831 to 1840



**Pioneer Kinship Clusters of Marengo Township**

Marengo Township was politically organized and separated from the rest of Calhoun County in 1834. It originally was constituted of Marengo, Sheridan, Clarence and Lee Townships, which are the four northeast corner townships of Calhoun County.

The pioneer of Marengo Township was Seeley Neale and his family. Mr. Neale's family consisted of a wife and ten children when he settled on section 27, along the Territorial Road, which he had helped survey in the 1820's. The family arrived in Marengo township in June 1831. Mr. Neale's father, Noah, aged eighty-eight years, was the first adult death recorded in the township, which occurred July 30, 1832. Mr. Neale donated the land to the township where his father was buried, establishing the first cemetery in the township. By 1840, Seeley Neale is listed as head of household on the census, over sixty years of age, with a wife and five children remaining in the household (History of Calhoun County 1877:125,127; Rust 1869:180; Federal Census 1840).

A group of people came to Marengo township in 1833, some of these were related and some were just friends from their home state of New York. The description of their travels from New York to Marengo Township, by Mrs. George W. Dryer, gives a good account of the hardships encountered by pioneer travelers. Mr. and Mrs. George W. Dryer were accompanied by Mrs. Dryer's parents and younger brother to Marengo Township. Accompanying them from their home area were Henry Gardinier, Wandall Bartles, Thomas Pryor, and Garrett Baker. The following Spring, Mrs. Dryer's sister and other friends from New York arrived at their home in Marengo Township (Rust 1869:181-190).

Thomas Chisholm and his brother George arrived in Marshall in 1831, accompanying Sidney Ketchum, the pioneer of Calhoun County, and Randall Hobart and their families. Thomas Chisholm's daughter, Ellen Minerva, was the first child born in Marshall in 1832. He purchased land in Marengo township in 1831 and settled there with his family. His wife died in 1838 and he remarried in 1839 to Mary Hewitt, a daughter of Dethic and Louisa (Ainsley) Hewitt, pioneers of Marengo in 1836 who appear on the 1840 census with nine children in their household. Mrs. Hewitt is most likely related to the John Ainsley who was the second settler in Marengo township in 1831 (History of Calhoun County 1877:125,131; Federal Census 1840).

There is a settlement in the four corners of Lee, Clarence, Marengo, and Sheridan Townships known as the "Rice Creek Settlement." This area was settled in 1836 by a group of families from Oswego and Cayuga Counties, New York. The people involved were the families of Caleb Hanchett, Burt H. Carrier, Amaziah T. Carrier, Abram Hadden, Amos Hadden and David H. Miller. Caleb Hanchett, Burt H. Carrier and Amaziah T. Carrier were related by marriage. Caleb Hanchett, David Hanchett Jr. and Emeline (Hanchett) Carrier (Mrs. B.H. Carrier) were brother and sister, children of David Hanchett Sr.. David Hanchett Jr. also settled in the Rice Creek Settlement in 1837. He was married and had children when he migrated to be with family members in Marengo Township. David H. Miller was also a member of this group. He was married in 1823 to Polly Carrier, a daughter of Amaziah Carrier and sister to Burt H. and Amaziah T.Carrier. Therefore, David H. Miller and his wife, Polly, settled with the families of Burt H. and Amaziah T. Carrier at Rice Creek. The Hanchett's (Caleb and David Jr.) were related to the Carrier families through their sister Emeline who was

married to Burt H. Carrier. Additionally, Caleb was married to Esther, a daughter of Daniel Miller, who was probably related to David H. Miller or his father, David Miller. David Hanchett, Jr. settled on section 1 in Marengo Township. Caleb Hanchett originally purchased land in sections 35 and 36 of Lee Township in 1836, but exchanged them in 1838 for land in section 1 Marengo Township, next to his brother David, Jr. Burt H. Carrier purchased land on section 6 and 7 of Sheridan Township as did his brother-in-law, David H. Miller. Additionally, Amos and Abram Hadden were brothers who settled with the Carriers, Hanchetts, and Millers in the Rice Creek settlement in 1836. Amos Hadden had originally settled on section 36 in Lee Township in 1835. He was one of the first settlers in that township. Amos' brother, Abram, settled on section 31 of Clarence Township, that adjoins section 36 of Lee Township. The Hadden's do not appear to be related to the Hanchett's, Carrier's or Miller's, but they did all originate from Cayuga and Oswego counties, in New York and arrived at Rice Creek in 1836 together (History of Calhoun County 1877:74,115,127,132; www.familysearch.com).

**Pioneer Kinship Clusters of Clarence (Pinckney) Township**

Other kinship clusters are found in Clarence Township. Until 1840 it was called Pinckney Township. The Bell clan arrived in 1836. Andrew Bell purchased the entire section 14 parcel. He had a large family and according to the county history wanted to be able to provide farms for all of his offspring. By the 1840 census there are four Bells listed as separate heads of household. Alison A., over twenty years of age and married with no children, Oliver S., who appears to have Andrew Bell living in his household, because he does not appear on this census as a head of household, but does appear on the 1850 federal census, Ancil O., married, over twenty years of age, with a wife and

one child, and Jeremiah Bell, also married with children (History of Calhoun County 1877:191; Federal Census 1840 and 1850)

John Austin was also an early settler of Pinckney Township. He arrived in 1836 and by the Federal Census of 1840 there are four Austins listed as separate heads of household. John Austin is over fifty years of age, while a second John Austin is listed as over thirty and married. Rodgers Austin is over thirty with a wife and children and Humphrey Austin is over twenty with a wife and child. All four Austin households are listed on the federal census consecutively (History of Calhoun County 1877:191; Federal Census 1840).

Jotham Dyer, along with his relatives settled in Clarence Township in 1837. Jotham is listed on the 1840 census as being over fifty years old, with a wife and five children. John B. Dyer, probably his son, is over thirty with a wife and five children, also. Frank Dyer is listed in the county history, but does not appear on the census of 1840, probably living in his father's household, since there were two males besides Jotham over twenty years of age on that census. The Dyers owned adjoining parcels of land in section 35 of the township (History of Calhoun County 1877:191; Federal Census 1840; GLO 1994).

**Pioneer Kinship Clusters of Lee Township**

The township of Lee was very sparsely settled in the frontier period of Calhoun County. Even by 1840, the first census year, there were only fourteen separate heads of household listed for the entire township. Three separate groups of households were most likely related, because they have the same last name and they appear next to one another on the census report of 1840 as well as owning land adjoining one another in the tax records for 1844.

Benjamin Thomas first settled in Marengo Township in 1836, but moved to Lee in 1839. Charles R. Thomas is also listed as a head of household on the 1840 census and was married with one child on this census. He was also listed as an early settler in Lee Township in the county history. The third person, Oliver Thomas, is also listed next to Benjamin on the census and is a head of household and has a wife and young child. While no direct connection can be found between these three men, the probability that they are related to one another is very high. Not only did they have the same last name, although a common one, they were all within a decade of each other in age, over twenty, but under thirty years old and they all settled together on section 3 of Lee township in 1839 (History of Calhoun County 1877:113-114; Federal Census 1840; Calhoun County tax rolls 1844).

Two other surnames appear on the 1840 census of Lee Township, with two people for each surname. Jesse and John Ackley, were probably brothers, because Jesse is over forty and John is over thirty, with an elderly female living in his household, over seventy years of age, while Jesse is listed as head of household with children. They settled in the northwest quarter section of section 31. The other two families, Eleaser and Stephen Aldrich were also probably brothers. Eleaser was over forty, with a wife and children, while Stephen was over thirty with a wife and children and an elderly female also living in his household. The Aldrich's owned land in section 30 (History of Calhoun County 1877:114; Federal Census 1840).

**Pioneer Kinship Clusters of Sheridan Township**

Many of the pioneers of Sheridan had relatives elsewhere. Mention has already been made of Asahel Warner, one of the sons of Wareham Warner. He spent many

years moving from township to township and finally settled in Sheridan from Marengo and Marshall Townships. Chandler M. Church, a brother-in-law to Asahel and William Warner, because of his marriage to Lura (Warner) Church has already been mentioned as an early settler in Sheridan Township. Reuben Abbott is credited as the pioneer of Sheridan Township, arriving in September 1831. By 1840, Samuel, who is over twenty years of age on this census, is Reuben's oldest son, is listed on the federal census along with his father, as a separate head of household, with a wife and young son (History of Calhoun County 1877:142,144-145; Federal Census 1840).

**Table 5.3: Kinship Clusters of Marengo Township**

| Family Name | Settlement | Township | Cluster type | # of Members |
|---|---|---|---|---|
| Neale | 1831 | Marengo | Generational | 13 |
| Chisholm | 1831 | Marengo | Sibling | 19 |
| Abbott | 1831 | Sheridan | Generational | 9 |
| Church | 1832 | Sheridan | Generational | 8 |
| Dryer | 1833 | Marengo | Extended | 7 |
| Crane | 1833 | Sheridan | Generational | 28 |
| Ainsley | 1833 | Marengo | Generational | 14 |
| Wild | 1835 | Sheridan | Generational | 10 |
| Lusk | 1836 | Marengo | Generational | 9 |
| Hanchett/Carrier | 1836 | Mar/Sheridan | Extended | 21 |
| Hadden | 1836 | Lee/Clarence | Sibling | 10 |
| Bell | 1836 | Clarence | Generational | 15 |
| Austin | 1836 | Clarence | Generational | 13 |
| Dyer | 1837 | Clarence | Generational | 14 |
| Wright | 1839 | Marengo | Generational | 12 |
| Thomas | 1839 | Lee | Sibling | 8 |
| Bunn | 1839 | Marengo | Extended | 13 |
| Ackley | 1839 | Lee | Sibling | 7 |
| Aldrich | 1839 | Lee | Sibling | 12 |
| Loomis | 1840 | Sheridan | Generational | 12 |
| Hall | 1840 | Sheridan | Generational | 18 |
| Squires | 1840 | Clarence | Generational | 11 |

The early years of settlement of Marengo Township were specifically associated with the presence of the Territorial Road. This was the first road surveyed through the county, ordered by the territorial government in 1829. It began in the township of Plymouth, in Wayne County, running west through Ann Arbor, Jackson County and Calhoun County through the second tier of townships, later known as Sheridan, Marengo, Marshall, Emmett and Battle Creek and ending at St. Joseph on Lake Michigan. Sealey Neale, the pioneer settler of Marengo Township, was involved in the survey of this road in the late 1820's. The legislative council approved the survey and established the road as a public highway in March 1831, during the earliest phase of settlement of the county. The Territorial Road had only been surveyed and marked when settlement began in the county (History of Calhoun County 1877:14; Rust 1869:28).

When examining the map of settlement for Marengo Township in the earliest years of settlement, it is possible to see the effect of not only the Territorial Road on settlement, but also the Indian trails that crisscrossed the county at this time. "When the first settlers came into the county they followed the trails of the Indians, ... and in many instances government roads followed the meanderings of the same in their early location" (History of Calhoun County 1877:14).

Settlement by the pioneers to this area, in the earliest years, tended to concentrate along the route of the Territorial Road, which followed the main east/west Indian trail through the townships. The two upper townships of this quadrangle were not settled in the first few years of settlement. Sheridan Township also was very sparsely settled during this time period as well. When people did settle in Sheridan, however, they were

more than likely to be part of a kinship cluster than not as evidenced by the settlements seen on Figure 5.7, page 135. The Abbott's, Church's and Crane's all settled near each other and along the Territorial Road in Sheridan Township. The Church's were related to Wareham Warner, one of the founders of the village of Albion. Mrs. Lura Church was Wareham Warner's daughter. Only three other families were involved in settlement of the township during the initial settlement of the township through 1834.

Marengo Township was much more heavily settled in the initial settlement phase (See Figure 5.7, page 135). More kinship clusters were involved in this settlement process than were seen in Sheridan Township. Settlement in this township by kin groups does appear to have an effect on the settlement pattern in the first years of settlement. It is, however, possible that kinship played less of a role here, than elsewhere in the county, because of the presence of the Territorial Road and its consequent accessibility for entrance into the county. Settlement was still clustered during this initial settlement phase as seen on Figure 5.7 on page 135.

It is during the middle period of settlement (see Figure 5.8, page 136) of these townships that the initial settlement by kinship clusters occurs in the townships of Lee and Pinckney. Kinship appears to affect the settlement pattern for these two townships more than it did for the rest of Marengo Township. The Hadden's were the first kinship cluster to settle in Lee and Clarence Townships. Amos Hadden purchased land in section 36 of Lee, while his brother purchased land in section 31 of Clarence that adjoined his brother's land in Lee Township. The Bell's, Austin's and Dyer's all purchased land in Pinckney Township. When non-related people did settle in these

townships, they tended to settle in direct association with these kinship clusters in the initial settlement phase.

Only one new kinship cluster is associated with the second phase of settlement of Sheridan Township. The settlement pattern (see Figure 5.8, page 136), however, is still showing evidence of clustering during this time. Many new settlers arrived in the township and purchased land in the southern half of the township during the second phase of settlement. This clustering appears to have more relationship to the village of Albion, than it does with the kinship clusters that were already present in the township.

The continuing influx of people into Marengo Township tended to overwhelm the effect of kinship on the settlement pattern for this township by the middle period of settlement. The settlement pattern appears more diffuse during this phase than the first period of settlement. Many new settlers arrived and purchased land in the township, without any significant regard for the presence of kinship clusters during this second phase of settlement. Only three additional kinship clusters settled in Marengo Township during this phase of settlement. The most important kinship cluster in this township was that of Caleb Hanchett, who settled in the northeast section of the township in the Rice Creek Settlement with the rest of his kinship group. This settlement by the Hanchett/Carrier/Miller clan would eventually develop into the Rice Creek Settlement. Rice Creek is still a viable entity more than one hundred and sixty-five years after its initial settlement by its founding kinship cluster.

Very few people settled in Lee Township even during the second phase of settlement to this area. The only settlement that occurred, up to 1837, did so at the Rice Creek Settlement, a kinship cluster. The remainder of the township remained uninhabited.

During the final phase of settlement for this group of townships, kinship appears to play a significant role only in those areas where the population was not dense enough to act as a support group for settlement. Lee Township is the least populous area in this group of townships and actually in the entire county at that time. The few people that had settled in Lee Township by 1840 were mostly related to one another. The Ackley's, Hadden's, Thomas', and Aldrich's were practically the only settlers in the township comprising the majority (32 out of 50 people) of the population on the 1840 Federal Census.

The last phase of settlement for Pinckney Township also appears to be affected by the presence of kinship clusters. The population at this time appears to be either associated with the settlement at Rice Creek or the group of kinship clusters in the southeast portion of the township. While there is some evidence of spread of population away from the kinship clusters, it is evident when examining the map (see Figure5.9, page 137) that most of the population was still grouped together and associated with kinship clusters.

This is not the case with the very populous township of Marengo. By the end of the settlement phase, in 1840, almost all of the available land had been purchased and was occupied by pioneer farmers. There were no new kinship clusters associated with this phase of settlement.

The final phase of settlement of Sheridan Township is similar in many respects to what occurred in Marengo Township. There is still evidence of clustering in this township (see Figure 5.9, page 137) even as late as 1840. The clustering that does occur, however, appears to be related primarily to the presence of the Territorial Road,

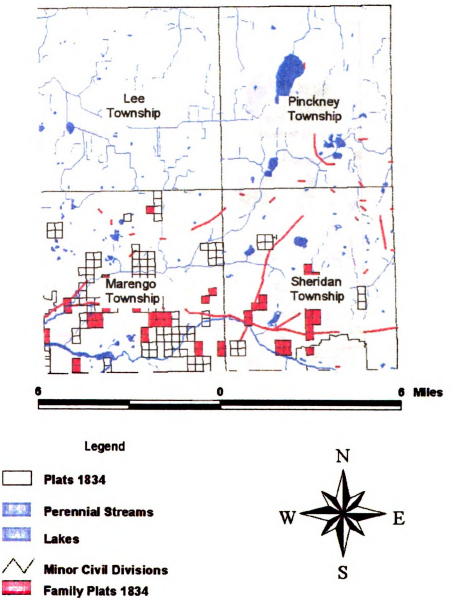
the Village of Albion, and the settlement at Rice Creek. In that respect, kinship can be considered only one factor related to the settlement pattern for this township, because the settlement of the Rice Creek area was essentially a large kinship cluster and other people settled near this group of pioneers from the beginning of its development.

The presence of factors of social centralization did occur in this township, just as it had in the other townships. Several mill sites had developed in this group of townships by the end of the pioneer phase. Two mills were built in the sparsely populated township of Lee, probably to take advantage of the heavy timber that was present in that township. Marengo Township had four mills within its borders by the end of the pioneer period. Three of these were located in the village of Marengo, and the fourth was on a tributary of the Kalamazoo River. None of these mills were specifically associated with a kinship cluster, but do appear to be associated with areas of social centralization, i.e. a village.

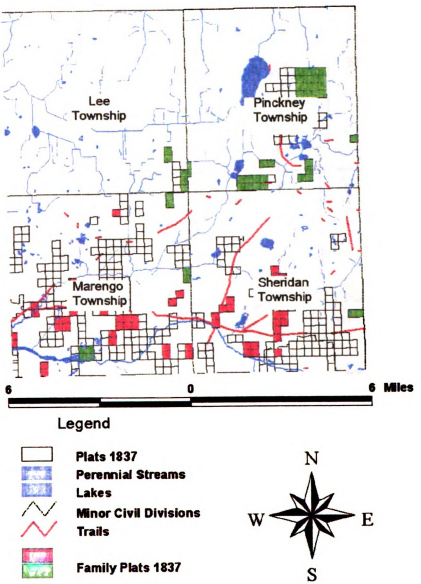
Cemeteries are few in number, except for Marengo Township. Sheridan Township did not have any cemeteries during the pioneer period. The Rice Creek Settlement did contain a cemetery, located in section 36 of Lee Township. One cemetery was present in Pinckney Township at this time. It is situated near Duck Lake in an area known as Clarence Center. This appears to be the area of social centralization for this particular township during the pioneer phase. While not specifically associated with a kinship cluster, this area known as Clarence Center acted as an open country neighborhood for this township. The cemeteries in Marengo Township do not appear to be associated with areas of social centralization, except for the cemetery in the village of Marengo. The oldest cemetery in the township was the one donated by Seeley Neale where his

father, Noah, was buried in 1832. The remaining cemetery that was in use during the pioneer phase was the Sampson Cemetery, named for the Sampson family.

