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Music in the Northern Woods: An Archaeological Exploration of Musical Instrument Remains

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MUSIC IN THE NORTHERN WOODS: AN ARCHAEOLOGICAL EXPLORATION OF MUSICAL INSTRUMENT REMAINS

By

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Acknowledgments

I would like to thank far too many people than there is space. The networks of people that have influenced me over the years are spread across the corners of the world. Not that I am alone in this by any means. But what it does mean is that there are people that haven't been seen in years, yet some of them have occupied my thoughts extensively since I began this journey towards a Master's degree in Industrial Archaeology at Michigan Tech. These people will remain unnamed here because they are silent voices, invisible faces, ethereal visions. They will continue to haunt me.

My thanks and gratitude go to my comrades in the program and the faculty and staff of the Social Sciences department. I remember those early days returning to the Copper Country from two years working abroad in Japan as something alien. The Copper Country seemed like something new again and I didn't know what to make of it. I began asking questions. The Industrial Archaeology program came to my awareness through Kathleen Halvorsen. She then introduced me to Hugh Gorman. He was the first to tell me about the program and he soon passed me on to Patrick Martin. I am thankful for those conversations. Thank you.

It was the beginning of fresh perspective of a place where my family has made a home of for the last hundred years or so. But I'm forgetting something. I'm forgetting music.

I remember a warm, summer day slinging feed bags and grass seed. I was loading some rolled corn into Joel Tepsa's Jeep when I spotted a Carvin amp. Well, I had a Carvin bass. If a few days I found myself in a hay barn playing Celtic music with a band named *Fiddlehead*. I had no idea what I was doing. Joel was there. It was his barn. Floyd Henderson, Libby Meyer, and Lisa were there. In a dark corner of the barn was Oren Tikkanen. He once told me that his first impression of me wasn't so good. I'll spare the details. More than a decade later and we are still playing music together. I have so much more to learn. All of these people. Joel, Floyd, Libby, Lisa, Oren, and their families. Thank you.

Sometimes music feels like it gets pushed to the sidelines. There are times in this life where it seems necessary to focus on one thing at the expense of others. It is when interests overlap when things become interesting. I am fortunate that my newfound interest in archaeology is compatible with my identity as a musician. The two identities have managed to fuel each other, thanks in large part to the infectious energy of LouAnn Wurst. Thank you. I remember sitting in the back seat of her Jeep on a trip to Marquette to look at

water power sites. She referred to me as “intellectually promiscuous.” I ran with it. I will continue to run with it.

I’ve been fortunate to be engaged in countless conversations with staff, faculty, and other students about topics from landscape, heritage, archaeology, and music, just to name a few. I want to thank Carol MacLennan, Steve Walton, Sam Sweitz, LouAnn Wurst, Don LaFreniere, and Melissa Baird for creating environments that fostered a free and open expression of ideas. I want to thank my classmates Ryan Brown and Marley Chynoweth. Thank you. The ideas and comradery they exposed to me inside and outside of class have become a part of me.

I would also like to thank Eric Drake and the Hiawatha National Forest. Eric Drake tutored me through my first series of shovel test pits in a mosquito infested bramble field. I still have scars. And to all the Passport in Time volunteers for their week at Coalwood. Thank you. It was a pleasure.

I want to thank my committee members Steve Walton and Matt Seigel for taking the time to discuss ideas with me and all the great suggestions they have made.

And finally, and not least, there is my family. They may not understand what it is I am trying to do, but they fully support me in my endeavor. My partner, Pamela, has been there every step of the way tolerating my flights of fancy.

Enough sappy stuff. Let’s bring on some music.

Abstract

Archaeological and historical literature neglects music and sound. The quantity and distribution of musical remains found during archaeological excavations at Coalwood, a Cleveland-Cliffs Iron Company (CCI) logging camp active from 1901-1912 in the Upper Peninsula of Michigan, addresses the importance of music to the people that lived there. Musical reed plates from harmonicas, concertinas, and accordions were recovered and examined. These musical remains have traditionally been ignored as a diagnostic artifact, but here, I use them as primary evidence to access the daily lives of people in the northern woods. To do this, I will present how CCI developed Coalwood as a lumber camp and some of the people that lived there. Then, I will explore the soundscape through artifacts and bring attention to formal and informal music ensembles and the music they play. I will demystify the reed plate and present a typology of reed plates.

1. There was music

> "*Music, at its essence, is what gives us memories. And the longer a song has existed in our lives, the more memories we have of it.*"
> *– Stevie Wonder*

Sound surrounds us. Its existence disappears as background noise in our everyday activities. Those sounds are eventually forgotten. This is true for the past that archaeologists study. Let's use the example of a lumber camp in the first decade of the twentieth century. What sounds were produced as part of the everyday life of these occupants? The clink and clunk of thick ironstone dishes set on a rough-cut wood table. The spark of a match. The tink of metal against glass. The squeak of a chimney flue fine-tuned. An oil lamp brightened the room. People talked. People laughed. They scraped files across their tools. Trains puffed steam and clanked down the railway. It was business as usual. The background activities of a day. What about music? Maybe a wood chopper next door was practicing the concertina for an upcoming performance. A jaw harp plunking away as a child hops by. A soothing harmonica melody wafted from a teamster calming the horses down the way. These are just a few of the sounds that we don't often hear in the twenty-first century. Everyday sounds have changed. The people of the past lived with different sounds and it was a part of their lives then just as it is a part of our lives today. Sound and music are important elements to consider when we think about the daily lives of the people we study. The question is: How can we study sound and music with the material archaeological record?

There are artifacts that create a material link with the sounds and music of the past. For example, sheet music, recordings, musical instruments, and parts of musical instruments. Other general artifacts such as ceramics, glass,

and tools can and have been used to make music and generated the background noise of their lives. My goal in this thesis is to explore how artifacts recovered from the Coalwood lumber camp can build ideas about the sounds the occupants may have heard and created. To do this, I will take a two-pronged approach. The first one will use common artifacts to reconstruct the sounds of a day. The second will focus on musical reed plates, those parts of accordions, concertinas, and harmonicas that were recovered at Coalwood lumber camp. I present a description and classification of musical reed plates so they can be identified in the material record and offer some suggestions as to how they can be used to explore the sounds of the past. The ability to identify and classify these artifacts in an archaeological context can contribute another layer of sound and music to the lives of the people we study.

The people I'm interested in are those that lived at the Coalwood lumber camp that operated from 1901-1912. A large and diverse collection of musical reed plates have been collected at Coalwood during numerous excavations and surface collections. They will serve as the data for this thesis. There were dozens of structures at Coalwood. A store provided goods for the hundred or so people that lived there, including women and children. There were family homes and boarding houses. And there were plenty of lumberjacks, or choppers, crawling across the tree covered landscape.

The image of the lumberjack sparks certain mental images of a big, burly man with a beard wearing flannel. You could call it a trope, or a cliché, or a stereotype that represents the most broad, relatable character traits. I would like to complicate and add to these common images for the lumberjacks at Coalwood. These choppers worked. These choppers lived. These choppers had leisure time. Some lived in boarding houses. Some lived with their families. Some of them played music; others listened to the music. There was music. Music was recorded in ephemeral ways instead of the hard reality of accounting books. Because music is ephemeral and reed plates are a low-

density artifact in the material record, the importance of music in people's everyday life is seldom considered. I suggest that even in low densities, these musical remains help refine and complicate the everyday stories of the people we study.

The Upper Peninsula of Michigan (U.P.) is a suitable place to study the lives of immigrants and the development of industry in the nineteenth and twentieth centuries because of the history of mining and lumbering. The U.P. has served as a cultural backdrop for a wide variety of ethnic identities represented by immigrants from all over Europe, Canada, and the Nordic countries. Alan Lomax recorded the sounds of folk music in 1938, a collection now housed at the Library of Congress Folklife Center. When Lomax visited the Upper Peninsula, he passed through Alger county where Coalwood is located and recorded songs performed by immigrants in languages such as Finnish and Slovenian. As the historian Theodore Karamanski put it: "The forests of the Upper Peninsula are an excellent historical laboratory for exploring the effects of logging on the social and natural environments" (1989:15).

1.1. Enter Coalwood

Coalwood was a lumber camp operated from 1901 to 1912. It was one of several cordwood lumber camps in the Coalwood district developed by the Cleveland Cliffs Iron Company (CCI). It was a hub of activity. These days, Coalwood is located just off a dirt road southwest of Munising in the Upper Peninsula of Michigan. It is nestled among a mixed pine plantation maintained by the U.S. Forest Service in the Hiawatha National Forest.