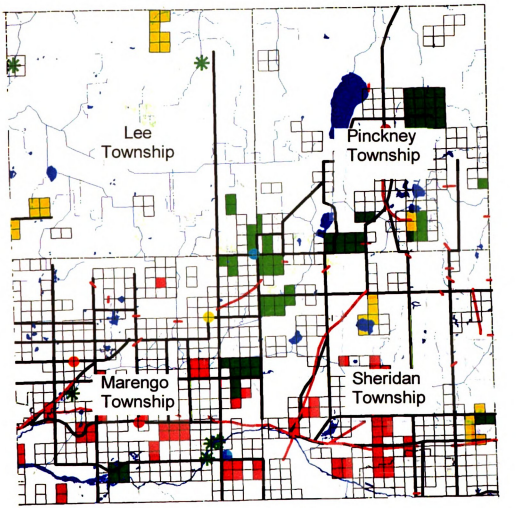
**Figure 5.7: Marengo T. 1831 to 1834**



## Figure 5.8: Marengo T. 1831 to 1837



# Figure 5.9: Marengo T. 1831 to 1840



**Pioneer Kinship Clusters of Battle Creek (Milton) Township**

Milton Township was separated from Marshall Township in 1833. Marshall was the only township of the county when Calhoun was first organized in 1832. In 1833, Milton Township consisted of the eight townships of Milton (later Battle Creek), Emmett (originally Cady), Pennfield, Bedford, LeRoy, Athens, Burlington and Newton. As stated previously, Athens Township was separated from Milton in 1835, incorporating the last four townships listed. Of the four townships in the upper northwest quadrant of Calhoun County, Milton and Emmett Townships received the greatest number of settlers in the pioneer period since the Territorial Road passed through these two townships. The early settlers of Milton Township were some of the earliest in the county, in 1831, and kinship appears to be a factor here as elsewhere in the county (Rust 1869:23).

The Thomas families were not the first pioneers of Milton (Battle Creek) Township, but they arrived very early in its history. Isaac Thomas arrived on Goguac Prairie in 1831, as did his sons, Frank, Hiram and Orson. Isaac's brother Daniel arrived in January of 1832 and settled near his brother. There is also a Jonathan Thomas, another brother of Isaac and Daniel, listed as arriving at this time. Daniel had adult children, because his daughter Berthena was married the next year to James Simonds. Isaac Thomas' son, Frank, was married to Amanda Goddard in 1832/33. Aranthus Thomas is also listed as a pioneer of Battle Creek Township, settling near Daniel and Isaac Thomas in section 24. Aranthus is also listed as the first schoolteacher on Goguac Prairie in 1833 or 1834. He is also listed as being married, over twenty years of age, with children by the 1840 census. Frank and Aranthus Thomas are mentioned as being among the young people who partied during the holidays in the early years of settlement (History

of Calhoun County 1877:94-96; Rust 1869:76,87-88; Gregory 1988:4; Federal Census 1840; GLO 1994).

The Stewart kinship cluster arrived early in the history of Battle Creek Township as well. John Stewart, Jr. arrived first in August 1831, followed by John Stewart, Sr. and his multiple children in the fall. He is listed as having five sons and two daughters who settled with him in 1831. Joseph W. Stewart, who was born in 1809 and married in 1829, before coming to Michigan in 1833, already had children when he arrived. In addition to John, Jr. and Joseph W., John Stewart had three other sons, Peter, Enoch and Levi. On the 1840 Federal census, John is listed as head of household and over seventy years of age. Joseph W. is the oldest son, over thirty years of age, by 1840. John, Jr. and Enoch are separate heads of household by 1840, and were between twenty and thirty years of age. Another reference to Enoch lists him on his own "eighty" in 1836 when settlers were passing through the area. John Stewart, Jr. and Taylor Stewart are listed as joint owners in section 10, while John Stewart, Sr. owns more than a quarter section in section 15, with Enoch Stewart owning the adjoining parcel in section 15. Joseph W. Stewart settled less than a mile from his siblings and parents on section 27, purchasing an entire quarter section in 1834. Peter and Levi appear to still be included in their father's household on the Federal Census of 1840 (History of Calhoun County 1877:94-95,103; GLO 1994).

The McCamly family was very important to the settlement of Battle Creek Township and the city of Battle Creek. Sands McCamly is considered the founder of Battle Creek. Arriving in Calhoun County in June 1831, he tried to purchase the land at the confluence of the Kalamazoo and Battle Creek rivers. Due to an unfavorable

financial outcome, he was unable to make the purchase at that time and settled first at Nottawa Prairie and then at Marshall until 1834. Finally able to purchase the land that he had tried to acquire in 1831, McCamly is credited with erecting the first sawmill in the village of Battle Creek. McCamly was already a married man with a family when he arrived. He did not arrive in the county without other family members. It is highly likely that Eleazor McCamly, the pioneer of Burlington township was related to him. Sands McCamly's nephews, Samuel W. and Gilbert W. are also listed as arriving in Battle Creek in 1836. By 1840, on the Federal Census, there are six separate McCamly households listed on the census. Ruth McCamly is over fifty years of age with dependent children; Leander McCamly is married, over thirty years of age, with young children; Samuel W., married with children and over thirty years of age; Sands McCamly, over forty years of age, with numerous dependents; Robert McCamly, between twenty and thirty, with dependent children and David McCamly, over thirty years of age, married, with dependent children (History of Calhoun County 1877:80; Federal Census 1840).

An interesting family cluster, associated with the early development of Battle Creek as a village, is the Merrett/Hart family cluster. Jonathan Hart was married to Mary Merrett, a sister of Abraham, Joseph and Isaac Merrett. Jonathan Hart's sister, Phoebe, was also married to Joseph Merrett. Sibling exchange is a well documented form of kinship relationship and plays a role in many societies to order the society. It is also a fairly common occurrence in nineteenth century America (History of Calhoun County 1877:80).

The Hall brothers were also early settlers of Battle Creek. Moses Hall was the older brother, who arrived in 1832 and purchased land for himself and his brother Tolman. Moses and his wife and five children settled permanently in Battle Creek in 1833. Tolman W. was born in 1805, married in 1832 and moved to Battle Creek in 1834. Both Moses and Tolman W. Hall were active in the early development of the city, the county and the state of Michigan. Both men served in the state legislature and both men were considered to be influential in the early years of village development (History of Calhoun County 1877:80-81).

The Morehouse family cluster is interesting in that two men named Morehouse were early settlers of Calhoun County and were not related to each other except by marriage. Bradley Morehouse was married to Sally, the daughter of Aaron Morehouse before arriving in Calhoun County in 1835. Both men settled on adjoining parcels in section 26 and 35, purchasing a quarter section each. Aaron Morehouse is listed on the census of 1840 as over sixty years of age, married, with numerous dependents. Bradley Morehouse, over forty, married with three sons and a daughter (History of Calhoun County 1877:95; Federal Census 1840; GLO 1994).

An early historian of Battle Creek and Calhoun County was the offspring of a kinship cluster. Martin and Ephraim Van Buren, Jr. were brothers who settled in Battle Creek, on section 21, in 1836. Their father, Ephraim Van Buren, Sr. came in the fall of 1836 with his wife, daughter, Eliza and son, A.D.P. Van Buren. It is A.D.P. Van Buren's description of early Battle Creek, written for the *Battle Creek Journal*, which described the early settlements on Goguac Prairie (History of Calhoun County 1877:95).

The extended family cluster of the Barney and Convis families was involved in the settlement of Battle Creek. Nathaniel Barney arrived with his family from New York in 1833. Accompanying him were Ezra Convis, his son-in-law, who would later be involved in the development of Verona, now a suburb of Battle Creek. Ezra Convis' brother, Samuel Convis, also arrived about the same time. The Convis brothers and Nathaniel Barney are considered some of the earliest proprietors of Battle Creek. Ezra Convis was elected to the state legislature in 1835 and was made the first speaker of the house. He died in early 1838, after a sleigh accident caused him severe injuries. Samuel Convis was actually a settler of Pennfield Township, which makes up part of the modern city of Battle Creek, the village of Verona being in this area. Samuel Convis and his brother, Ezra owned many parcels of land in sections 28, 29, 30, 31 and 32, in the southwest corner of Pennfield Township (History of Calhoun County 1877:80,179; GLO 1994).

**Pioneer Kinship Clusters of Pennfield Township**

Much of the early settlement of Pennfield Township was associated with the development of Battle Creek. The southwest corner of the township contains the village of Verona, a modern suburb of Battle Creek, which in the early development of the county was said to rival Battle Creek as a population center. The remainder of the township was more sparsely settled in the first years of the pioneer period.

An example of a generational family settling on the frontier of Pennfield Township would be the Adams family. William K. Adams and his son, John S., arrived in Pennfield Township in 1836 and settled on section 8. John S. built a shanty and began improvements on the property while his father returned to New York to bring the

remainder of the family west. This occurred in 1838, after William Adams had lost all his property in the Panic of 1837 (Rust 1869:228).

The Marshall brothers settled in the southeast section of Pennfield Township in 1838. Erastus, William and Orrin Marshall settled with each other on sections 35 and 36. Erastus and his brother Orrin were over thirty years of age on the Federal census of 1840, in separate households. In the Orrin Marshall household, there is an additional male listed over thirty years of age, this is probably William. A woman, who is probably their mother, is enumerated at over fifty years of age, also living in Orrin's household (History of Calhoun County 1877:176; Federal Census 1840).

The Morey family cluster arrived in Pennfield Township in 1837. Eli Morey and his son, Elijah M. Morey are listed as arriving that year. The Federal census of 1840 lists Eli Morey as over fifty years of age, married, with one dependent in his household. Elijah M., who was born in 1809, is listed in the next household to be enumerated, married with one young (under five years of age) son (History of Calhoun County 1877:176; www.familysearch.com:Morey).

**Pioneer Kinship Clusters of Bedford Township**

Bedford Township is located in the furthest northwest corner of Calhoun County. In the first few years of settlement of the county, Bedford was also a township that was very sparsely populated. Even though there were few people living in Bedford Township in the early years, there were still numerous kinship clusters involved in the settlement of this area.

In the northwest corner of the township a group of New York pioneers settled together in 1836. Harvey Cooley and his brother, Anthony, along with their brother-in-

law, Stephen H. Carmen, arrived with George B. Hamilton and John Hamilton, brothers, and a man named Jonas Young. Harvey Hamilton, a brother of George B. and John settled just across the township line in Kalamazoo County. These men were all married at the time of their arrival, except for Anthony Cooley, who was a bachelor. They settled together on sections 5,6,7 and 8 (Rust 1869:215-216; GLO 1994).

Isaac Sutton arrived with his family in 1836, purchasing the entire section 25 in Bedford Township. At the time of his arrival, his family consisted of four adult offspring, plus five children who had not yet reached their majority. It was stated in the history of the township, that Mr. Sutton purchased an entire section of land so that he could provide farms for all of his children (History of Calhoun County 1877:194).

In 1837, the brothers Eli L., George L. and David Stillson settled together on section 29 in Bedford Township. Jacob and Abraham Frost settled on section 19 the same year. Jacob and Abraham were both over forty years of age by the census of 1840, married, with dependents (History of Calhoun County 1877:194; Rust 1869:215; Federal Census 1840).

In 1840, a man named John Cox settled in Bedford Township. He was married in 1831 to Eleanor, a daughter of Jacob Stringham, who also lived in Bedford Township. Jacob Stringham had arrived in 1836 and settled on section 27 and 28. He also had two sons, John and Elijah Stringham, who by the census of 1840 were listed as separate heads of household. John Cox, Jacob's son-in-law is credited with beginning the "Cox Settlement" which consisted of six hundred acres of land, which he sold in parcels to other people and deeded some to his children for farms (History of Calhoun County 1877:197; Rust 1869:215; Federal Census 1840; www. Familysearch.com:Stringham).

**Pioneer Kinship Clusters of Emmett Township**

The early development of Emmett Township is closely aligned to both the city of Battle Creek and the other townships associated with the Milton Township cluster. Emmett Township contained the Territorial Road that ran from Detroit to St. Joseph and consequently the first settlements in this township, originally designated as Cady, until 1837, were contemporaneous with Battle Creek, Marshall and Marengo townships.

The first family cluster to arrive in Emmett Township was the Dwinnell family cluster, arriving in August 1831. Benjamin T., Henry L. and John D. were brothers who arrived with their widowed mother and younger sister. Benjamin T. was already married with dependent children on arrival. Henry L. married another pioneer family's daughter in 1834, his being the first marriage in the township. Benjamin T. Dwinnell, the brother of the groom, performed the marriage ceremony. The Dwinnell's are also credited with building the first bridges in the township, one over Pigeon Creek and the other over the Kalamazoo River (History of Calhoun County 1877:181; Rust 1869:239).

In 1833, the Lowell brothers, Asa and Moses, settled in Emmett Township on sections 11 and 14 on adjoining parcels. By the census of 1840, both brothers are listed as over forty years of age with multiple offspring in each household. This family cluster settled just to the north of the Dwinnell family cluster (History of Calhoun County 1877:181; Federal Census 1840).

Luther Phelps settled in Emmett Township in 1834. Luther's younger brother, Asa, followed him to Emmett Township in 1835. These men were both married with multiple offspring when they arrived. Asa was married to Maria (Stiles) Phelps, a daughter of Zebediah Stiles. By the 1840 census Luther and Asa are listed as over fifty

and over forty respectively, with multiple dependents (History of Calhoun County 1877:181; Federal Census 1840).

The Zebediah Stiles family cluster also arrived in 1835. Zebediah was quite elderly when his family arrived, since he is listed on the 1840 census as over 70 years of age. His three sons, Royal, Chester, and Justus, are all listed as separate heads of household by the 1840 census, with wives and dependents of their own. This family cluster settled on section 8 of the township, just outside of Battle Creek (History of Calhoun County 1877:181; Federal Census 1840; GLO 1994).

The Spauldings are another family cluster that arrived in 1836. Jacob Spaulding's family consisted of his wife, three sons and two daughters. They settled on section 29 of the township. Jacob is listed as over fifty years of age by 1840 and his son John A. is listed as a separate head of household on this census. The other four children were younger when they arrived in Emmett Township, but settled later on farms near their parents (History of Calhoun County 1877:181; Federal Census 1840).

Professional people also arrived in family clusters. Two doctors, both pioneers of Emmett and Battle Creek Township arrived in the early years of development. Dr. Asahel Beach arrived in 1834 and settled on section 10, the first physician in the township. He had practiced in New York with his brothers, Thomas and John. It was Dr. Asahel Beach who suggested the name of Cady for the township, named for his son, who had been named for his wife's father, General Cholett Cady. Dr. John Beach, with his wife and four children, followed his brother to Michigan, first staying with the Asahel Beach's until their home could be built. Dr. John Beach died in the summer of 1840, at the age of 43, having overworked himself in the "sickly season of 1838" and

become ill himself. His brother, Asahel, continued his medical practice in Emmett Township until 1843, when he turned to farming on section 10 of the township (History of Calhoun County 1877:100-101, 181).

Other family groups that settled in the township consisted of the Harper's and the Beadle's. Beadle Lake is named for the Beadle family, who arrived before 1840. The Harper's are another family cluster of which little can be found in the county histories. John Harper arrived in 1834 and settled near the Dwinnell family cluster. John is listed on the 1840 census as being over sixty years of age. Hiram and Benjamin Harper are listed on the census as separate heads of household, both over thirty years old, with multiple dependants. Hiram and Benjamin are probably John's sons. John Harper is credited with building the first sawmill on the Kalamazoo River in Emmett Township, on section 31, in 1835 (History of Calhoun County 1877:181-182; Federal Census 1840).

Two of the four townships in the northwest quadrant of Calhoun County were settled very early in the pioneer period. The Territorial Road was surveyed through the lower two townships of this quadrangle in the late 1820's. This appears to have affected the settlement pattern for these four townships. Both Emmett and Battle Creek Township were settled very early and heavily by the influx of pioneers to Calhoun County. The first settlements in Battle Creek Township were on Goguac Prairie and kinship clusters are evident in this area. The Thomas' and the Stewart's were large groups of people, comprising at least thirty people in these two kinship clusters alone. The majority of the rest of the early settlement was associated with the waterpower in the northeast quadrant of Battle Creek Township. The confluence of the Kalamazoo and

Battle Creek Rivers was a natural area for settlement because of the abundant waterpower, and many people tried to acquire this parcel of land to benefit from this power source. Originally, J.J. Guernsey, Lucius Lyon, Sands McCamly and Robert Clark were all interested in purchasing this area. Lyon and Clark were surveyors who were familiar with the area. McCamly and Guernsey paid off the other two men and entered a claim, but the deal fell through and Guernsey sold off the land to his brother, Ezekiel and his brother-in-law, Phineas Sackett. J.J. Guernsey never became an actual settler, but was a land purchaser and speculator (Gregory 1988:5; Rust 1869:75-76).

**Table 5.4: Kinship Clusters of Battle Creek Township**

| Family Name | Settlement | Township | Cluster type | # of members |
|---|---|---|---|---|
| Thomas | 1831 | Battle Creek | Sibling | 10 |
| Stewart | 1831 | Battle Creek | Generational | 20 |
| McCamly | 1831 | Battle Creek | Extended | 35 |
| Dwinnell | 1831 | Emmett | Sibling | 11 |
| Hall | 1832 | Battle Creek | Sibling | 12 |
| Lowell | 1833 | Emmett | Sibling | 16 |
| Barney/Convis | 1833 | Bedford/Penn | Extended | 18 |
| Phelps/Stiles | 1834/35 | Emmett | Extended | 50 |
| Beach | 1834 | Emmett/BC | Sibling | 12 |
| Harper | 1834 | Emmett | Generational | 18 |
| Morehouse | 1835 | Battle Creek | Generational | 14 |
| Merritt/Hart | 1836 | Battle Creek | Extended | 22 |
| Van Buren | 1836 | Battle Creek | Generational | 7 |
| Adams | 1836 | Pennfield | Generational | 6 |
| Cooley | 1836 | Bedford | Sibling | 10 |
| Hamilton | 1836 | Bedford/Kz | Sibling | 10 |
| Sutton | 1836 | Bedford | Generational | 9 |
| Spaulding | 1836 | Emmett | Generational | 15 |
| Morey | 1837 | Pennfield | Generational | 6 |
| Stillson | 1837 | Bedford | Sibling | 13 |
| Frost | 1837 | Bedford | Sibling | 8 |
| Marshall | 1838 | Pennfield | Sibling | 9 |
| Simons | 1838 | Battle Creek | Generational | 12 |
| Beadle | 1838 | Emmett | Generational | 11 |
| Hutchinson | 1838 | Emmett | Generational | 16 |
| Wells | 1838 | Pennfield | Generational | 19 |

Settlement was clustered around the rivers and Goguac Prairie (Figure 5.10, page 153). Many kinship clusters were involved in this early period of settlement and it is evident that most of the settlement to this township in the first few years was clustered in the northeast quadrant. However, kinship did play a role in where people settled. Numerous kinship clusters settled on Goguac Prairie and the few outlying kinship clusters were related to these people. A majority of the land purchases were by people involved in a kinship relationship. When other people did settle in this township, they almost always settled near someone else.