Figure 1.1. Map of the Upper Peninsula of Michigan, Source: Author.

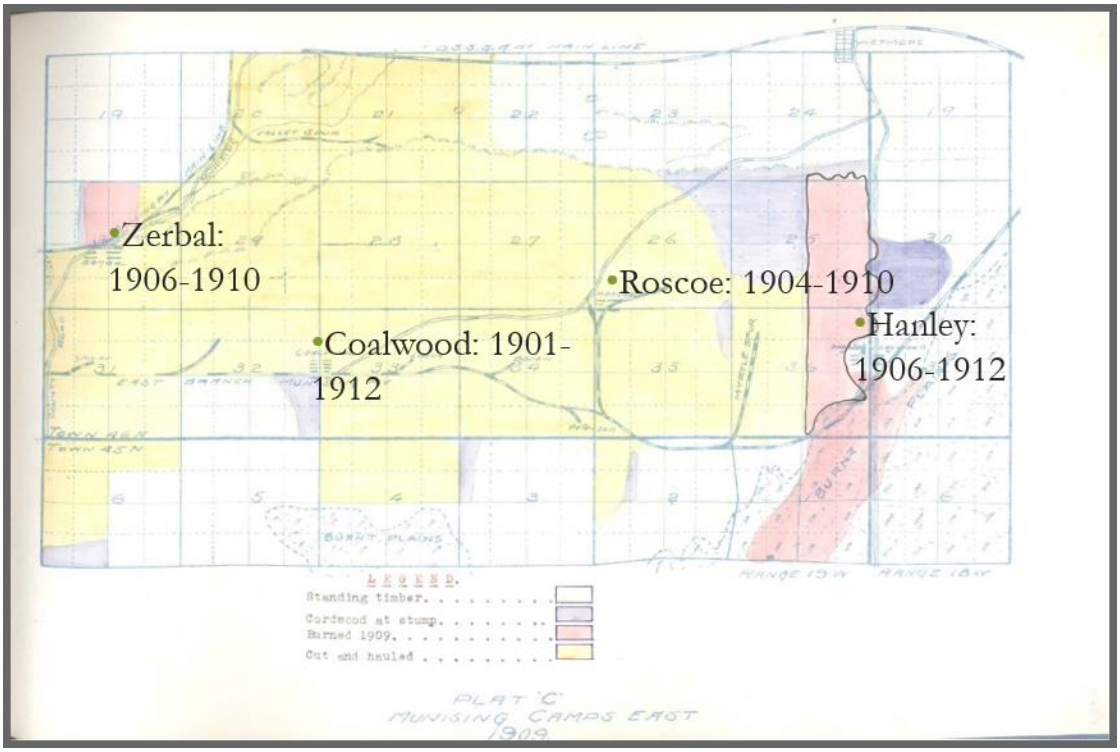


Figure 1.2. Coalwood District, Source: 1909 CCI Annual Report

The forest is vast and still transected by logging roads shooting off the main branch of the old railroad grade. After miles of trees an open field to the south filled with brambles and tall grasses comes into view. Closer inspection reveals depressions ranging from cellars to privies. Cell phones don't work there. Only the sounds of the forest remain and the crunch of dried brush underneath.

That's what Coalwood is like now. It is an isolated place. But during the time of occupation in the early 20th century, it was a busy little town of about 30 tarpapered frame structures and log buildings. The surrounding tree-filled sandy pine plains were dotted with small lakes, rivers, and swamps by the retreating glaciers of the last ice age. A store run by William Roberge served the 250 or so people that lived there according to the 1910 Census. The remains of a sauna hints at Finnish occupation that is supported by the 1910 census as well as a history of Alger County (Swanberg 1986). There were single homes on the North side and boarding houses on the South side – most likely family run. There were women and children at Coalwood, including Tilda Mattson whose family of seven children ranged in age from two to sixteen in 1910.

Coalwood was a lumber camp but it was also a town. A small town. The area was awash with activity, creating a variety of sounds of life, labor, and leisure. There was a wider variety of sounds than now. Because where there were people, there was music. This simple realization contrasts with the way historians and archaeologists have examined lumber camps of this era—barely making any mention of the importance of music at these sites. This is also true of other working-class contexts dating to the same era. While there are numerous questions that can be investigated with the data from Coalwood, I am interested in the social role of music and the types of instruments people were playing. The goal of this research is to raise awareness of the importance of music and sound in the everyday lives of the people we study. Using

archaeological data and oral histories, the people living at Coalwood had access to and played a wide variety of harmonicas as well as concertinas and accordions. Other instruments such as guitars, mandolins, and fiddles may have been present but they are not represented in the material record.

As a lumber camp in the Upper Peninsula, Coalwood has received a great deal of scholarly attention relating to the evolution/development of industrial production of lumber in the United States (Franzen 1992; Karamanski 1989; Howe 2015; Wurst 2016). Coalwood is also a different sort of lumber camp because of the presence of families. Research in Upper Peninsula logging contexts has focused attention on alcohol, tobacco, medicine (Franzen 1995), food (Conlin 1974), and the spatial organization of lumber camps (Rohe 1985), but emphasis on music is severely underrepresented.

Coalwood provides an ideal case study to examine music because a large number and variety of musical reed plates have already been recovered. Musical reed plates will be the primary archaeological data used to determine the types of instruments that existed at Coalwood. Musical reed plates are the parts of free reed instruments that hold the tongue of a reed, the part that makes the distinct tone of the instruments. The instruments represented are harmonicas, concertinas, and accordions. The quantity and diversity of reed plates found at Coalwood demonstrates that there were musical instruments there, and where there were instruments, there was music. The large sample speaks to how important music was in the lives of these choppers and their families during their time at Coalwood. This archaeological data augments the limited documentary evidence related to Coalwood and the role of music in lumber camps.

Two oral histories refer to musical experiences at nearby CCI camps. Frank Debelak (1991) and Robert Lustic (1994) grew up in the Coalwood district and both mention accordions and musical events such as dances.

Archival photographs from logging camps commonly illustrate loggers posing with a wide variety of instruments. Numerous collections of logging songs and music have been collected by folklorists and musicologists. These sources are used to emphasize sound, which is, after all, the primary goal of my research. By investigating sound and music, my research will also add a layer of complexity to the lumbering life in the northern woods of the Upper Peninsula.

I will create a typology of reed plates that will help with identification of instruments. While not every reed plate can reveal much in the realm of maker's marks (reed plates represent the epitome of the anonymity of mass production), they can reveal the type of instrument, possibly its key, and have the potential to narrow down the specific brand or even model of instrument in some cases, revealing dates and possibly item sources. Closer observation and recording of this information can add sound and music to historical and archaeological narratives.

The typology of reed plates will help archaeologists identify these artifacts and thus increase the visibility and importance of these material traces of music. Recognizing the importance of sound and music to the inhabitants of the past is a crucial layer of their daily lives.

1.2. A Prelude

Chapter two presents the historical context surrounding Coalwood and its operation by the Cleveland Cliffs Iron Company. This historical context provides the backdrop that illustrates the development of Coalwood as a lumber camp and situates it in the context of cultural and industrial production. It will also introduce the some of the people that lived there.

Chapter three introduces the immaterial nature of sound and music. Sound is ephemeral. We have become used to the ready accessibility and availability of recording technologies along with the ubiquitous access to

information, the mass marketing of music by the music industry, and an informal/independent accessibility of musical potential made possible by the Internet (Merrill 2009). People living at Coalwood at the turn of the twentieth century did not have these technologies. I use material culture recovered at Coalwood to access the sounds of the time. After taking a trip through the sounds of a day, I will discuss theoretical aspects of formal and informal music as well as issues of worker mobility. Then I will use song lyrics to access ideas of immigration, ethnicity, and ways of accessing lost history.

Chapter four focuses on the materiality of sound. A survey of archaeological literature has shown that music, sound, or an engagement with musical remains is rare. Accordion style reed plates have been misidentified as belt buckles or suspender straps. Other archaeologists merely mention them in passing as part of leisure or entertainment category of artifacts. Without further discussion, these artifacts remain mute to their potential to reveal something about the people we study. To do this, I present a short history of free reed instruments that explores where and how they developed and spread and how they are made. This general overview is intended to provide enough information for archaeologists to consider reed plates as an artifact that can help reconstruct past human behavior. A typology of reed plates is supplied to aid archaeologists with identifying these curious artifacts. The primary data source was identified musical remains recovered at Coalwood, plus one. I felt the plus one (a reed organ reed example obtained from a pump reed organ owned by Dave Bezotte) was necessary to illustrate the overlap of reed plate use across these instrument types.