During this same period, many people were settling in Emmett Township as well. The majority of the early settlers were involved in some type of kinship relationship with other settlers. The Stile's, Lowell's, Dwinnell's and Harper's all settled early in the pioneer phase of this township. These four kinship clusters alone were almost one hundred people strong. Settlement was not scattered, but concentrated along the river, Indian trails and road. This is where people were and incoming pioneers settled here.

The two upper townships, Bedford and Pennfield, were not settled to any extent in this early phase, much like the rest of the northern tier of townships in this county. The settlement that did occur in Pennfied in the first few years was very sparse and clustered, near the river in the southwest portion of the township. Land purchased here, belonged for the most part, to people who were related to settlers that were already living in Battle Creek Township. Bedford Township did not receive any settlers in the first few years of settlement.

The explosion of population during the second phase of settlement for these townships is evident when examining Figure 5.11, page 154. Bedford and Pennfield, in

particular, received a large influx of settlers. For Bedford Township, many of these settlers were associated with a kinship cluster. In the northwest quadrant of Bedford Township the Cooley/Carmen/Hamilton cluster took up a large portion of that area of the township. Isaac Sutton and his large family settled in the southeast portion of the township, near Battle Creek. The Frost brothers and the Stillson siblings make up a group of settlers in the southwest portion of the township. The land purchased by kinship clusters accounts for more than half of the land sold to actual settlers during this phase of settlement. The effect of kinship on settlement is very evident when examining the map.

Pennfield Township, during the second phase of settlement, received a great influx of settlers. This settlement appears to be primarily clustered around the southern half of the township. There were very few kinship clusters in Pennfield Township during this phase of settlement and therefore it seems unlikely that kinship had much to do with the settlement pattern for this township at this time. The large increase in population appears to have more to do with environmental factors, such as water source/power, than to social factors, such as kinship.

Emmett Township received very few new settlers in the middle phase of settlement. When people did settle in Emmett, they tended to settle near an already established family. The presence of large numbers of kinship clusters still lends support to the idea that kinship played a role in settlement decisions during this time period.

The settlement of Battle Creek Township, in the middle phase, (see Figure 5.11, page 154) exhibits a large expansion of the population. Settlement south and west of Goguac Prairie was extensive and much of this settlement was associated with kinship

clusters. While most of the settlement of this township during the early phase was associated with the northeast quadrant, more of the settlement was associated with the areas away from the social and economic center of the township in this phase. Numerous kinship clusters settled here in the years between 1835 and 1837. When settlers were not related to a kinship cluster, they almost always associated with one by purchasing land adjoining a kinship cluster.

During the final phase of settlement for these townships, kinship appears to be less significant to settlement decisions. By examining Figure 5.12 on page 155, it is possible to visualize the significant population increase in all four townships.

The least populous township, Bedford, was becoming heavily settled by the end of the pioneer phase. Few new kinship clusters arrived during this final phase of settlement. The vast increase in the general population led to a general filling in of land purchases for the township.

The same is true for Pennfield Township. Almost all of the land that was available in the township, especially the southern half, was purchased by the end of the pioneer phase of settlement. The only area that was not heavily settled was the northeast quarter of the township, and no one lived there. The majority of settlement appears to be associated with the presence of the villages of Verona and Battle Creek. Kinship does not appear to have an effect on settlement decisions for this phase of settlement.

Emmett Township was also heavily settled by this time. While there are arrivals by kinship clusters for this period, they only add to the general filling in of the township. The kinship clusters do not appear to affect settlement during this phase. By 1840,

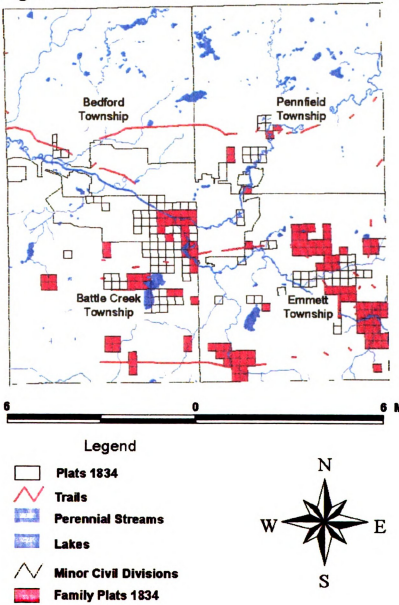
Emmett Township was almost completely populated. The frontier phase was over for this township.

Battle Creek Township shows the same general filling in of land purchases for this last phase of settlement. Very few kinship clusters arrived and settled in the area during this time period. The population was large enough that the need for "neighborhood" was not a requirement by this time. Therefore, kinship probably played only a minor role in settlement decisions for the people settling in this township during the last part of the frontier period.

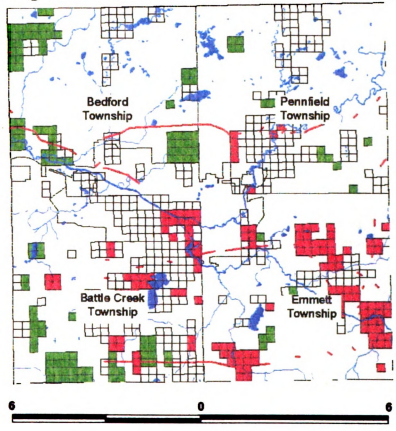
With respect to the presence of aspects of social centralization, mills and cemeteries, these do not appear to be associated with kinship clusters. The mill sites present in the pioneer period of Milton Township are associated primarily with the villages of Battle Creek, Verona and Bedford. Three other sites contain mills in the southern part of Milton Township. Only one of these is associated with a kinship cluster, the Harper family cluster in Emmett Township.

There were numerous cemeteries established in the pioneer phase of Milton Township. The earliest cemetery was associated with the Stewart kinship cluster. Mrs. Stewart was the first death recorded in the township. This particular cemetery is now known as the Beadle Cemetery, another kinship cluster that arrived later in the pioneer period. The other cemeteries in Milton Township do not have a specific association with a particular kinship cluster. This is not particularly surprising, since there was such a large population influx, especially during the later two-thirds of the pioneer period. Many of the pioneer families buried their deceased relatives in these cemeteries, and therefore they did not have a particular association with a specific kinship cluster.

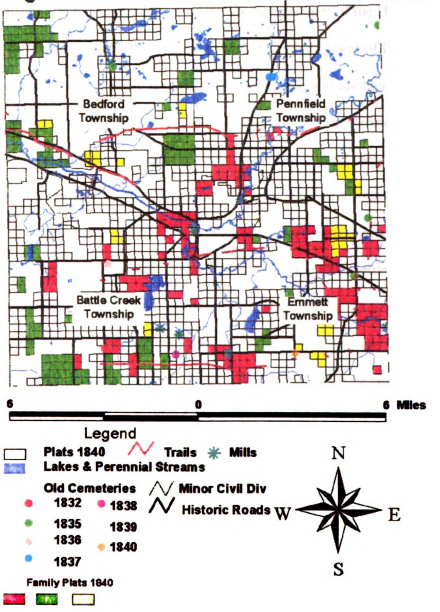
## Figure 5.10: Battle Creek T. 1831 to 1834



## Figure 5.11: Battle Creek T. 1831 to 1837



## Figure 5.12: Battle Creek T. 1831 to 1840



**Pioneer Kinship Clusters of Convis Township**

The four remaining townships in Calhoun County consist of Convis, Marshall, Fredonia and Tekonsha. These four townships run in a line from north to south from the top to the bottom of the county.

Convis Township was named for Ezra Convis, the first speaker of the House of Representatives of Michigan, and a member of a pioneer kinship cluster of Pennfield Township, which neighbors Convis to the west. This township was another one in the county that was slow to develop, both because of its location and environmental factors. The land in Convis Township is not as level as in other townships and there was a considerable amount of swampy area in the southwest part of the township during the pioneer period. The areas that were not hilly or swampy were heavily timbered. This also delayed settlement of the township. Areas that received the most settlement were the oak openings, when they were found (History of Calhoun 1877:153).

No one settled in Convis Township until 1835, and there were not significant numbers until later in the decade. The first cluster, although it cannot be considered a true kinship cluster, emigrated from England, the group of James Lane, Paul Moss and William Newman. James Lane was induced to move from England to the United States in 1835 by a former neighbor who had emigrated the previous year. Mr. Lane and his family accompanied the family of the former neighbor to Michigan. Paul Moss was hired to convey Mrs. Lane and their child to Convis Township. Mr. and Mrs. Lane purchased land in section 27 and Paul Moss purchased land adjoining theirs. William Newman was also from England, and arrived in Convis Township some time before his family, who were adults on their arrival. William Newman purchased land in section 22

and 23 just north and adjoining the lands of Moss and Lane (History of Calhoun County 1877:153).

In 1836 Elisha and Hiram Brace moved into the township. From the census data, Elisha appears to be the parent, over sixty years of age, while Hiram is listed as a separate head of household, over forty years old. Both households have numerous dependents listed (History of Calhoun County 1877:153; Federal Census 1840).

Another family group that settled in 1836 was the family of Asahel Hawkins. Asahel is listed on the 1840 census as over thirty years of age, with a wife and four dependent children. The very next entry for head of household on this census is Alanson Hawkins. Alanson is also over thirty years of age, married with three children. Although it could not be confirmed, it is highly likely that these two men were brothers and settled next to one another in Convis Township (History of Calhoun County 1877:153; Federal Census 1840).

**Pioneer Kinship Clusters of Marshall Township**

Marshall Township, originally spelled Marshal, was the original township of Calhoun County and included all twenty townships when the county was organized in June 1832. On March 29, 1833, the township of Marshal was reorganized into three townships, Marshall, Milton and Marengo. The township of Marshall included all the townships 1,2,3, and 4 in range 6 west, that is Convis, Marshall, Fredonia, and Tekonsha, as well as the four townships later organized as Homer Township (History of Calhoun County 1877:180).

The first settler in Marshall Township and Calhoun County was Sidney Ketchum. He is also a member of the first kinship cluster in Calhoun County. Sidney was the

original pioneer of Calhoun County. It was his brother, George, who built the first log cabin and erected a sawmill on Rice Creek, in 1831, in what would later become the village of Marshall. Sidney and George, along with Charles D. Smith and Isaac Hurd were the original proprietors of the village of Marshall. The Ketchum kinship cluster was quite large, extending over three generations. When George Ketchum arrived in April 1831, with his cousin, White Ketchum, he came with six other men to establish the village of Marshall. Sidney Ketchum had returned east to bring his wife and five children back to the settlement. When Sidney returned in July, he brought his wife and children and his younger sister, along with their parents. Then George returned to New York to retrieve his wife and two children, and sister Susan Ketchum, arriving in November 1831. When Sidney returned in July, he brought Peter Chisholm and his wife, along with Randall Hobart and his wife. When George Ketchum returned with his family in November, he brought Thomas and George Chisholm, Peter's brothers, and Thomas Chisholm's wife and family. Therefore, there were two kinship clusters involved in the very earliest settlement of Marshall Township (Rust 1869:27-30; History of Calhoun County 1877:12-14,50-51,131).

While the village of Marshall was developing, the surrounding township was acquiring pioneer settlers as well. In 1834 George W. Bentley arrived and settled in the township on section 16. Joseph Bentley followed his brother George, in 1836, to the township. On the 1840 census, the George W. Bentley household has two males, both over thirty years of age, with other people residing in the household (History of Calhoun County 1877:69; Federal Census 1840).

The Labertaux kinship cluster was another group of early settlers to Marshall Township. Jacob, Henry, and James Labertaux all purchased adjoining parcels of land in sections 9 and 10 of the township in 1838. Jacob purchased the northeast quarter of section 9, James the southwest quarter of the northwest quarter of section 10 and Henry purchased the southwest quarter of section 10 along with the west half of the southeast quarter of section 10 and the north half of the northwest quarter of section 15. On the census of 1840, Jacob and Henry are both over forty years of age and James is listed, on the census, between Jacob and Henry at more than thirty years of age. All three men were married with dependent children on this census. Anna Labertaux is also listed on the census, at over seventy years of age, probably their mother, living in a separate household by herself, located on the northeast quarter section of section 3 (Federal Census 1840; GLO 1994).

The King kinship cluster was also an early arrival to Marshall township. Gilbert King purchased the west half of the southeast quarter of section 3, which was adjoining land purchased by Jacob King, the northeast quarter section of section 10. John King is also listed as a brother of Gilbert King. He apparently immigrated to Marshall from New York in 1835, settling in Marshall Township until 1848, when he moved to Convis Township. Jacob King is listed on the 1840 census as over fifty years of age, with three dependent females in his household, not including his wife. Seneca H. King, probably Jacob's son, is the next listing on the census as a separate head of household. Seneca is enumerated as over twenty, with another male who was also over twenty as well as a female between fifteen and twenty years of age (History of Calhoun County 1877: 153; Federal Census 1840).

What appears to be most interesting about the early settlement of Marshall Township is that while it is by far the most populous in the county, it seems to have fewer kinship clusters than the rest of the county. It is only in the very earliest settlement period, 1831 - 1834 that kinship appears to play a role in where people settled.

**Pioneer Kinship Clusters of Fredonia Township**

Fredonia Township was another township that was not heavily populated in the early years. The first settlements did not occur until late in 1833, and only two in that year. Thomas Burland is the recognized pioneer of Fredonia Township, and he is also a member of a kinship cluster. Thomas Burland left England in 1831 with his wife and three daughters. He settled first in the village of Marshall and was the first settler of Fredonia Township in 1833. His father, William Burland, Sr. helped him build his log cabin on the northeast quarter of section 24. Mr. William Burland, Sr. had migrated from England in the winter of 1832-33 to be with his family in Calhoun County. By the census of 1840, the Burland household consisted of Thomas, who is probably the male listed at over forty years of age, with a male also listed at over sixty, probably William Burland, Sr., two other males in their twenties, one male under five and three females all under fifteen. Mrs. Burland is probably the female who is over thirty years of age (History of Calhoun County 1877:161; Federal Census 1840).

The second settler to Fredonia Township, also in 1833, was John Houston, Sr. He was nearly forty years of age when he settled in the township. His daughter was the first child born, to his second wife, in the township in 1834. By the 1840 census there are nine people living in his household. John, Sr. is over forty, born in 1794, John Jr. is

probably the male who is over twenty, while there are six dependent children in the household on this census (History of Calhoun County 1877:161; Federal Census 1840).

Increase A. Pendelton settled on section 24 in 1834. This area is known as Palmer's plains, because of the first settler over the township line, in Eckford Township, was Charles K. Palmer. Increase's wife, was a sister of Charles K. Palmer, who had settled in Eckford in 1832. This is another example where a kinship cluster forms through the female line in the family. There is another Pendelton listed on the census, most likely a brother of Increase A., being over twenty years of age, with one young dependent child on this census (History of Calhoun County 1877:162; Federal Census 1840).

Another kinship group, two half-brothers, settled in 1835 on Section two of the township. John Tilton, his wife and child and his half-brother, Caleb settled this area together. Caleb was a bachelor and lived with his brother and sister-in-law. John Tilton died in 1849, leaving a wife and three children. Caleb married John's widow, shortly after John's death (History of Calhoun County 1877:162; GLO 1994).

The Rowley brothers were also early settlers of Fredonia Township. William Rowley and his wife came to Michigan and Fredonia Township on their honeymoon in June 1837. William's brother, Benjamin, had been out to Michigan the previous summer and located land on section 22. Benjamin then returned to New York where he had married a sister of William's wife and they all came to Fredonia Township together. By 1840, they are still present in the township, in separate households on adjoining land (History of Calhoun County 1877:162; Federal Census 1840).

Thomas P. Briggs located 200 acres of land on the northeast quarter of section 35 and the northwest quarter of the southeast quarter of section 35 in 1835. When the

family arrived it consisted of Thomas P. and his wife, their sons, Thomas J. and George W. (twins), Joseph, and John W., and Esther Ann. Thomas J. and George W. traveled to Buffalo alone by way of the Erie Canal, while the rest of the family arrived in Buffalo by team. The Briggs family cluster is listed on the Federal Census of 1840, with Joseph, over twenty, married, with a young son, being in an adjoining separate household, and Thomas and George still living with their parents, although over twenty years of age (History of Calhoun County 1877:162-163; Federal Census 1840).

Another pair of brothers settled in Fredonia Township as well. Frank B. Wright came to Michigan in 1836 and lived in Marshall for a number of years. His brother, Julius, also came to Michigan in the fall of 1836 and worked for several years in Marengo Township. Both brothers eventually settled in Fredonia township on section 14, part of Palmer's plains (History of Calhoun County 1877:163).

The Carey family is one more kinship cluster that settled in Fredonia Township. Hiram Carey purchased land on section 4 in 1834. By the 1840 census, Hiram is over twenty years of age, married with a young son. The next entry on the census, Archibald Carey, is over fifty years of age, with four sons and no wife. It is highly likely that Archibald is Hiram's father, although no mention can be found of this in the local histories (History of Calhoun County 1877:163; Federal Census 1840).

**Pioneer Kinship Clusters of Tekonsha Township**

Tekonsha Township was much like many of the other townships in Calhoun County in the early years of settlement. Because there is a river, the St. Joseph, and a village in the township, it developed somewhat more quickly than completely rural townships, such as Newton and Fredonia. The first settlers in Tekonsha, however, did not arrive

until 1833, and there were actually very few people in the township until as late as 1835. The township was separated politically from Marshall Township in 1836 (History of Calhoun County 1877:147).

The first settler in Tekonsha Township, much like the earliest arrivals in other townships was a member of a kinship cluster. The earliest settlement occurred in what would later become the village of Tekonsha. Timothy Kimball was the first settler at the site of Tekonsha village. His brother, Stephen, was an early settler of the city of Marshall. Timothy purchased half of section 27 from Darius Pierce, also from Marshall, and settled on it in 1833 (History of Calhoun County 1877:147,150).

The next kinship group to arrive did not come to Tekonsha Township until 1835. At this time there were only three families living in the entire township. The Kerr family arrived in June 1835. William H. Kerr was a bachelor, twenty-three years of age, and traveled with his father's family, John Kerr and his wife, three other sons and a daughter. William H. Kerr purchased a quarter-quarter section, 40 acres, and constructed a log cabin on it where the family lived for several years. He was married in 1840 to a niece of Samuel and Joseph Hemenway, early businessmen (and members of a kinship cluster) of Tekonsha village (History of Calhoun County 1877:150).

Samuel Hemenway arrived in 1836 and constructed a hotel in the village of Tekonsha. His brother, Joseph, followed him to Tekonsha, arriving in 1837. Joseph ran the hotel, while Samuel became the first general store owner in the village. Their niece, Mary Barker, who married William H. Kerr in 1840, came with here uncle, Joseph Hemenway, when he traveled from Vermont to Tekonsha (History of Calhoun County 1877:147-148).