Chapter five uses the musical remains uncovered at Coalwood as an archaeological case study. This data, recovered from surface collections in 2009 and 2013, and excavations in 2014 and 2016, represents an astonishing quantity and diversity of reed plates, resulting in a minimum vessel count (MNV) of twenty. The musical remains were found to be evenly distributed

across the site with the only exception being the store. It seems that music played a part in the lives of the people of Coalwood. It also raises a new question: Why were there so many reeds left behind?

In the final chapter, I discuss the findings and suggest ideas for further research. The parts of musical instruments found in the archaeological record cannot recover the actual sounds, but they do allow us to recognize the importance of sound and music in people's everyday lives.

2. Fresh Water, Ore, and Lumber

"Music is the greatest communication in the world. Even if people don't understand the language that you're singing in, they still know good music when they hear it." – Lou Rawls

The goal of this chapter is to situate the Coalwood district in the historical development of Michigan's Upper Peninsula, the development of the logging industry in the U.P., and the role of Cleveland Cliffs Iron Company (CCI) in forming and running Coalwood as a lumber camp. In addition, an overview of historical music and sound will contribute to the aural sensations of the region in the early twentieth century. This context provides a general background that will contribute to understanding the daily lives of people living in Coalwood as well as an overview of literature about the Upper Peninsula and how scholars have treated the topic of music. Historians and archaeologists have seldom mentioned music, while the realms of folklore, musicology, and music studies tend to put music front and center at the expense of in-depth social inquiry. I will begin by examining the development of the logging industry in the Upper Peninsula, including geology, relevant companies, and individuals. I will then present the development of Coalwood.

As Figure 2.1 shows, the Upper Peninsula (U.P.) of Michigan is located between Lake Superior and Lake Michigan, two of the largest freshwater lakes in the world and part of the five Great Lakes that are recognized around the world.

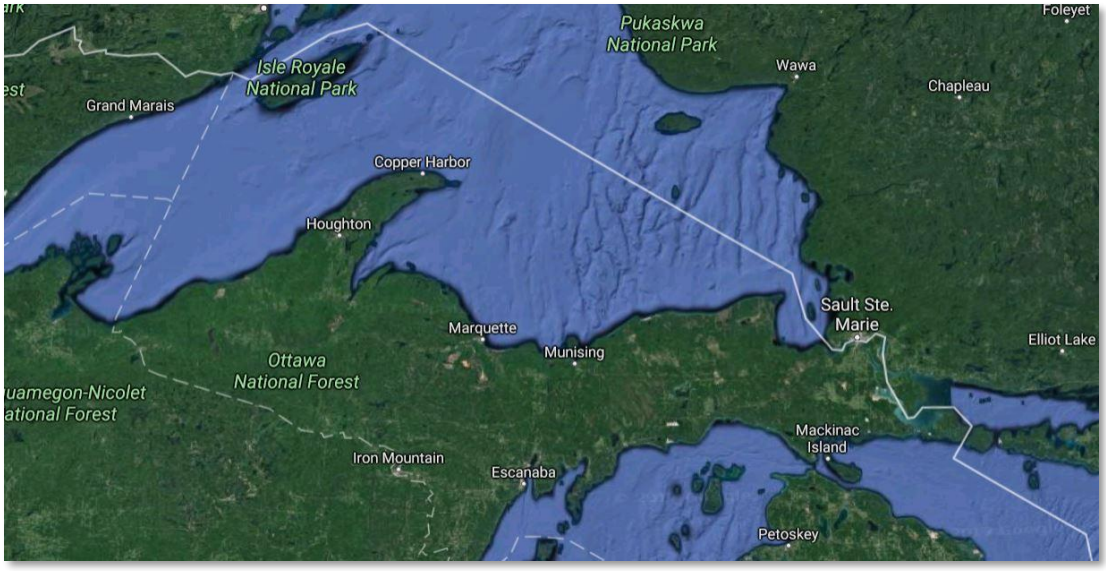


Figure 2.1. Michigan's Upper Peninsula, Source: Google Maps

The U.P. is a diverse landscape filled with numerous mineral and natural resources. Iron, copper, and small amounts of silver are just a few of the mineral resources that have been mined, in addition to stone and natural forest products. The wildlife is diverse. Bears, deer, wolves, squirrels, chipmunks, even moose roam its forested lands. Native Americans harvested copper, iron, and forest products long before Americans negotiated land and mineral rights to the western portion of the U.P. when the 1842 Treaty of LaPointe was signed between the Ojibwe (Anishinaabe) and the United States government (Lankton 2010:13; Dunbar and May 1995; Reynolds and Dawson 2011:). The Treaty of LaPointe became effective in 1843, which resulted in the U.S. government retaining both mineral and property rights (Lankton 2010:13; Dunbar and May 1995). This allowed the government to begin leasing and selling land to investors, many of them from the east coast cities of Boston and New York. One group of investors from Ohio eventually formed the Cleveland-Cliffs Iron Company. Those investors came for the mineral riches. Figure 2.2 shows a ridge along the Keweenaw peninsula known as the Keweenaw fault was the source of rich mineral resources.

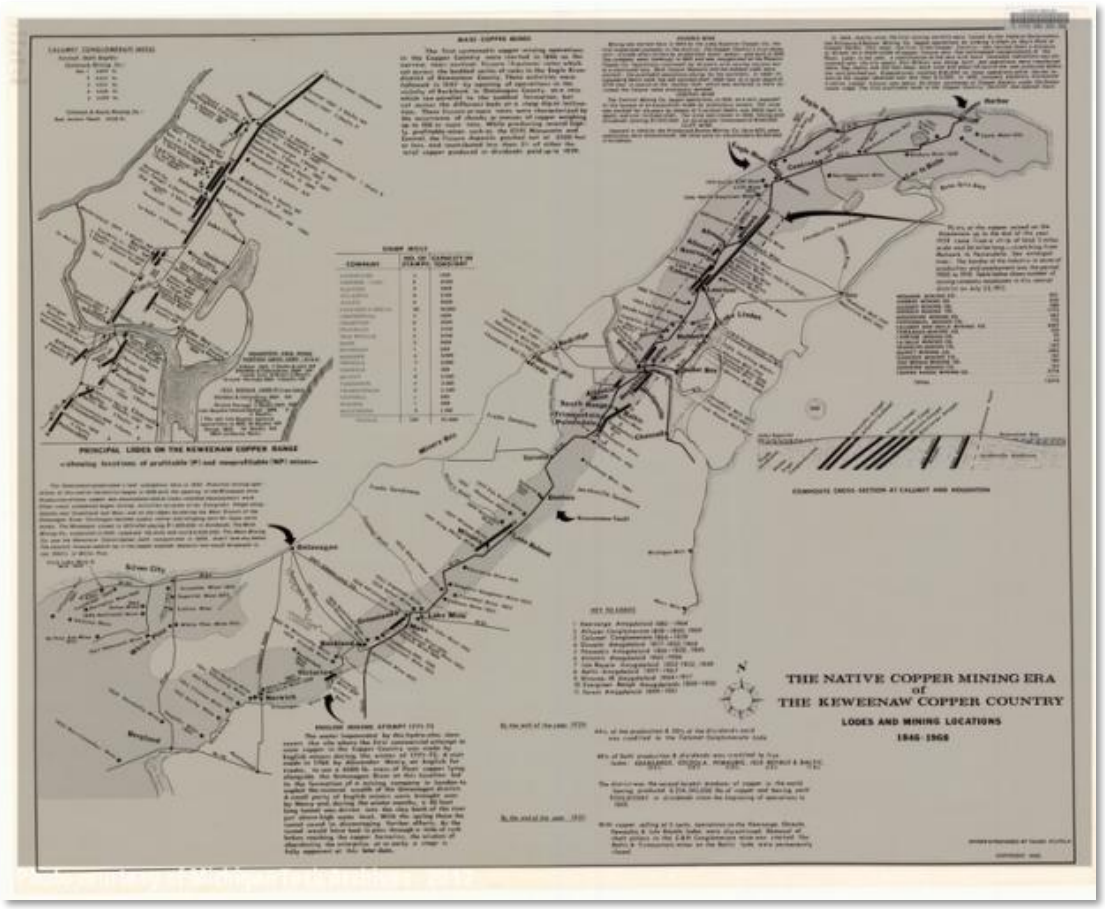


Figure 2.2. Keweenaw Copper Country Lodes and Mining Locations (1846-1968), Source: Michigan Tech Archives. Accessed 10 October 2017.