In the spring of 1836, two brothers, Rufus and Cornelius Osborn came from Rochester, New York and settled on section 29 of Tekonsha Township. With the two brothers were their widowed mother, and three sisters. Cornelius was the first blacksmith in the township (Rust 1869:198-199; History of Calhoun County 1877: 148,150).

Other kinship clusters also arrived in Tekonsha at this time. Lewis and Levi Merrifield, Eli and Elijah J. Stone, Daniel and Luther Walling, and David and William Watson all settled in Tekonsha Township. The most complete information is for David and William Watson. According to the local history, both men were married when they arrived in the township. Additionally, their father also came with them. Although his name is not mentioned, there is a George Watson on the 1840 census, over 60 years of age and is enumerated next to David Watson in the census data. The Watsons settled on sections 14 and 15 in 1836 (History of Calhoun County 1877:151; Federal Census 1840; GLO 1994).

The Walling kinship cluster consisted of Daniel and Luther Walling. There is an additional Daniel Walling listed on the 1840 census, the elder Daniel is over sixty years of age, while Luther is over thirty and the second Daniel is over twenty. Daniel and Luther Walling own adjoining 80 acre parcels in section 18 of Tekonsha Township according to the original land purchase data (History of Calhoun County 1877:150; GLO 1994; Federal Census 1840).

The Failing family has already been discussed in other townships. This is an example where siblings spread out over more than one township. John Failing originally settled in 1833 on Cook's Prairie in Clarendon Township. His brothers,

Benjamin, Henry, and Abraham also settled in Michigan, two of them in Calhoun County. Abraham came to Michigan with John and Linard Born from New York in 1833. The other Failing brothers settled in Homer and Ann Arbor (History of Calhoun County 1877:151).

**Table 5.5: Kinship Clusters of Marshall Township**

| Family Name | Settlement | Township | Cluster type | # of Members |
|---|---|---|---|---|
| Chisholm | 1831 | Marshall | Sibling | 9 |
| Ketchum | 1831 | Marshall | Extended | 18 |
| Bentley | 1834 | Convis | Generational | 9 |
| Pendleton | 1834 | Fredonia | Sibling | 4 |
| Carey | 1834 | Fredonia | Generational | 9 |
| Lane/Moss/Newman | 1835 | Marshall | Extended | 13 |
| Tilton | 1835 | Fredonia | Sibling | 5 |
| Briggs | 1835 | Fredonia | Generational | 8 |
| Kerr | 1835 | Tekonsha | Generational | 8 |
| Hawkins | 1836 | Convis | Sibling | 11 |
| King | 1836 | Marshall | Sibling | 15 |
| Wright | 1836 | Fredonia | Sibling | Unknown |
| Hemenway | 1836 | Tekonsha | Sibling | 9 |
| Osborn | 1836 | Tekonsha | Generational | 9 |
| Merrifield | 1836 | Tekonsha | Sibling | Unknown |
| Stone | 1836 | Tekonsha | Generational | 6 |
| Walling | 1836 | Tekonsha | Generational | 16 |
| Watson | 1836 | Tekonsha | Generational | 16 |
| Rowley | 1837 | Fredonia | Sibling | 8 |
| Labertaux/Root | 1838 | Marshall | Extended | 27 |
| Holt | 1839 | Fredonia | Generational | 10 |
| Thomas | 1839 | Convis | Generational | 10 |
| Cassidy | 1840 | Marshall | Sibling | 16 |
| Buckingham | 1840 | Marshall | Sibling | 10 |
| Edmonds | 1840 | Tekonsha | Generational | 9 |

The four townships of Tekonsha, Fredonia, Marshall and Convis were very sparsely settled in the early years of the frontier period. Tekonsha and Convis did not receive any settlers until 1834 and 1835, respectively. Fredonia only had two families living in

that township by the end of 1833 and they were both kinship clusters. The early years of Marshall Township were once again associated with the presence of the Territorial Road and the Kalamazoo River. Proximity to the road and the river may well have been the primary reasons why people decided to settle where they did in the early period. The effect of kinship, however, cannot be completely discounted, even in Marshall Township. Several kinship clusters were present in Marshall Township in the first few years of settlement. The Ketchum's and the Chisholm's were both large kinship clusters, involving many people. The Ketchum brothers were also very influential, because they managed to persuade numerous people to settle in Michigan and Marshall in particular.

By the end of the early period of frontier settlement, in 1834, numerous families had settled in Marshall and Fredonia Townships. These settlers (see Figure 5.13, page 171) tended to be associated with either the developing village of Marshall, or the settlement on Palmer's Plains. A third area that attracted settlers and settlement was the northwest corner of Fredonia Township and the southwest corner of Marshall Township.

During the second phase of settlement, all four townships acquired new arrivals and many kinship clusters were present among these settlers. Convis Township had its first settlers during this stage of development. Most of the families that settled in Convis Township in the years between 1835 and 1837 were involved in some type of kinship relationship. When other families did settle in the township they tended to settle near the established kinship clusters in the southern part of the township (Figure 5.14, page172).

Tekonsha Township also received its first significant settlement in the second phase of the frontier period. Most of the settlement was associated with the village of Tekonsha and the St. Joseph River that runs through the township. Numerous kinship clusters are visible on Figure 5.14 of the township. In 1835, most of the settlement occurred in the southwest portion of the township and appears to be heavily influenced by the presence of kinship clusters in this area. There was a large influx of pioneers to the township in 1836, concentrated in the middle of the township, north of the St. Joseph River and east of the village. This group of settlers also had several kinship clusters associated with them at the time settlement occurred. The only settlers to Tekonsha Township in 1837 were part of a kinship cluster that had already settled in the township the previous year.

Fredonia Township during the middle phase of settlement received numerous settlers (see Figure 5.14, page 172). Most of these were not associated with a kinship cluster and settlement, in general, was generally scattered throughout the township. Several kinship clusters did settle in Fredonia Township during this period, but there were so many non-kinship settlers that the few kinship clusters that were present do not appear to have a significant effect on the settlement pattern for the township.

The dominance of non-kin settlement over kin-based settlement is true for Marshall Township. There are a significant number of settlers in the township from 1835 to 1837, but very few kinship clusters. The fact that there were few kinship clusters in Marshall Township during the pioneer phase of settlement has been alluded to earlier. When settlement occurred in this phase, it tended to be scattered and not concentrated around the existing kinship clusters in the township.

During the final phase of frontier development for Convis Township numerous settlers arrived. Most of the settlement continued to be concentrated in the southern half of the township where no new kinship clusters settled. With the beginning of settlement in the northern half of the township developing, several kinship clusters arrived in this area and the overall development of the township continued (see Figure 5.15, page 173).

By the end of the frontier period for Marshall Township almost all of the land was occupied with few new kinship clusters associated with this township. The few clusters present in the upper central part of the township that arrived during this phase of settlement are surrounded by non-kinship cluster settlement. Nearly two-thirds of all available land in this township was owner occupied by this period on the frontier and kinship clusters were not heavily represented at any time.

Fredonia Township did not continue to receive the significant increase in population that had occurred during the second phase of settlement. Only one new kinship cluster arrived in the last three years of the frontier phase of settlement. The pioneer farmers that settled in the township during this phase continued a general filling in of the township with a number of parcels purchased that tended to be contiguous with other already purchased parcels in the township. A widespread settlement pattern was developing for this township much like the other townships during this phase.

Tekonsha also showed a significant increase in its population during the final phase of frontier settlement. Most of the population continued, however, to settle in the southern half of the township, in the St. Joseph River valley. A historical road, visible on Figure 5.15, page 173, appears to divide the township in half, with almost no settlement north of this road and significant settlement below it. Several kinship

clusters did settle in the township during this phase. By this time, however, the population of the township was such that kinship appears to affect settlement patterns not at all.

With respect to the presence of aspects of social centralization for Tekonsha Township during the settlement phase, there are both cemeteries and a mill site present in the township in the frontier period. The village of Tekonsha was both the site of a cemetery and mill in the early years of settlement. The sawmill was built in 1836 in the village by two men who were not related to one another nor any other kinship cluster. The village cemetery was established in 1838. An additional cemetery was also located in the township in the area know as the "Windfall." This area was covered by heavy timber before settlement, but a storm apparently devastated the area, causing the timber to be uprooted (History of Calhoun County 1877:150). The cemetery at the "Windfall" was associated with a kinship cluster, the Stone family and the Walling family clusters both owned land in this area in the pioneer period.

No area of social centralization for Fredonia Township was discernable, either on the map or historically. There are, however, two cemeteries in the township. These cemeteries were established late in the pioneer period and did not have a specific association with a kinship cluster.

Marshall Township has two areas of social centralization, neither of which should be considered to be associated with a kinship cluster. The village of Marshall and the village of Ceresco are both on the Kalamazoo River, one on each side of the township. Marshall was not only the social and economic center of the township it was and is, the county seat for Calhoun County. What this implies is that social centralization for this

particular township was not related to the presence of the kinship clusters here. It has already been stated that there were too few kinship clusters, especially in the early phase of development to consider them an important factor in settlement for this township.

The village of Ceresco, established in 1838, was directly associated with the building of a sawmill on the Kalamazoo River at this point. In 1839, several men of Marshall Township built a flourmill here and laid out the village of Ceresco (History of Calhoun County 1877:70). This village was not associated with any kinship clusters, but did develop into a social center, probably due to the presence of the mill sites there.

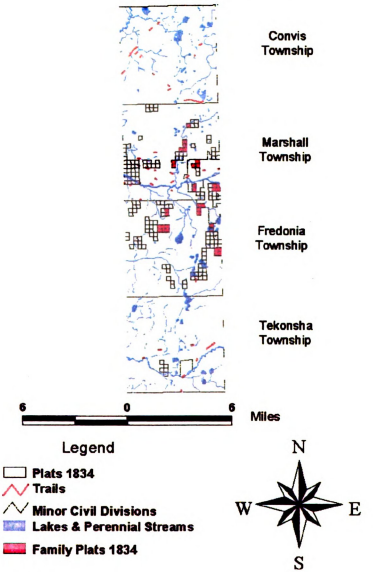
Two cemeteries are present in Marshall Township. The Hotchkiss Cemetery is in the northern part of the township and is directly associated with several kinship clusters in that area. The other cemetery is Oakridge, established for the village of Marshall, in 1839.

Convis Township did not have any mill sites in the pioneer period of its development. Two cemeteries were established in the township in the later part of the frontier period. Mrs. Nancy (Paul) Moss, a member of the English kinship cluster who settled in Convis Township in 1835, was the first burial in the Porter Cemetery, in October 1840. The two cemeteries were otherwise not particularly associated with any kinship clustering in the township.

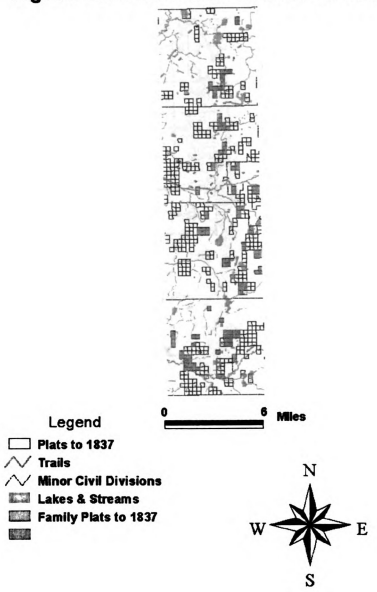
In general, the aspects of social centralization that have been used as criteria for the effect of kinship on settlement patterns appear to have little relevance in the four townships just discussed. Some evidence for social centralization does exist associated with the presence of kinship clusters, but most of the factors associated with social

centralization have more to do with the village sites present in these townships than with any association with the kinship clustering phenomenon.

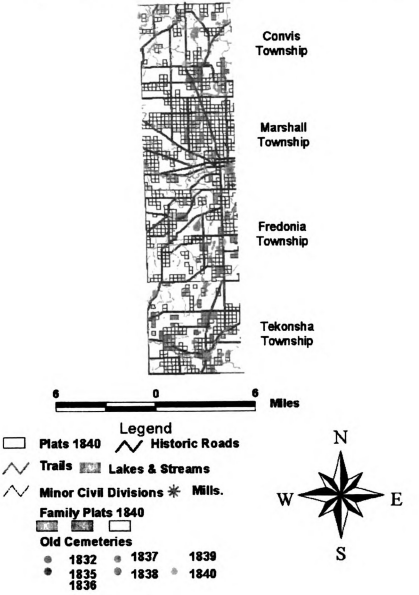
**Figure 5.13: Marshall T. 1831 to 1834**



## Figure 5.14: Marshall T. 1831 to 1837



## Figure 5.15: Marshall T. 1831 to 1840



**Conclusion**

Most significant patterns recognized in this research deal with the effects of kinship clusters on initial settlement of the frontier of Calhoun County. Almost all of the initial settlers to the townships of Calhoun County were associated with kinship clusters. This initial settlement by kinship clusters is true with respect to settlement, whether the initial settlement was during the first phase (1831-1834) or the second phase (1835 –1837). When a kinship cluster was not the initial settler in a township, e.g. Newton and LeRoy Townships, kinship clusters were still one of the earliest settlers to arrive in the township.

The majority of settlement to the county during the initial phase was by kinship clusters. When non-kinship cluster pioneers did settle in this period they tended to cluster near the kinship clusters already present. The presence of kinship clusters in a township, therefore, tended to result in settlement in general becoming clustered.

Townships with a low population density, even late in the pioneer period, tended to show significant clustering in their settlement patterns. This clustering appears to be primarily associated with the presence of kinship clusters. Townships with higher population density tended toward a less clustered settlement pattern over time as the population increased. The effect of increased population over time tended to overwhelm the effect of kinship clusters on the settlement pattern.

Factors of social centralization, such as mills, cemeteries and villages are frequently associated with kinship clusters. Many of the village sites in the county were established by kinship clusters. These villages acted as areas of social centralization and clustering occurred around them. Mill sites were more frequently established by a

kinship cluster than by an individual. These sites were usually associated with a village or on land owned by a kinship cluster. Cemeteries, especially in the early settlement period, were frequently associated with kinship clusters.

When kinship clusters were found less frequently in a township, e.g. Albion, Marshall and Marengo, the settlement pattern was more dispersed and associated with other factors, such as the environment and cultural aspects. The environment affected settlement patterning when it was not clustered by kinship. For example, Pennfield Township's settlement pattern was clustered, but did not tend to be associated with kinship. The rivers in this area tended to affect the settlement pattern.

The establishment of roads, a cultural manipulation of the environment, affected settlement patterns. This is especially true for the second tier of townships. The Territorial Road was established before initial settlement to Calhoun County had begun. This road's presence may have had a greater influence on the settlement pattern in these townships that the road traversed than kinship.

The last phase of the pioneer period was almost always associated with a decrease in the effect of kinship on the settlement pattern and a general filling in of the landscape by pioneer settlers.

# Chapter VI
# Frontier Calhoun County: Testing the Role of Kinship on the Settlement Pattern

## Introduction

The previously presented data on kinship clusters and their effect on the settlement pattern of Calhoun County during the frontier phase will be evaluated in this chapter using multiple analytical techniques. The statistical techniques used will depend on the data being examined. Some data lends itself to written comparative analysis, while other data requires charts, tables, graphs or more complex statistical analytical methodology. Numerous questions pertaining to the impact of kinship on settlement will be examined and answered by this analysis. The questions to be answered in this chapter and the analytical techniques that will be used are as follows:

1. Does the type of kinship cluster effect the settlement pattern in the county?

By comparing kinship cluster type in the different townships it will be possible to determine if settlement was affected by the presence of a particular type of kinship cluster in a specific area of the county. One way to do this is to compare the different types of kinship clusters in the different townships to see if there is a statistical difference in the distribution of these clusters in the county.

2. Who was responsible for more land purchases in Calhoun County, kinship clusters or non-kinship cluster pioneers, during the pioneer period of settlement?

By quantifying land purchases by year and by number of parcels purchased, it should be possible to determine which group, kinship clusters or non-kinship cluster pioneers, were responsible for the most land purchases during the frontier period. This

should help determine whether kinship clusters were influential in determining the settlement pattern on the frontier of Calhoun County.

3. Did kinship clusters make up a significant proportion of the population during the pioneer phase of settlement?

Kinship clusters have been proposed as a significant factor to the settlement pattern of the frontier of Calhoun County. Did kinship clusters actually include enough people to have an effect on the general settlement of the county during the pioneer phase? By quantifying the number of individuals present in the kinship clusters this should determine if their numbers were large enough to actually have an effect on settlement patterns.

4. Was the settlement pattern of Calhoun County affected by the presence of kinship clusters and if so, how?

Kinship clusters were usually the first settlers in the townships examined. The consequent settlement of other pioneers to the townships around these kinship clusters should result in a settlement pattern that was clustered. It has been proposed that over time, this clustering phenomenon was decreased by the steady influx of non-kinship pioneers.

**Distribution of Kinship Clusters**

Analysis of the settlement patterns of frontier Calhoun County will focus on and emphasize the classification of kinship clusters presented in Chapter V. As previously discussed, there were three types of kinship clusters observed in the pioneer period of Calhoun County: 1) sibling clusters, 2) generational clusters and 3) extended family clusters. The first question to examine, therefore, is whether the settlement pattern may

have been affected by the type of kinship clusters present in the township. One way to do this is to compare the different types of clusters in the different townships to see if there is a statistical difference in the distribution of these clusters in the county. In order to accomplish this a chi-square analysis was performed using the three different types of kinship clusters in the five aggregated township areas. The goal of this analysis is to assess whether different kinship clusters operated in a similar or different fashion across different parts of the county.

Chi-square analysis "provides a standard for deciding whether two sets of frequencies are statistically independent. If the differences between the observed and expected frequencies are small, the conclusion is that the differences could have arisen by chance" (Earickson and Harlin 1994:238-239).

**Table 6.1: Analysis of Cluster Type vs. Spatial Units**

| Cluster Type | Athens | Homer | Marengo | BattleCreek | Marshall | Totals |
|---|---|---|---|---|---|---|
| Sibling | 7 | 15 | 5 | 10 | 11 | 48 |
| Generational | 11 | 32 | 14 | 12 | 11 | 80 |
| Extended | 4 | 5 | 3 | 4 | 3 | 19 |
| Totals | 22 | 52 | 22 | 26 | 25 | 147 |

The table above is a contingency table of values that are being cross-classified to test for independence of the variables. Under the null hypothesis, (Ho), it is assumed that: No difference exists between the type of kinship cluster and the areas in the county where they are found. Generational clusters were the most frequent family type of the three types examined. Extended family clusters were the least frequent. This

probably has more to do with the definition of an extended family rather than actual families present. While Homer Township had more than twice as many clusters as the other townships, the proportion of the three types was still very similar to the other townships.

The formula for calculating chi-square is:

$\chi 2 = \Sigma$ (f-o – f-e)2/f-e

The computation of the observed frequency (f-o) to the expected frequency (f-e) resulted in a calculated chi-square value of 4.9491. This value is less than the computed value of chi-square of 15.507, from a chi-square table with degrees of freedom (v) = (r-1) (c-1) = 8 and P = .05, where r is the number of rows and c is the number of column in the contingency table.

Computation from Table 6.1:

| Cell | f-o | f-e | (f-o – f-e)2/f-e |
|---|---|---|---|
| 1,1 | 7 | 7.18 | .0045 |
| 1,2 | 11 | 11.97 | .0786 |
| 1,3 | 4 | 2.84 | .473 |
| 2,1 | 15 | 16.98 | .231 |
| 2,2 | 32 | 28.30 | .484 |
| 2,3 | 5 | 6.72 | .440 |
| 3,1 | 5 | 7.18 | .662 |
| 3,2 | 14 | 11.97 | .344 |
| 3,3 | 3 | 2.84 | .009 |
| 4,1 | 10 | 8.49 | .269 |
| 4,2 | 12 | 14.15 | .327 |
| 4,3 | 4 | 3.36 | .122 |
| 5,1 | 11 | 8.16 | .988 |
| 5,2 | 11 | 13.61 | .501 |
| 5,3 | 3 | 3.23 | .016 |

Critical value of chi-square $\geq$ 15.507, v = 8, Computed chi-square = 4.9491

Therefore, the null hypothesis must be accepted and there is no difference in the type of kinship cluster in the areas in the county where they are found.

The phi statistic ($\phi$) makes a correction for the value of chi-square being directly proportional to the sample size. $\phi = \sqrt{\chi}2/n$:

Phi statistic = square root of chi-square divided by total number of occurrences (n).

Cramer's V adjusts the rows and columns in the table, depending on which of the two is smaller. Cramer's V has a range of 0 to 1, just like the phi statistic, the closer to one, the greater the degree of relationship between f-o and f-e.

The formula for computing Cramer's V is: $\sqrt{\phi}2/$ Min (r-1), (c-1)

Cramer's V is computed by taking the square root of phi squared divided by the lesser of the two numbers (r-1 or c-1). Phi ($\phi$) = .1835 and Cramer's V = .1297. Therefore, the null hypothesis (Ho) cannot be rejected because the relationship of the observed to the expected frequencies is weak. Consequently, there is no significant difference in the type of kinship cluster present in any particular township in the county and therefore type of kinship cluster does not affect the settlement pattern seen in this research. What this allows one to conclude about kinship clusters and the settlement pattern of frontier Calhoun County is the type of kinship cluster did not have an effect on settlement and all kinship clusters, no matter what type or in what part of the county, acted in a similar fashion on the settlement pattern in this frontier community.

**Land Purchase Data: Kinship Purchases versus Non-Kinship Purchases**

Examining the land purchase data from the maps produced in Chapter V, it is possible to quantify the amount of land purchased by kinship clusters versus land purchased by actual settlers, not kinship clusters or speculators, in specific years during

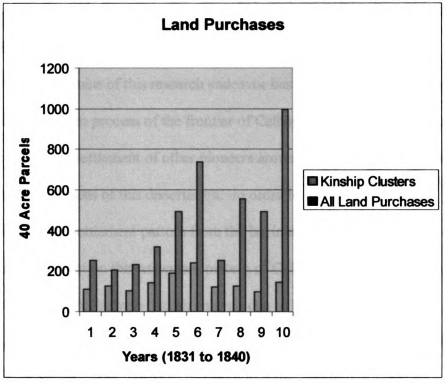
the pioneer settlement period. By graphing parcels of land purchased by kinship clusters against total land sales to actual settlers, for each specific year, it is possible to determine what proportion of total land purchases were acquired by kinship clusters. Demonstrating the purchases of land graphically in Figure 6.1, it is possible to see that kinship cluster purchases made up a higher percentage of total land purchases in the early years of settlement than they did in the later pioneer period. This was accomplished by quantifying all land purchases from the data used in Chapter V to produce the maps in ArchView 3.2 GIS®. It was possible to calculate each year's land purchases, both by kinship clusters and total land purchases for the year in question. Whenever land was purchased, the date of purchase was entered into the program, which then quantified the total land sales for the county by year for both groups. In the first few years of settlement, 1831 to 1834, the quantity of land purchased by kinship clusters incorporated a much greater percentage of the total land purchases than it did in later years of the settlement period, 1835-1840, as seen in Table 6.2.

**Table 6.2: Land Purchase Data by Year – Calhoun County**

| Year | # Kinship Parcels | Total # Parcels | Percentage |
|---|---|---|---|
| 1831 | 110 | 252 | 43.7% |
| 1832 | 126 | 207 | 60.9% |
| 1833 | 104 | 233 | 44.6% |
| 1834 | 143 | 320 | 44.7% |
| 1835 | 188 | 494 | 38% |
| 1836 | 239 | 739 | 32.3% |
| 1837 | 121 | 253 | 47.8% |
| 1838 | 125 | 556 | 22.5% |
| 1839 | 97 | 495 | 19.6% |
| 1840 | 145 | 994 | 14.6% |

The exception to this is in 1837, when the total land purchases in the county dropped significantly and purchases by kinship clusters, again, made up a greater proportion of total sales, as it had in the earlier years of settlement. By the end of the pioneer period, land sales to pioneers who were not associated with a kinship cluster were more than five times higher than land sales to kinship clusters.

**Figure 6.1: Land Purchase Data – Calhoun County**




**Kinship Population versus Total Population**

The total population of Calhoun County in 1840 was 10,576 people (Federal Census 1840). Of this total population, a minimum of 1,967 people, were associated with kinship clusters in the county (See Tables 1-5, Chapter V). This constituted a substantial percentage (18.6%) of the total population. It has been stated previously that

settlements required a certain minimum number of individuals to survive and prosper (Green 1977:51). What this implies is that since kinship clusters were often the initial settlers to an area, the number of people in the cluster was important for continuation of the settlement. Unfortunately, it is impossible to get an accurate population count in the county before the 1840 census. Ideally, it would be informative to know the proportions of kinship cluster population to total population in the earliest years, but that data is not available for study. Information that is available by 1840, however, would therefore imply kinship should be considered an important factor in settlement.

**Settlement Patterns on the Frontier**

The premise of this research endeavor has been that kinship was a major factor in the settlement process of the frontier of Calhoun County. Kinship clustering and the consequent settlement of other pioneers around these kinship clusters has been the major emphasis of this dissertation. In order to examine this effect it is important to look at the settlement pattern from the beginning of settlement and see if kinship did have an effect on the settlement pattern of Calhoun County. It is necessary to pinpoint settlement precisely so that an analysis can be performed on the data. The settlement of the county will be examined as point data from the maps in Chapter V.

Analysis of the spatial distribution of point data on maps can be accomplished by performing a technique known as nearest neighbor analysis. Nearest neighbor analysis was originally formulated by plant ecologists to evaluate the randomness of plant species in the environment (Earickson and Harlin 1994:249). According to Whallon (1974), "one of the great advantages of nearest neighbor analysis is that it is entirely free from such problems of grid size, shape, and orientation. Proceeding directly from

the exact location of each item in relation to the exact location of every other item, it can detect and handle clusters of any size or shape..." (Whallon 1974:17). One problem, however, that has been noted by Whallon and others is the effect of artificial boundaries that are created in an excavation unit. It is possible that the artificial boundary created by the excavation unit may not incorporate all items in the calculations that may be included in the site. This bias may affect the nearest neighbor statistic that is calculated if items near the border of the unit are included in the statistical analysis. Whallon argues "if the boundaries of the excavation are made to correspond well to the limits of the site, the existence of the site itself as a spatial phenomenon will play no role in the nearest neighbor statistic" (Whallon 1974:22). Since the township units used in calculating the nearest neighbor statistic in this research include all the area under investigation, this "boundary effect" has no basis for concern in this particular circumstance.

In order to use this statistical tool it is necessary to measure the distance between points on a map and determine the mean *observed* distance [r(o)] and compare them to a mean *expected* distance [r(e)] in a random spatial distribution. A ratio (R) equals r(o) divided by r(e).

Nearest Neighbor Analysis Equation (R) = r(o)/r(e).

This analysis results in a distinct value of numbers that range from zero (0) for completely clustered (aggregated) points to a value of 2.1491 for points which are completely regular in a hexagonal lattice, where all points are equidistant from all other points in the analysis. A value of one (1) falls in between the upper and lower limits of this range and is the ideal number for a random pattern. The range of these numbers

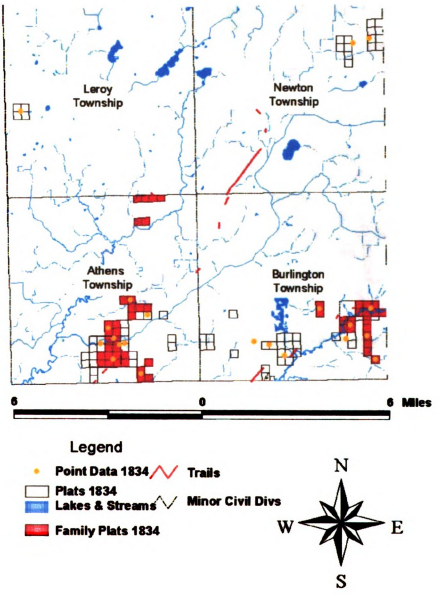
allows the investigator to determine whether points on a map are tending toward clustering, random or a regular arrangement. The closer the computed value is to zero, the more clustered the point data. As the values for nearest neighbor increase above one this indicates a more regular pattern (Whallon 1974:18-19).

Nearest neighbor analysis of the data from Calhoun County was accomplished using the maps from Chapter V indicating on the maps where the pioneer settlers were located in the county at a specific point in time. This data was formulated using the purchase dates of the land by the pioneers, whether a kinship cluster or not. Just like the maps in Chapter V, the kinship cluster purchases, indicated by colored forty-acre parcels and the non-kinship cluster purchases are indicated by open forty-acre plot squares. Points were placed on the maps at the center of the land purchased by the individual person or kinship cluster. In a few instances, it will be noted when examining the maps that there are some points that do not correspond to forty-acre plots. The points were approximated by the computer software program when the individual owned more than one plot of land and the parcels were not contiguous. While this may have introduced some error in the calculations, there are very few points of this nature in the entire county. The nearest neighbor statistical analysis was then performed by the software program in ArcView 3.2®, a geographic information system (GIS)(ArchView GIS 1996).

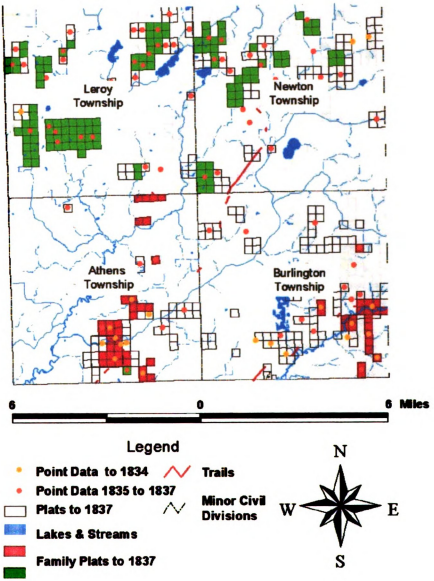
Each of the five aggregated townships was examined for indications of clustering, randomness or point patterns that tended toward regularity. The years of settlement were not individualized, but condensed into the same three-year segments that were used for the maps from the previous chapter (Chapter V). Each aggregated township

will be discussed individually, the point data examined and conclusions drawn as to the presence or absence of clustering in the township.

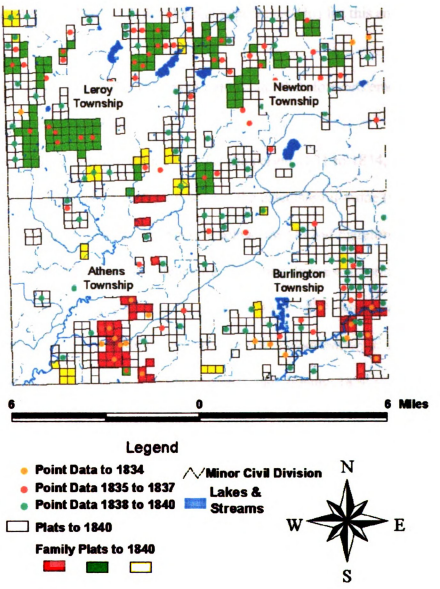
**Figure 6.2: Athens T. 1831 to1834**



## Figure 6.3: Athens T. 1831 to 1837



## Figure 6.4: Athens T. 1831 to 1840



**Athens Township Nearest Neighbor Statistical Analysis**

Applying nearest neighbor analysis to the data from Figures 6.2 to 6.4 it is possible to determine if kinship did have an effect on the settlement pattern of Athens Township in the frontier period from 1831 to 1840. The null hypothesis (Ho) for this analysis would be that:

Ho: Kinship did not play a role in the settlement pattern and therefore settlement should be random in the township examined.

Using Arcview 3.2® to perform the analysis for the period 1831 to 1834, where N (number of settlers) = 21 for the township of Athens, the calculated R-value (nearest neighbor statistic) = .606775. This is significantly below one (1) and therefore the null hypothesis must be rejected because a tendency for clustering does exist during this time period for this particular analysis. For the period 1835 to 1837, where N = 69 for the township of Athens, and R = .884646, indicates a random distribution of settlement for the township because the R-value is tending toward one. Finally, 1838 to 1840, where N = 93 and R = 1.03648 this also indicates a random distribution of settlement. The null hypothesis must be accepted for both the middle period and later period of settlement of Athens Township.

A separate analysis was performed using the data from Athens Township with the land purchases separated by whether kinship clusters or non-kinship settlers purchased the land. For the first period, 1831 to 1834, there were a total of 21 settlers (N) to the township. Of these, eleven were non-kinship settlers and ten were kinship clusters. The R-value for the kinship cluster group with N of ten (10) was .399379. This indicates a significantly clustered settlement pattern for this period of time. The R-value for the

non-kin settlers, (N = 11), was .698559. This is less clustered than the original R-value calculated for the total population at this time period, and is significantly less clustered than the kinship clusters for this period. Even though this is a hypothetical examination of what occurred during this part of the settlement phase, and does not reflect the true settlement events, this still indicates that kinship clusters were instrumental in forming the settlement pattern for this particular time period in Athens Township.

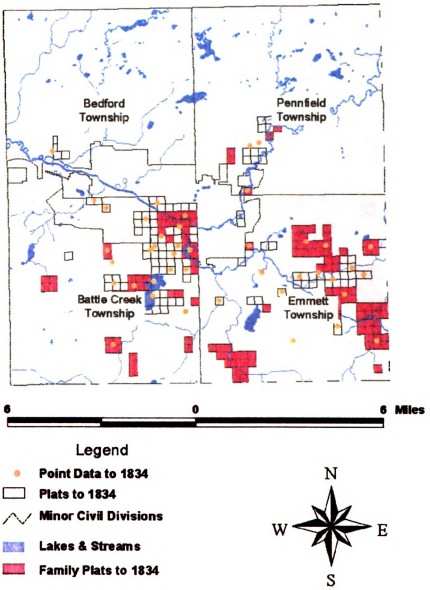
For the period 1835 to 1837, the number of kinship clusters (N) was 27 and the number of non-kin settlers was 42 for a total (N) of 69. The R-value for kinship clusters was calculated at .807216 and for non-kinship settlers at .865367. Both these numbers are within the range of random distribution and both are less than the original calculated R-value of .884646. This would indicate that kinship clustering was already being overwhelmed by the influx of pioneer non-kin settlers.

During the final period, 1838 to 1840, the number of kinship clusters in Athens Township was very small (N) = 9 and the number of pioneer non-kin settlers was almost ten times greater at 84. The R-values for this period reflect this overwhelming of the effect of kinship clusters with .951937 and 1.04453 respectively reported for the two groups. The R-value for the non-kin settlers is almost identical to the original calculated R-value (1.03648) for this township and this time period.

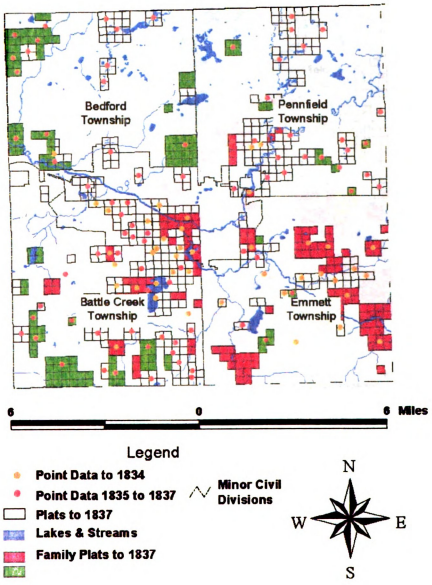
The data for Athens Township during the frontier period, therefore, supports the conclusion that kinship did play a role in the settlement pattern seen in the first part of settlement of the township. Visualization for such a conclusion may be supported by examining Figure 6.2 and noting the significant number of kinship clusters that existed in the township during that period. During the later two periods, see Figure 6.3 and 6.4,

settlement was more random for this particular township resulting in a nearest neighbor statistic that supports this conclusion.

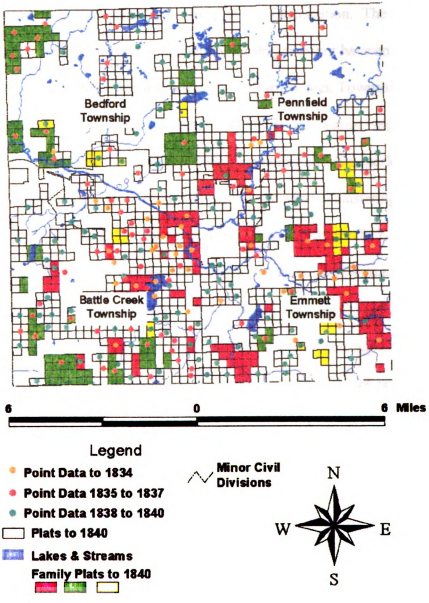
**Figure 6.5: Battle Creek T. 1831 to 1834**



## Figure 6.6: Battle Creek T. 1831 to 1837



## Figure 6.7: Battle Creek T. 1831 to 1840



**Battle Creek Township Nearest Neighbor Statistical Analysis**

Application of the nearest neighbor analysis from ArcView 3.2® for Battle Creek Township for the same three time periods resulted in similar results. The null hypothesis for this township is the same as for the previous examination. The null hypothesis implies that settlement is random and that kinship does not have an effect on the settlement pattern for the township in question. For Battle Creek Township for the earliest period, 1831 to 1834, N (settler numbers) = 43 and R (the nearest neighbor statistic) = .713972. A tendency for clustering does exist during this time period, therefore, the null hypothesis is rejected and the position that kinship clustering affects the settlement pattern is accepted. For the second time period, 1835 to 1837, N = 93 and R = .972336, this supports the null hypothesis with a random distribution. Finally, for 1838 to 1840, N = 136 and R = 1.10159. This is greater than one (1) and therefore a tendency toward a regular pattern exists and the null hypothesis is once again rejected.