Copper mixed with small amounts of silver were deposited by volcanic activity along the spine of the Keweenaw in the north and iron formed around Marquette and into the northern part of Wisconsin and the Eastern part of Minnesota. In the Keweenaw, a nearly pure form of copper was pushed through the crust and oozed to the surface, creating ribbons that were harvested by Native Americans and later by capitalists as they penetrated the region. Figure 2.3 shows the copper and iron ranges.

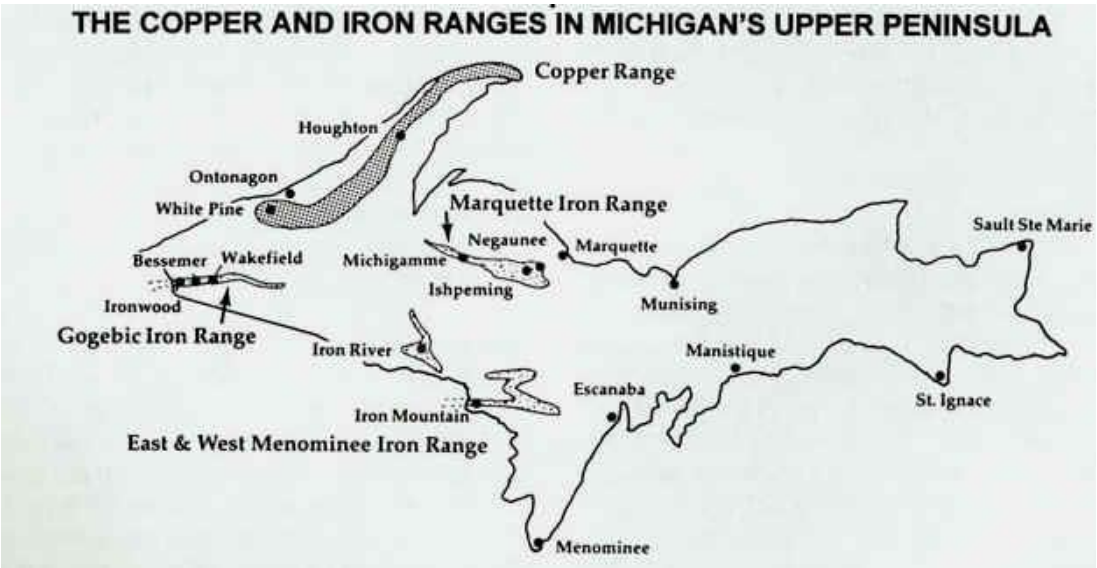


Figure 2.3. The Copper and Iron Ranges in Michigan's Upper Peninsula, Source: http://geo.msu.edu/extra/geogmich/copper.html. Accessed 2 April, 2018.

The rush to purchase land happened quickly. Promising mineral locations were already purchased by other companies such as the Calumet and Hecla Mining Company (C&H) and the Quincy Mining Company (Lankton 2010). The U.P. was also home to vast mixed hardwood and mixed pine forests that were exploited for use in mines as support for underground copper and iron mining, creating what was known at the C&H as an underground forest (Lankton 2010:78-79). Forest resources were also used for producing charcoal, wood chemicals, and other consumer products such as paper products, kitchen ware, veneers, and construction materials (Reynolds and Dawson 2011; Karamanski 1989, Wurst 2017).

The Upper Peninsula was a land full of natural resource wealth. It has been home to extraction industries and production industries and has become known as one of the great producers of copper and iron throughout the years. But it all began as colonizers began pushing their way into the deep forests to trade with the Native Americans.

2.1. Early Logging in the Upper Peninsula

The story of logging in the U.P. begins with the fur trade in the eighteenth century, at least from the colonizer perspective. Early on, it was mostly French-Canadians who were looking for forest resources and participated in the fur trade. It was these early forays into the thick, dark forests of the Upper Peninsula where white fur traders from Canada and some from the newly formed United States interacted with Native Americans, particularly Ojibwe and Ottawa. The *Voyageurs* of French-Canadian fame paddled their birch bark canoes along rivers and the shores of Lake Superior (Nute 1955). They would sing songs about their canoes and lives of trapping and trading. Ojibwe and other Native American tribes would sing songs as well. Lumber resources figured prominently in these accounts and logging has an important role in the history of the Upper Peninsula (Nute 1955; Karamanski 1989).