Applying the same technique of separating the kinship clusters from the non-kinship settlers and running nearest neighbor analysis for Battle Creek Township resulted in some interesting variations to the earlier findings. For the initial phase of settlement, 1831 to 1834, (N) = 16 for kinship clusters and 27 for non-kinship settlers. This township was much more heavily settled than Athens Township during the same period of time. The R-value for kinship clusters was calculated at .783888, only slightly higher than the original calculation of R for the township. The R-value for the non-kinship settlers, however, was .692942, more clustered than either the kinship clusters or the original calculation for the township. This might indicate that shear numbers alone have an effect on the settlement pattern in the early period. Another possibility is

that something other than kinship was responsible for the clustering that occurred in this township for this time period. In an earlier discussion (Chapter II) other possible causes for settlement patterning, besides kinship, were examined. This discussion included environmental effects on settlement decisions by pioneer farmers. The importance of the river systems and soil types was discussed extensively. When examining Figure 6.5 it can be noted that there are two significant areas of settlement in the township during the early phase. Almost all of the settlement occurred along the Kalamazoo River and the large prairie south of the river surrounding Goguac Lake. The other area of settlement for the township during this phase was in an area that would later become Emmett Township. The settlements there were north of the Kalamazoo River in a broad, open plain and "oak openings." These environmental factors were also likely to be responsible for much of the clustering of settlement during this early phase of the pioneer period.

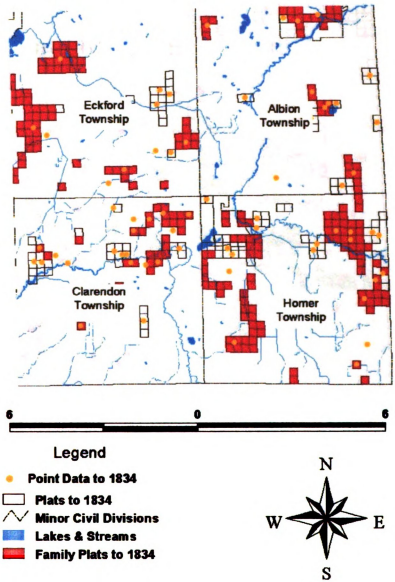
During the second settlement phase, 1835 to 1837, (N) was 28 and 65 for kinship clusters and non-kin settlers and the R-values were .928373 and .957452 respectively. The kinship clusters were more clustered than the non-kin settlers. Both of these R-values are close to the calculation for the total population of .972336, and again indicate a random pattern of settlement for the township for this period. This very diffuse settlement pattern is obvious when examining Figure 6.6.

For the period 1838 to 1840, (N) equaled 18 for the kinship clusters and 118 for the non-kin settlers. The R-values were .865513 and 1.04274 respectively. The kinship clusters were more clustered than the non-kin settlers, but were still within the range of a random pattern, most likely associated with the fact that settlement was becoming

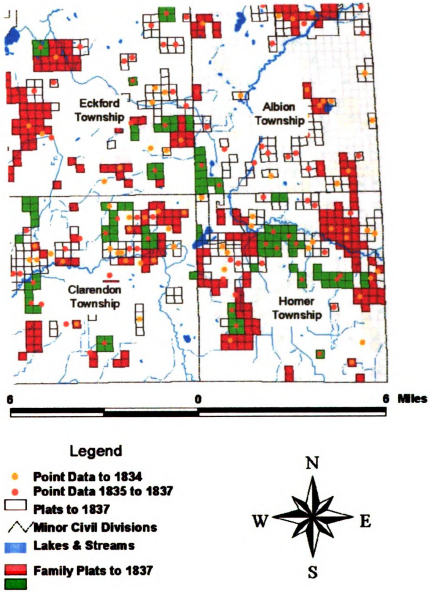
quite dense by this period and settlement was tending toward a regular pattern as first calculated for the combined population.

By examining Figures 6.5 to 6.7, it is possible to visualize the change in the settlement pattern over time for this township. The statistical analysis supports the conclusion that clustering exists early in the settlement period. Clustering in Battle Creek Township during the early period apparently had to do with factors other than kinship. A more random distribution is seen during the middle period with the influx of settlers. Due to the significant population increase during the later period, (N) of 136, a more regular pattern is beginning to develop. Battle Creek Township was heavily populated by the end of the pioneer period and the limited number of the kinship clusters had little effect on the general settlement pattern that was developing by this period.

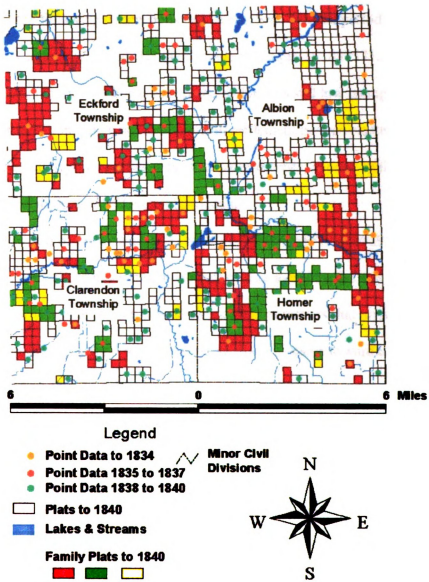
## Figure 6.8: Homer T. 1831 to 1834



## Figure 6.9: Homer T. 1831 to 1837



## Figure 6.10: Homer T. 1831 to 1840



**Homer Township Nearest Neighbor Statistical Analysis**

Homer Township was settled early and heavily during the pioneer period. Applying the nearest neighbor statistical analysis program from ArcView 3.2® to the data from Figures 6.8 to 6.10 the following conclusions can be reached. For the period 1831 to 1834, the number of settlers (N) = 66 and the R-value was equal to .837571. While this R is the closest to one (1) that has been determined so far, it is still low enough because of the total number of settlers to consider the overall settlement pattern clustered for the earliest period. The null hypothesis, that a random pattern exists, is once again rejected for the early period of settlement of Homer Township.

For the middle period of settlement, 1835 to 1837, N = 79 and R = .952955. This supports the null hypothesis, that settlement is random, and therefore the null hypothesis cannot be rejected for this time period. The shear number of settlers that arrived in Homer Township during this period would tend to push the R-value toward a random distribution, since it was already getting close to that in the earliest period.

A continued significant influx of pioneers during the later period, 1838 to 1840, once again resulted in a significant increase in the density of the population for this township. For this period, N = 168 and R = 1.10732, the null hypothesis is once again rejected, the settlement pattern is showing a tendency toward a regular pattern.

Examining the distributions of kinship clusters and non-kin settlers as separate groups for Homer Township with nearest neighbor analysis resulted in R-values that were very similar for the separate analyses and the original (combined) calculations for the settlement patterns.

For the initial settlement period, 1831 to 1834, with (N) of 35 and 31 and R-values of .900513 and .806305 respectively for kinship clusters and non-kin settlers, a reversal of the results is found for this township. The kinship clusters are less clustered than the non-kinship settlers. The two groups are similar in number and the combined R-value that has already been discussed (.837571) is almost midway between these two calculations. It is not possible to assign a specific cause for this particular result. One explanation, that can be visualized in Figure 6.8, may be that the large group of kinship clusters that are in Eckford Township may have altered the calculation for this period since there are very few settlers in this township that are not associated with a kinship cluster, resulting in a more widespread settlement pattern for the kinship clusters. Another possibility is once again the environmental factors that were mentioned in the discussion of Battle Creek Township's settlement. There are two major rivers associated with this group of townships. There are also two village sites, Albion and Homer, both of which were early settlement sites, and contained mills (both saw and grist) as early as 1833 (History of Calhoun County 1877:111,121). Environmental or social effects, therefore, could possibly be a contributing cause of the discrepancy in nearest neighbor statistic for the initial period of settlement of these townships.

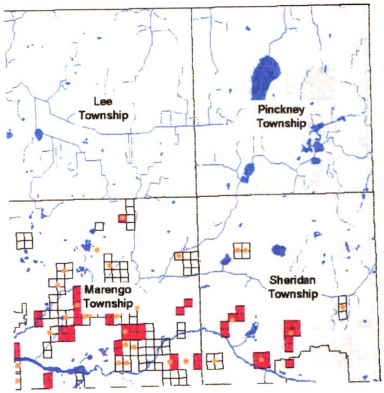
For the second period, 1835 to 1837, with (N)'s of 32 and 47 and R-values of .938682 and .853964, respectively, for kinship clusters and non-kin settlers, the data for both groups indicates increasing R-values and a tendency toward a random pattern. This is a similar result to the combined R-value of .952955 for this township. What this indicates is the heavy population influx into this township resulted in a random distribution of settlement even as early as the middle period of settlement. The thirty-

two kinship clusters that settled in Homer Township during this period were more similar in number to the other townships, unlike the previous examination when the kinship cluster numbers were much higher than was present in the other townships for the same time period.

During the final period, 1838 to 1840, kinship does not affect the settlement pattern to any significant degree. The statistical analysis of the two subsets of kinship clusters and non-kin settlers resulted in respective (N)'s of 38 and 130 and R-values of .931562 and 1.09. The kinship cluster numbers are, once again, overwhelmed by the presence of non-kin settlers to the township. The R-value for the kinship clusters in this period is random in nature and equivalent to the R-value for the middle period with a similar number of kinship clusters for each time period. The R-value for the non-kin settlers is almost identical to the aggregated R-value of 1.10732. These statistics are indicative of a tendency toward a regular pattern for the township due to the very heavy settlement that occurred in this township, the heaviest in the entire county for this period.

There were a significant number of kinship clusters present in Homer Township during the entire pioneer period. While the kinship cluster subset was not as clustered as the non-kin settler subset for the initial settlement period, it is still possible when looking at the map (Figure 6.8) to visualize the effect that kinship had on the settlement of this group of townships. These clusters tended to act as a focal point for settlement and the settlement pattern therefore remained clustered for the early period.

## Figure 6.11: Marengo T. 1831 to 1834



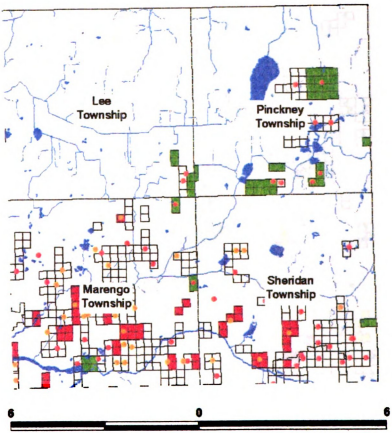

6 0 6 Miles

Legend

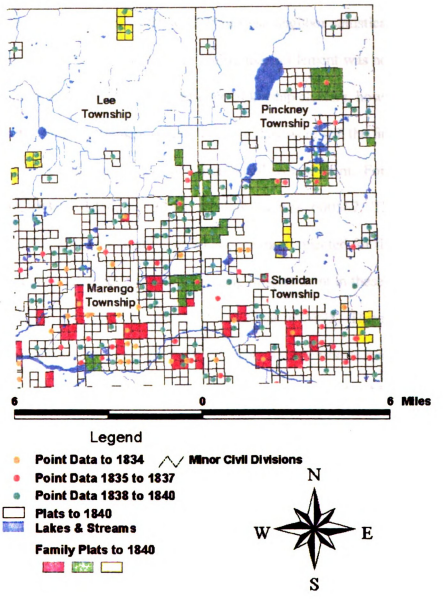
- Point Data to 1834
- Plats to 1834
- Minor Civil Divisions
- Lakes & Streams
- Family Plats to 1834

N
W E
S

## Figure 6.12: Marengo T. 1831 to 1837



## Figure 6.13: Marengo T. 1831 to 1840



**Marengo Township Nearest Neighbor Statistical Analysis**

Marengo Township was less settled than Homer during the same time period. The two northern tier townships did not receive any settlement in the first years of the pioneer period. When applying the ArcView 3.2® nearest neighbor statistical program to the data from this township it is necessary to realize that settlement was not generalized throughout this township. The presence of kinship clusters, however, was still a significant factor in the settlement pattern because they were still the first settlers in the township and all consequent settlement congregated around them. For the earliest period of settlement, 1831 to 1834, N = 33 and the R-value was .600567. The null hypothesis (Ho) that random settlement occurred is once more rejected for this time period. There is a definite tendency towards clustering of settlement in these townships.

For the years 1835 to 1837, N = 47 and the R-value was .695895. This is also within the range of a clustered pattern of settlement. The null hypothesis is once again rejected for this period. Settlement was not as heavy during this period in Marengo Township as it was elsewhere in the county.

During the last period of settlement, 1838 to 1840, the township acquired a great many settlers, N = 134 and R-value of .912037. This result indicates a random distribution of settlement.

When examining the maps in Figures 6.11 to 6.13 it is possible to visualize the spread of settlement in this group of townships. The initial period saw settlement only in the two lower townships. During the middle phase there was still only a few new settlers to the township with the resultant continuation of a clustered settlement pattern.

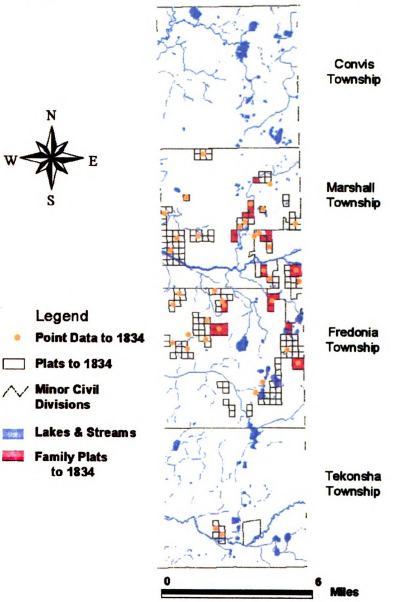
It is only during the final phase with a significant increase in population that settlement becomes random.

Evaluation of the two subsets, kinship clusters and non-kin settlers, with nearest neighbor analysis confirms the tendency toward clustering, with the expected effect of kinship on the settlement pattern. For the initial settlement period, 1831 to 1834, with (N) of seven and 26 for the two subsets of kinship clusters and non-kin settlers, and R-values of .507914 and .603434, respectively, indicates a significant tendency toward clustering. The R-value for the non-kin settlers is very similar to the combined R-value of .600567. The kinship clusters for the same period are significantly more clustered with an R-value of .507914, the expected result if kinship were a factor in settlement.

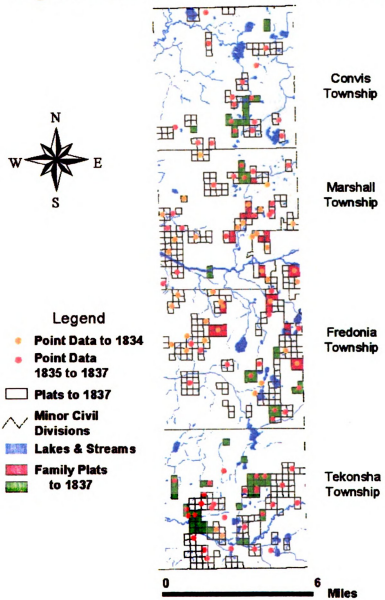
During the next phase of settlement the pattern is still tending toward clustering, but with R-values for the non-kin settlers significantly less clustered with an R-value of .778549 and an R-value for the kinship clusters of .606903. Both groups are moving toward a more random pattern, and the kinship clusters, as expected, are still significantly more clustered than the non-kin settlers.

In the final phase of settlement, 1838 to 1840, settlement increased rapidly. Settler numbers were much higher for this period than the previous two periods with (N)'s of 22 and 112 for kinship clusters and non-kin settlers. The kinship clusters had a marked increase in settlement and increased clustering during this phase, with an R-value of .470437, a very clustered result. The kinship clusters for this period tended to fill in around already existent kinship groups. The non-kin settlers continued toward a random pattern result of R = .929647. This result is very similar to the R-value of .912037 calculated for the total population for this period.

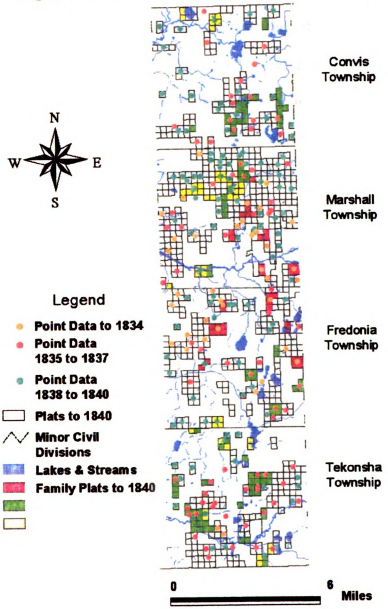
## Figure 6.14: Marshall T. 1831 to 1834



## Figure 6.15: Marshall T. 1831 to 1837



## Figure 6.16: Marshall T. 1831 to 1840



**Marshall Township Nearest Neighbor Statistical Analysis**

Marshall Township was the first actual area to be settled in Calhoun County. It is with this in mind that examination of the settlement pattern for the four townships involved in the group was undertaken. The outlying townships of Convis and Tekonsha were slower to develop than the more centrally located townships of Marshall and Fredonia. In undertaking the nearest neighbor analysis for this township during the first period, 1831 to 1834, N = 37 and R = .637712. Rejection of the null hypothesis, the random distribution of settlement, is once again the case for the early pioneer period. Numerous kinship clusters were the first to settle in Marshall Township and other incoming settlers purchased land around these original land purchasers.

For the years 1835 to 1837, settlement increased with N = 74 and R = .936439. The null hypothesis is accepted for this period with a random distribution of settlement in these four townships. It is during this phase that initial settlement was accomplished in the outlying townships of Convis and Tekonsha.

During the final phase of settlement, 1838 to 1840, there was a large influx of pioneers, and the outlying townships of Convis and Tekonsha were more heavily settled with N = 110 and R = 1.00278. Acceptance of the null hypothesis is once again appropriate due to the random settlement distribution.

When the subsets of kinship clusters and non-kin settlers are examined for this township for the initial settlement period, a distinct clustering is noted for both the kinship clusters and the non-kin settlers. The kinship clusters are more clustered with an R-value of .584267, than the non-kin settlers with an R-value of .693989. This is the

result that is expected when settlement is associated with kinship clusters acting as a focal point.

During the second phase of the pioneer period, 1835 to 1837, there is an expansion in the settlement distribution with N = 22 for kinship clusters and N = 52 for non-kin settlers. The R-values for the nearest neighbor statistic are .565743 and .971116 respectively for the two groups. The kinship clusters remained clustered, while the non-kin settlers tended toward a random distribution of settlement. This is what has been expected with the increasing population during this portion of the pioneer period.

For the final pioneer period, 1838 to 1840, settlement became more widespread throughout the four townships. The R-values were calculated on (N)'s of 15 and 95, for kinship clusters and non-kin settlers, respectively, for the four townships. The kinship clusters now show a distinctly random pattern with an R-value of .986263. The non-kin settlers outnumbered the kinship clusters greater than five to one also show a random pattern to their settlement distribution with an R-value of 1.00089. This is the expected result for the later pioneer period due to the overwhelming effect of the non-kin settlers on the settlement pattern.

Figures 6.14 to 6.16 exhibit a similar progression as was seen in the earlier examinations for clustering. The earliest settlement was clustered with kinship clusters providing a focal point for the beginnings of community. This is evident by the nearest neighbor statistic result of .637712, a distinctly clustered pattern. As more pioneers moved into the area, and kinship played a lesser role, the need for close neighbors was taken up by non-kin pioneers. As this occurred the settlement pattern became less clustered and the nearest neighbor statistic reflects this with a value that is within the

random range at .952995. Kinships role was significant during the early phase, as it had been in the other townships, but as the population increased, kinships role decreased.

**Conclusion**

In the preceding analysis of the data on kinship clusters several questions were posed and examined using different analytical techniques. These questions included: 1) what was the distribution of kinship clusters in the county and did this distribution affect the settlement pattern 2) What proportion of the land sales were to kinship clusters and if this could help explain the effects on the settlement patterns 3) Was there a significant population associated with kinship clusters in the pioneer period 4) How clustered was settlement in the pioneer period and did kinship clusters have an effect on the settlement pattern.

Examination of the effect of kinship on the settlement processes associated with the frontier of Calhoun County in the early nineteenth century has led to the conclusion that kinship played a significant role in the early development of the county. Different types of kinship clusters were distributed throughout the county and acted as rudimentary social centralization areas. It was determined using chi-square analysis that the type of kinship cluster did not matter; it was the presence of a group of individuals that was the important point for consideration. Statistically the kinship cluster types were distributed in an equivalent manner throughout the townships and therefore the type of kinship cluster did not have an effect on the settlement pattern.

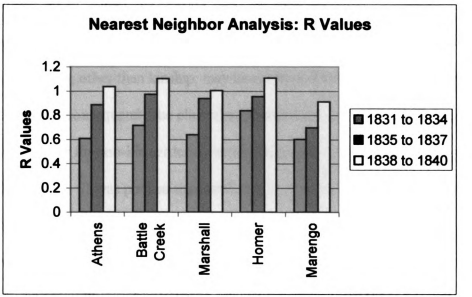
Kinship numbers were important because these clusters of people constituted a substantial percentage of the total population, especially in the earliest years. It has

been determined that a minimum number of people was essential for settlement to continue and prosper on the frontier. These kinship clusters provided that demographic.

The kinship clusters accounted for more than forty percent (40%) of the total land purchases in the first four years of land availability for Calhoun County. During the second phase of settlement the kinship clusters still accounted for more than thirty percent (30%) of the total land purchases. It is only in the final settlement period, 1838 to 1840, with the large influx of pioneers to the county, that kinship played an insignificant role in settlement.

It has been determined that almost all of the townships were first settled by one or more kinship clusters. In those few townships where the kinship clusters were not the first pioneers, they were almost always among the first. The conclusion, therefore, is that kinship clusters provided a focal point for settlement to begin, progress and prosper.

**Figure 6.17: R-Values (aggregated) for all Townships**



Statistically, (see Figure 6.17, p.214) nearest neighbor analysis of the five township's settlement patterns indicates that clustering was significant to the early development of Calhoun County.

During the first years, 1831 to 1834, the nearest neighbor statistics show a significant clustering effect occurred in all the townships. The two townships with the lowest population (Athens and Marengo) were more clustered than the townships that received a larger influx of pioneers (Battle Creek and Homer). As the population increased, the effect of kinship became less of a factor to the development of the settlement pattern for the individual townships and the county.

When examining the two subsets, kinship clusters and non-kin settlers, using nearest neighbor analysis, (see Figure 6.18) during the initial settlement period, 1831 to 1834, it becomes clear that population density and the presence of kinship clusters did play a role in the settlement pattern for the county. The townships with the lowest population, Athens, Marengo and Marshall, were significantly more clustered than the other two townships of Homer and Battle Creek, the most populous. It is in these areas with the lowest population that kinship clusters appear to have their greatest effect.

Factors, other than kinship, may have affected the settlement pattern in the initial phase and consequently the clustering phenomenon in two of the townships. R-values were lower for non-kin settlers over kinship clusters for Battle Creek and Homer Townships. It was posited that environmental factors such as the presence of major rivers or large prairies could have attracted a large number of settlers to a relatively restricted area resulting in a clustered settlement pattern. Cultural factors such as the presence of villages, Battle Creek, Homer and Albion, with their resultant mill sites that

were established during this initial phase, may have also been a factor in the non-kin clustering phenomenon that was recognized in the two townships during this early period of settlement.

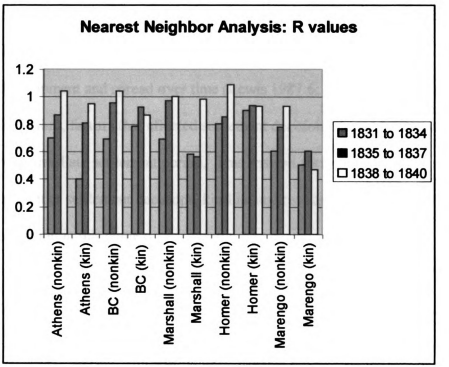
For the middle phase of settlement, 1835 to 1837, it was determined through nearest neighbor analysis in general (see Figure 6.17, p.214) that kinship was not a significant enough factor to continue to maintain the settlement pattern in a clustered configuration. A tendency toward a random distribution of settlement was seen during this phase. The only township where this was not the case was Marengo. It continued to maintain a clustered settlement pattern, most likely because the two upper townships were not settled at all during the first phase of settlement, so that during the second phase this particular township was more like the other townships were in their initial phase of settlement.

When examining the subsets of kinship clusters and non-kin settlers for the middle period, (see Figure 6.18, p. 217), it becomes apparent that areas with slower settlement and lower population, such as Marengo and Marshall Townships, still show significant clustering for this period. Both of these townships contained areas that were slow to develop resulting in a more clustered pattern for the middle period of settlement. What is seen for the other three townships is a tendency toward a random distribution. This is what was expected when kinship becomes less of a factor as population increased.

By the end of the frontier period in Calhoun County, all of the townships were so heavily settled that kinship should not be considered a significant factor affecting the settlement pattern. The only area that this does not hold true for was Marengo Township. Part of this township, the township of Lee, was so sparsely settled even as

late as 1840 that few people lived there and clustering was still a significant finding. The population was dense enough in the rest of the county by this time that the security and social interactions that kinship clusters provided, in the early period to the frontier, were no longer necessary.

**Figure 6.18: R-Values (subsets) for all Townships**



# Chapter VII

## Frontier Calhoun County: An Overview and Conclusion

Analysis of the settlement patterns of an agricultural frontier such as Calhoun County, Michigan, is a complex and multidimensional problem. Investigating the settlement patterns is important for understanding adaptation on agricultural frontiers in general and Calhoun County specifically. Most agrarian settlement is thought to be involved with processes that were permanent and nuclear family based, with subsequent development and spread over time (Lewis 1987:6; Jordan and Kaups 1989:3,123). Therefore, factors that affected settlement decisions should have consequences beyond the immediate settlement period. This analysis focused on one often overlooked factor in frontier settlement decisions, kinship, and results in a general model of settlement evolution in this context.

The frontier of Calhoun County, Michigan, was part of the Old Northwest Territory. Jerome Steffen believed this was the only insular frontier in American historical development. Furthermore, the relative social and economic isolation of this region resulted in agricultural development that was briefly self-sufficient and based on family need (Steffen 1977:xii, xviii). Frontier studies have been based on diverse interests and focused on the different views of various researchers as to what actually comprises a frontier.

Kenneth E. Lewis examined the frontier of Michigan and noted the importance of agricultural production with its resultant ties to the world economy. As agriculture developed the increased demand for products outside of the frontier resulted in increased prices for those products that encouraged transport of them to outside

markets. Detroit developed as the entrepot for frontier Michigan with a network of roads extending into the interior in a dendritic fashion. These roads enabled both people and agricultural products to make their way back and forth across the peninsula. By the 1840s this network had developed to such a degree that this marked the closing of the frontier of Michigan (Lewis 2002:8).

For other modern theorists, the frontier is a contact zone between cultures that results in a new syncretized culture developing in the culture contact zone. The frontier of southwest Michigan was a new habitat as well as a social process. The pioneers that settled in this region were looking for land that would be more productive than the areas they had left in the east. In addition, the processes involved in society building led to formation of a new culture, similar, but not the same as what was left behind. Southwest Michigan was an agricultural frontier contact zone where intrusive agricultural colonizers met an extant Native American agricultural society. This contact led to specific cultural changes in the intrusive agricultural society. Diverse flexible agricultural systems allowed frontier farmers to be self-sufficient for the first few years of settlement. This included the multi-crop and animal complex seen on other frontiers. Family labor was essential for success in this environment because agriculture on the frontier was labor intensive and extensive in nature. The role of family and kinship in this environment cannot be overemphasized.

Kinship's role in society, in general, is one of social organization (Pasternak 1976:82). Kinship acts to group people into effective, cooperative units to accomplish tasks that cannot be accomplished by a single person or family. In European and Euro-American society kinship distinguishes between family and relatives. Family refers

almost exclusively to the nuclear family of immediate relatives, comprised of parents and siblings. Relatives are those people related to the referent by either blood (consanguineal) or marriage (affinal). The primary focus for kinship in western society is best described as the nuclear family. Nuclear families were the primary settlement group on the frontier of southwest Michigan. Like most agrarian settlement, the frontier of southwest Michigan was considered a permanent settlement. This usually results in family involvement with the settlement process. Most of the pioneers were also from areas in the east that had already experienced nuclear family settlement resulting in whole families moving west to Michigan. In many instances groups of separate households settled together at the same time and/or in close proximity. Many of these household groupings were also kin groups, consisting of nuclear families related to one another by birth or marriage. These "kinship clusters" lent support to each other on the frontier, providing the needed social dynamic to support the group during the initial phase of settlement.

The premise of this research into frontier settlement has been that kinship provided the beginnings of community in an environment that was not accommodating to an encroaching culture. Overarching integrative social organization was not present during the early years of settlement in Calhoun County. Kinship may, in fact, have provided one of the few organizational mechanisms present in the early frontier settlement. Recognition of the fact that spatially organized kinship clusters provided the needed demographic, a significant population of young early reproducing families, in close proximity, for society to grow and prosper in this new environment is an important outcome of this work.

By providing the beginning organizational mechanism for settlement, kinship's role should be measured first at the settlement level. The "open country neighborhoods" discussion of Robert Mitchell placed significant emphasis on kinship's role in the initial organization of these settlements. Over time the kin based settlements examined in the different townships of Calhoun County expanded and became interconnected with other settlements in the townships. This interconnectedness resulted in further ties, both social and economic, with resultant expansion of the township. Kinship's role is best exemplified at the settlement level because once expansion occurred kinship became less significant to the processes of frontier development. Kinship provided the essential beginnings of community that enabled pioneer settlers to prosper on this frontier.

As mentioned at the outset, the environment, transportation facilitation, economic factors associated with trade, presence/absence of indigenous people and farming technology all played a role in the settlement pattern that developed in this frontier community. Initially agrarian frontier settlers judged the suitability of the environment for agriculture by its tree cover. Later, by the time pioneer settlers arrived in Calhoun County, areas such as "oak openings" and prairies became highly prized for agricultural settlement. Certain areas in the research universe may have been more desirable than other areas for agricultural development. This may indeed have affected the settlement distribution and the pattern of settlements that developed. However, since the kinship clusters were usually the first groups to arrive in an area they would have had their choice of any agriculturally habitable zones. There were areas in the county that experienced heavier settlement from the outset. These areas were usually associated

with the major river basins as well as the area where the Territorial Road crossed the county.

The frontier of Calhoun County was an open environment with accessibility to the area governed by the presence of rivers and Indian trails. The first road through the county, the Territorial Road, was little more than a modified Indian trail for several years. Pioneer settlers followed Indian trails and section lines that had been marked by surveying parties when the county was surveyed in the 1820's (History of Calhoun County 1877:14,18). Native American presence was relatively low in this area when settlement began and with the Indian Removal Acts in the late 1830's Native Americans had minimal impact on settlement decisions. The other factors mentioned also played a role in settlement decisions and should be considered for further investigation into settlement patterning.

It was proposed that kinship contributed to the formation of areas of social centralization on the frontier of Calhoun County. Some of these social centralization areas were described as churches, schools, or cemeteries. Other material culture entities recognizable on the landscape, and that had economic significance associated with them, were stores, mills, or taverns. All of these material culture entities should be associated with the development of social and economic centers on the frontier, described by Mitchell and Hofstra as "open country neighborhoods" (Mitchell and Hofstra 1993:124). Alternatively, this research reveals that in actuality kinship acted as the most effective social organizational factor on the frontier *before* these aspects of social centralization emerged.

When examining the history of Calhoun County for the earliest period of settlement, 1831 to 1834, it was found that very few edifices of social centralization, i.e. churches, schools, etc. had been developed. The presence of mills, both sawmills and gristmills, were some of the few aggregrative locations extant in the early period. First a sawmill and then a gristmill were constructed by George Ketchum in Marshall in 1831 and 1832, respectively (History of Calhoun County 1877:52). Milton Barney constructed a sawmill and a gristmill in 1833 in Homer (History of Calhoun County 1877:121). Other than these four facilities no other mills existed in the county at that early date. Each of the major villages, Marshall, Albion and Homer, had a store or tavern in the earliest days of settlement (History of Calhoun County 1877:15,105,121). Church services were usually associated with a residence for the first few years of settlement because the few ministers present were regionally itinerant. Schools were also an early development for the county, although actual school buildings were erected in Marshall, Marengo and Emmett Townships only prior to 1835 (History of Calhoun County 1877:25,127,181). Cemeteries were very scarce in the earliest settlements, and must be considered a result of social centralization, rather than a cause.

A further important consideration to an understanding of frontier settlement dynamics relates to the time governmental organization was formalized. Marshall and Homer Townships held their first township meetings during the initial pioneer period in 1833 and 1834, respectively (History of Calhoun County 1877:70,122). The other townships did not actually have formal and more centralized governmental organization until later in the pioneer period.

Mills, taverns, churches, and schools acted as organizational factors for this frontier society. These material culture entities were, however, few and far between in the earliest years of settlement. Present in the early days, however, were the underlying kin relationships and spatially organized kinship clusters.

Kinship is associated with families and families are involved in development of domestic (rural farmsteads) sites on the frontier. These domestic sites should not be evaluated archaeologically without integrating them into the larger socio-economic milieu of the settlement. Mitchell and Hofstra's "open country neighborhoods" included domestic habitations as well as social and economic material culture features such as churches, schools, mill sites, taverns, and country or village stores. According to Donald Hardesty, these material culture features must be included in any archaeological examination of domestic sites because "if domestic sites are evaluated outside of their social and economic contexts, their connections within local and regional settlement systems might be overlooked and their research value diminished" (Hardesty 2000:119).

Thus, kinship and its association with domestic life affected the material development of the settlement and consequently the settlement patterns that evolved over time. The material manifestations of kinship should be evaluated with respect to its role in settlement decisions based on family association and the need for a cohesive unit to be able to establish itself in the hostile environment of the frontier.

Archaeological evaluation of domestic sites that were associated with kinship clusters, confirmed through historical documentation, might lead to identifiable material culture patterns associated specifically with the presence of kinship clusters at these

sites. This could result in important models for domestic settlement associated with kinship clustering.

From this discussion a model of settlement patterning for southwest Michigan has been hypothesized that incorporated the previous discussion and generated the following questions.

1. If southwest Michigan was an insular agricultural frontier, then settlement patterns seen on this frontier should follow a similar development cycle as seen on other agricultural frontiers.
2. If nuclear family farms in the form of kinship clusters were the initial settlers to this area, then one should see evidence of an extensive kin based "clustering phenomenon" in southwest Michigan.
3. If the southwest Michigan frontier developed a settlement pattern associated with kinship clusters in a "clustering phenomenon," then this pattern should be visible archaeologically as areas of social interaction. They should manifest themselves in such material culture activity areas as stores, mills, schools, churches and cemeteries.
4. If Calhoun County, during the frontier period of settlement, shows evidence of the clustering phenomenon, as seen on other frontier settlements, then this kinship clustering phenomenon may be deemed a prevalent source of settlement on frontiers in general and southwest Michigan in particular.

Agricultural frontiers have been hypothesized to follow a developmental cycle that was proposed by John C. Hudson. The theoretical settlement pattern associated with an agricultural frontier, according to Hudson's model, should be comprised of three

separate phases: colonization – initial settlement, spread – over time the settlements grow and spread out from the initial contact points, and competition – when the population reaches a level where land availability becomes constrained. Hudson's model examined settlement on a theoretically featureless or isotropic plane. The spatial patterns that developed from these settlement phases can be examined using statistical analysis techniques. What is seen in actuality differs from the model in some respects, but generally follows the progression that Hudson theorized. For Calhoun County, a frontier that was comprised of a multitude of environmental variables, settlement did follow this three-stage progression. The colonization phase, referred to in this research as the initial phase, was associated with the presence of multiple kinship clusters and other early settlers. The earliest settlers spread out over Calhoun County, attracted to specific environments, the kinship clusters providing a significant proportion of the total population in this earliest phase. This was tested using census data that indicated that kinship clusters made up nearly twenty percent of the total population during the pioneer phase. The land purchase data was even more impressive indicating that for the initial period, 1831 to 1834, kinship clusters were responsible for approximately forty-five percent of the land purchases during those four years.

During the middle phase of frontier development, Hudson's spread phase, settlement did indeed spread and become more generalized in the county. The effect of kinship on this phase of settlement was not as dramatic. Land purchases by non-kin pioneers comprised a much larger percentage of the total land acquired from the government during this period. Kinship cluster settlement did not keep pace with the growing number of settlers that were not associated with a kinship cluster.

By the final phase of Calhoun County's frontier period, competition for space was evident when examining the maps of Chapter V. Many of the townships were heavily populated by this period, leaving little land available for settlement. The only areas where this was not the case, were those locations where less desirable agricultural lands were present. Swamps and heavily forested land were never highly prized agricultural commodities. Pioneering of these lands required specialized equipment and additional labor that was not available during the frontier phase.

It has already been shown that the kinship clusters were responsible for much of the land purchases in the county during the initial period. It has also been shown, in the kinship cluster tables in Chapter V, that kinship clusters contained significant numbers of individuals. These two factors were examined using maps of Calhoun County and locating the point of settlement on these maps for both kinship clusters and non-kin settlers. Using this point data and nearest neighbor analysis, a statistical testing technique that determines whether points on a plane are clustered, random or regular, it was ascertained that settlement was clustered in the earliest period, random or tending toward random during the middle period and random with a tendency toward a regular pattern during the final phase of settlement. As settlement progressed during the three phases, kinship appeared to affect the settlement pattern less. This was the expected result if kinship clusters had affected settlement during the pioneer period, because as the population increased kinship cluster numbers were overwhelmed by the large influx of pioneer settlers.

The two groups, kinship clusters and non-kin settlers were then separately tested using the same technique, in order to determine whether kinship clusters were more

clustered than the non-kin settlers. In a majority of the townships in the study this was the result. Statistically the kinship clusters were more clustered than the non-kin settlers in the earliest phase of settlement, indicating that kinship acted as a focal point for further and future settlement of Calhoun County. As settlement progressed through the middle phase, both the kinship groups and the non-kin settlers became less clustered and tended toward a random distribution in the county. During the last phase, kinship clusters were of little significance to the settlement distribution that was seen for the county.

In two areas, Battle Creek and Homer Townships, the nearest neighbor analysis indicated that the non-kin settlers were more clustered in the early phase of settlement than the kinship clusters. Several reasons for this deviation from the expected results were discussed. This deviation from the expected clustering most likely reflects the effect of environmental variables on the statistical results. In Battle Creek Township much of the earliest settlement was associated with a large plain, Goguac Prairie, southwest of the Kalamazoo River, where many early settlers were not associated with a kinship cluster. In fact, throughout this township, the kinship clusters were not the first people to arrive. Consequently, the clustered settlement developed without significant influence from kinship clusters. However, in the middle phase, settlement is once again more clustered for the kinship groups than for non-kin settlers, even with the large increase in settlement that occurred in this phase.

In Homer Township, a similar aberration from the expected result was found. During the initial pioneer period when settlement, in general was clustered, the kinship clusters were less clustered than the non-kin settlers. This discrepancy may have to do

with the number of kinship clusters in this township. There were more than twice as many kinship clusters here as any other township resulting in the spreading out that was seen in the initial phase.

For the other townships the kinship clusters were more clustered than the non-kin settlers and supported the hypothesis that kinship was a social centralizing factor during the earliest period of settlement. As time progressed and more pioneers settled in the county, the effect of kinship on the settlement pattern was diluted and diminished.

The need for social interaction in this frontier environment has already been discussed at some length. It was essential for the development of the frontier society for groups of people to work together in an integrated fashion to accomplish their goals and establish an economically productive and temporally viable working society.

The role of kinship as a principal element of social organization early in the development of this frontier society has also been examined in light of its spatial distribution. In the absence of significant political, economic or geographical structures of organization in this frontier society, kinship clusters may have been the only effective form of social organization in existence that allowed for the mobilization of people as cooperative groups to solve the many common problems that existed on the frontier. How these kinship clusters then acted as a focal point for further social development has also been discussed and explained. Thus, the "open country neighborhoods" of Mitchell and Hofstra can be visualized as the "settlements" that developed from these early kinship clusters throughout the county.

This dissertation has examined the settlement patterns of the historic frontier period of one portion of southwest Michigan. The analysis results in a general evolutionary

model with embedded testable propositions. This approach was based on a kinship model of settlement associated with kinship clustering and how this "clustering phenomenon" affected settlement decisions by these kinship clusters and the other pioneers who followed them. The social organizational role of kinship clusters and their effects on settlement patterns in a frontier environment could be the basis for further and more detailed investigation as a continuation of this research, as well as by others interested in frontiers elsewhere.

Archaeologists interested in settlement patterning in other localities and time periods may be able to use this model to determine if kinship played a significant role in initial settlement in those localities or periods. The overarching importance of kinship in the initial settlement period is something that should be testable and identifiable in general. This dissertation emphasized the importance of family and kinship relationships associated with agricultural settlement. Therefore, any agricultural settlement that is long term and associated with nuclear family involvement should be able to be examined using the same statistical techniques employed by this research to determine the importance of kinship and its effect on settlement patterns.

Comparing a suite of data sets, both archaeological and historical documentation, it may be possible to confirm archaeological manifestations of kinship clustering. This is a proposed future endeavor for this research. Using archaeology and the particularistic historical documentation employed by this dissertation in combination it may be possible to develop hypotheses that could be tested, expanded and generalized to settlement studies elsewhere.

The results of this research on the effects of kinship on settlement patterns results in a general model which can have other applications, and may not necessarily be considered specific to this region, environment or time period. Importantly, the model provides testable implications for further research and testing. Future endeavors involving this region generally and Calhoun County specifically may include a more focused archaeological examination of frontier settlement for a portion of the study area. Additionally, examination of the impact of one or more of the several other variables, and their interaction with kinship clusters, could be undertaken by future research. Integration and comparison of the results of this study with data from other regions to understand settlement decisions and patterns over a larger area is also a future goal. Through comparative analysis of regional frontier settlement patterns it may be possible to ascertain higher scale, more general, patterns and discover adaptive solutions that are common to all agricultural frontier communities.

# BIBLIOGRAPHY

# Bibliography


ArcView GIS
1996 Environmental Systems Research Institute, Inc., Redlands, CA.

Aron, Stephen
1996 *How the West Was Lost.* The Johns Hopkins University Press, Baltimore and London.

Anderson, Dean L.
1995 Breaking the Myth. *Michigan History,* 79(4):26-31.

Barker, Charles Ferguson
2001 Defining Michigan. *Michigan History,* 85(4):22-27.

Bartlett, Richard A.
1974 *The New Country – A Social History of the American Frontier, 1776-1890.* Oxford University Press, New York, NY.

Billington, Ray Allen
1958 *The American Frontier.* American Historical Association, Publication #8, Washington, DC.

1966 *America's Frontier Heritage.* Holt, Rhinehart and Winston, New York, NY.

Brashler, Janet G., Terrance J. Martin, Kathryn Parker, James A. Robertson and Michael J. Hambacher
2000 Middle Woodland Occupation in the Grand River Basin of Michigan. Paper Presented at the Middle Woodland in the Millennium Conference, Grafton, IL.

Brewer, Lawrence G., Thomas W. Hodler and Henry A. Raup
1984 *Presettlement Vegetation of Southwestern Michigan.* Western Michigan University, Map Library, Kalamazoo, MI.

Butler, Albert F.
1947 Rediscovering Michigan's Prairies. *Michigan History,* 31:267-286.

Calhoun County Tax Records
1844 Property Tax Records of Calhoun County. Microfilm, Southwest Michigan State Archives, Western Michigan University, Kalamazoo, MI.

Clark, Caven P.
1994 Berrien County's 4,000 Year Old House. *Michigan History,* 78(5):51-53.

Cleland, Charles E.
1992 *Rites of Conquest.* University of Michigan Press, Ann Arbor, MI.

Clifton, James A.
1978 Potawatomi. In *Handbook of North American Indians,* William Sturtevant, series editor. Vol. 15, *Northeast,* Bruce G. Trigger, editor, pp. 725 – 742. Smithsonian Institution, Washington, DC.

Cordell, Linda S. and Stephen J. Beckerman
1980 *The Versatility of Kinship.* Academic Press, NY.

Crass, David Colin, Steven D. Smith, Martha A Zierden and Richard D. Brooks
1998 Introduction: Southern Frontier Communities Viewed Through the Archaeological Eye. In *The Southern Colonial Backcountry,* David Colin Crass, Steven D. Smith, Martha A. Zierden and Richard D. Brooks, editors, pp. xiii – xxvii. University of Tennessee Press, Knoxville.

Cremin, William M.
1992 Researching the Void Between History and Prehistory in Southwest Michigan. *The Michigan Archaeologist,* 38:19-37.

Davis, James E.
1977 *Frontier America 1800 to 1840.* Arthur H. Clark Co., Glendale, CA.

Dowd, Gregory Evans
1992 *A Spirited Resistance: The North American Indian Struggle for Unity 1745 – 1815.* The Johns Hopkins University Press, Baltimore and London.

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

Earickson, Robert J. and John M. Harlin
1994 *Geographic Measurement and Quantitative Analysis.* Macmillan College Publishing Company, Inc., New York, NY.

Faragher, John Mack
1986 *Sugar Creek.* Yale University Press, New Haven and London.

1994 *Rereading Frederick Jackson Turner.* Henry Holt and Company, New York, NY.

Farber, Bernard
1967 *Comparative Kinship Systems.* John Wiley and Sons, New York, NY.

Farber, Bernard
1981 *Conceptions of Kinship.* Elsevier, New York, NY.

Federal Census Records
1840 Calhoun County, Microfilm Publication Roll # 203, National Archives and Records Administration. College Park, MD.

1850 Calhoun County, Microfilm Publication Roll # 348, National Archives and Records Administration. College Park, MD.

Fox, Robin
1968 *Kinship and Marriage.* Penguin Books.

1993 *Reproduction and Succession: Studies in Anthropology, Law and Society.* Transaction Publishers, New Brunswick, NJ.

Fuller, George N.
1916 *Economic and Social Beginnings of Michigan, A Study of the Settlement Of the Lower Peninsula During the Territorial Period, 1805 – 1837.* Wynkoop Hallenbeck Crawford Company, Lansing, MI.

1939 *Michigan Centennial History,* Vol. 1. Lewis Publishing Co., Chicago, IL.

General Land Office (GLO)
1994 *Automated Records Project Pre-1908 Homestead and Cash Entry Patents and Cadastral Survey Plat Index.* United States Department of the Interior, Bureau Of Land Management, Eastern States. Springfield, VA.

Gregory, Michael L.
1988 *The Forgotten Years of Battle Creek.* Kal-Gale Printing, Kalamazoo, MI.

Gilpin, Alec R.
1970 *The Territory of Michigan (1805-1837).* Michigan State University Press, E. Lansing, MI.

Green, Stanton W.
1979 The Agricultural Colonization of Temperate Forest Habitats: An Ecological Model. In *The Frontier: Comparative Studies, Volume 2.,* William W. Savage, Jr. and Stephen I. Thompson, editors, pp. 69-103. University of Oklahoma Press, Norman.

Green, Stanton W. and Stephen M. Perlman (editors)
1985 *The Archaeology of Frontiers and Boundaries.* Academic Press, San Diego, CA.

Halsey, John R.
2000 The River Road Rises. *Michigan History,* 84(5):22-27.

Hardesty, Donald L. and Barbara J. Little
2000 *Assessing Site Significance.* AltaMira Press, Walnut Creek, CA.

Haviland, William A.
1996 *Cultural Anthropology,* eighth edition. Harcourt Brace and Company, Orlando, FL.

Hine, Robert V. and John Mack Faragher
2000 *The American West – A New Interpretive History.* Yale University Press, New Haven and London.

History of Calhoun County
1877 L.H. Everts and Co., Philadelphia, PA.

Hoffman, Charles Fenno
1990 The Romantic Wilderness (1835). Excerpted in *A Pioneer Anthology: The Making of Michigan 1820-1860.* Justin L. Kestenbaum, editor. Wayne State University Press, Detroit, MI.

Holy, Ladislov
1997 *Anthropological Perspectives on Kinship.* Pluto Press, London.

Houghton, Douglass
1842 *Map of Calhoun County.* Published under direction of Douglass Houghton, State Geologist. State of Michigan Archives, Lansing, MI.

Hubbard, Bela
1877 Ancient Garden Beds of Michigan. *Michigan History and Pioneer Collections.* Volume 2:21-36. Robert Smith Printing Co., Lansing, MI.

1888 *Memorials of a Half-Century in Michigan and the Lake Region.* G.P. Putnam's Sons, The Knickerbocker Press, New York and London.

Hudson, John C.
1969 A Location Theory for Rural Settlement. *Annals of the American Association of Geographers,* 59:365-381.

James, Sheryl
2000 Roads, Roots and Ribbon Farms. *Michigan History,* 84(6):28-33.

Jordan, Terry G. and Matti Kaups
1989 *The American Backwoods Frontier.* The Johns Hopkins University Press, Baltimore, MD.

Kellerman, Aharon
1998 Transitions in the Meanings of Frontiers: From Settlement Advance to Regional Development. *Journal of Geography,* Sept/October, pp. 230-234.

Kuper, Adam
1999 *Culture: The Anthropologist's Account.* Harvard University Press, Cambridge, MA.

Lane, William A.
1888 *Homer and It's Pioneers.* P.W. Chase Publishers, Homer, MI.

Lewis, Kenneth E.
1984 *The American Frontier: An Archaeological Study of Settlement Pattern and Process.* Academic Press, Orlando, FL.

1988 The Agricultural Colonization of Southern Michigan, A Perspective for Archaeological Research. In *Nineteenth Century Historic Archaeology in Illinois,* Charles L. Rohrbaugh and Thomas Emerson, editors, pp. 105 –116. Midwestern Archaeological Center, Research Report 8.

2002 *West to Far Michigan, Settling the Lower Peninsula, 1815 – 1860.* Michigan State University Press, E. Lansing, MI.

Lewis, Helen F.
2001 *Southeastern Michigan Pioneer Families: especially Calhoun County and New York Origins.* Kinship Press, Rhinebeck, NY.

Lightfoot, Kent G. and Antoinette Martinez
1995 Frontiers and Boundaries in Archaeological Perspective. *Annual Review of Anthropology,* 24:471- 492.

Margolis, Maxine
1977 Historical Perspectives on Frontier Agriculture as an Adaptive Strategy. *American Ethnologist,* 4(1):42-64.

Mason, Roger D.
1984 Euro-American Pioneer Settlement Systems in the Central Salt River Valley Of Northeast Missouri. In *Publications in Archaeology, Cannon Reservoir Human Ecology Project.* Michael J. O"Brien, editor. American Archaeology Division, Department of Anthropology, University of Missouri-Columbia, No. 2.

McAllister, Paul W.
1999 Upper Mississippian in Western Lower Michigan. In *Retrieving Michigan's Buried Past.* John R. Halsey, editor, pp. 254-264. Cranbrook Institute of Science Bulletin 64. Bloomfield Hills, MI.

McClesky, Turk
2000 Shadowland: Provisional Real Estate Claims and Anglo-American Settlement In Southwest Virginia. In *The Southern Colonial Backcountry.* David Colin Crass, Steven D. Smith, Martha A. Zierden and Richard D. Brooks, editors, pp. 56 – 68. University of Tennessee Press, Knoxville.

Michigan Cemetery Compendium
1979 Compiled by Har-Al, Inc. Spring Arbor, MI.

Mitchell, Robert D. and Warren R. Hofstra
1993 How Do Settlement Systems Evolve? The Virginia Backcountry During the Eighteenth Century. *Journal of Historical Geography,* 21(2):123-147.

Mitchell, Robert D.
1998 The Southern Backcountry: A Geographical House Divided. In *The Southern Colonial Backcountry,* David Colin Crass, Steven D. Smith, Martha A Zierden and Richard D. Brooks, editors, pp. 1 – 35. University of Tennessee Press, Knoxville.

Murdock, G. P.
1949 *Social Structure.* Macmillon Press, New York, NY.

Nassaney, Michael S.
2001 Diggin Fort St. Joseph. *Michigan History,* 85(5):38-43.

Nobles, Gregory H.
1997 *American Frontiers.* Hill and Wang, New York, NY.

Pasternak, Burton
1976 *Introduction to Kinship and Social Organization.* Prentice-Hall, Inc., Englewood Cliffs, NJ.

Perry, James R.
1990 *The Formation of a Society on Virginia's Eastern Shore 1615 – 1655.* University of North Carolina Press, Chapel Hill and London.

Peters, Bernard C.
1970 No Trees on the Prairie: Persistence of Error in Landscape Terminology. *Michigan History,* 54 (Spring 1970):19-28.

1976 The Fever Period of Land Speculation in Kalamazoo County: 1835 – 1837. *The Michigan Academician,* 8(3):287-301.

Porter, Phil
1996 Stars and Stripes over Michigan. *Michigan History,* 80(4):10-17.

Prescott, J.R.V.
1965 The Geography of Frontiers and Boundaries. Aldine Publishing Co., Chicago, IL.

Price, Cynthia R. and James E. Price
1981 Investigation of Settlement and Subsistence Systems in the Ozark Border Region of Southeast Missouri During the First Half of the Nineteenth Century: The Widow Harris Cabin Project. *Ethnohistory,* 28(3): Summer 1981, 237-258.

Puglisi, Michael J.
1998 Muddied Waters: A Discussion of Current Interdisciplinary Backcountry Studies. In *The Southern Colonial Backcountry,* David Colin Crass, Steven D. Smith, Martha A.Zierden and Richard D. Brooks, editors, pp. 36 – 55. University of Tennessee Press, Knoxville.

Rust, E.G.
1869 *History and Directory of Calhoun County.* E.G. Rust Compiler and Publisher, Battle Creek, MI.

Schneider, David M.
1968 *American Kinship: A Cultural Account.* Prentice-Hall, Inc., Englewood Cliffs, NJ.

1984 *A Critique of the Study of Kinship.* University of Michigan Press, Ann Arbor, MI.

Schneider, David M. and Raymond T. Smith
1973 *Class Differences and Sex Roles in American Kinship and Family Structure.* Prentice-Hall, Inc., Englewood Cliffs, NJ.

Stark, Barbara L. and Dennis L. Young
1981 Linear Nearest Neighbor Analysis. *American Antiquity,* 46(2):284 – 300.

Steffen, Jerome O.
1980 *Comparative Frontiers: A Proposal for Studying the American West.* University of Oklahoma Press, Norman.

Stone, Linda
2001 *New Directions in Anthropological Kinship.* Rowman and Littlefield Publishers, Inc., London.

Swedlund, Alan
1975 Population Growth and Settlement Pattern in Franklin and Hampshire Counties, Massachusetts, 1650 – 1850. *American Antiquity Memoir,* 30:22-33.

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

Trigger, Bruce G.
1967 Settlement Archaeology – Its Goals and Promise. *American Antiquity,* 32(2): 149-159.

1989 *A History of Archaeological Thought.* Cambridge University Press, Cambridge.

Turner, Frederick Jackson
1893 The Significance of the Frontier in American History. Address delivered at the Forty-first Meeting of the State Historical Society of Wisconsin, December 14, 1893.

1994 Midwest Pioneer Democracy. In *Rereading Frederick Jackson Turner.* John Mack Faragher, editor, Henry Holt and Co., New York, NY.

Whallon, Robert Jr.
1974 Spatial Analysis of Occupation Floors II: The Application of Nearest Neighbor Analysis. *American Antiquity,* 39(1):16 – 34.

Woodruff, James C.
1997 LaSalle's Walk on the Wild Side. *Michigan History,* 83(2):6-15.