According to Karamanski (1989), the development of the logging industry in the upper Great Lakes followed Lewis Mumford's three stages of industrial growth. This includes categorizing the stages into three eras: the water-pine era from 1835-1900, the rail-hardwood era from 1900 to around 1935, and the gasoline-pulpwood era from the 1930s to the present (Karamanski 1989:16). These three periods provide an interesting perspective on shifts of how logging was performed and the types of lumber that was harvested. For the context of this study, each era is associated with different styles of music, particularly lyrics. The songs came from different places and the nature of the work was vastly different (Fowke 1970; Nute 1955; Sandburg 1990). Moving logs by river is associated with the sea-chanty and other water related lyrics. Moving logs by rail was a very different process and is reflected in the lyrics. Coalwood fits nicely into the beginning of the rail-hardwood era,

which suggests that much of Coalwood era music could prominently feature rail related lyrics.

European-Americans started commercial logging as early as 1822 on the eastern part of the U.P. A sawmill was built by John Jacob Astor's American Fur Company near the military garrison Fort Brady, near Sault St. Marie (Karamanski 1989:27). Other early logging occurred on the south-western part of the U.P. around the Menominee River that feeds into Lake Michigan. Both areas depended on rivers to transport the logs from the field to the sawmills. Although rivers allowed certain areas to be exploited, they did not provide access to the central region of the U.P. where Coalwood is located. Until the early 1850s, logging enterprises struggled to profit. The industry was mostly relegated to the production of construction materials in support of the fur trade. It took about 60 years for industrial logging to become profitable in the Upper Peninsula.

It wasn't until the arrival of rail transportation in the 1880s that access to the central region of the U.P. resulted in the industrialized extraction of forest resources. Rails relieved the reliance on rivers as the primary means of transporting timber and opened new areas to exploit resources. Immigrants represented labor and were crucial to the success of these industrial endeavors and immigration was booming. European immigrants thronged to the growing U.S. economy searching for opportunity through employment. They came from all over and represent various ethnicities and nationalities. Finnish, Slovenian, and other European peoples brought with them cultural traditions and music as they navigated their way in the new world. Musical instruments immigrated with them. Harmonicas, concertinas, and accordions among them. Some of these immigrants came looking for work in the woods of the Upper Peninsula and the Cleveland Cliffs Mining Company needed labor to exploit their iron and forest resources.

2.2. Cleveland Cliffs Iron Mining Company

The history of Cleveland Cliffs Iron Company (CCI) began with early land acquisitions when a group of investors from Cleveland organized an expedition to the region in 1846 (Reynolds and Dawson 2011:15). The area was still largely embroiled in the fur trade. Astor's American Fur Company at Mackinac was the center of the fur trade market in the early 1800s (Dunbar and May 1995). The fur exchange would move westward to St. Louis, leaving the U.P. in a time of change (Dunbar and May 1995:142). The songs of the *voyageurs* might still be heard along the rivers but they would soon turn to memories (Nute 1955). New people infused with capital would soon arrive in the area with much different world views towards the exploitation of the natural and mineral resources, and with them, new music. This new music could be traditions handed down, ethnic, or even institutionalized music such and hymms and psalms or nationalistic anthems. People tend to bring their music with them.

In 1847, the Cleveland Iron Mining Company, based out of Cleveland, Ohio, arrived in the Upper Peninsula (Reynolds and Dawson 2011). CCI originally wanted to exploit copper resources but ended up finding a solid supply of iron in the Marquette iron range. At first, the ore was accessible on the surface. Before long, the surface ore was exhausted and the hard rock overburden forced them to follow the ore underground. The need for timber expanded from construction materials to supports in underground mining. The forests of the U.P. were thick and vast and appeared to supply endless timber products. CCI began purchasing land.

CCI was one of the largest landholders in the Upper Peninsula, owning millions of acres of land amounting to about 14% of total land available in the U.P. (Reynolds and Dawson 2011:167; Karamanski 1989:144). The land was obtained many ways: sometimes through direct purchase from the government

or land holding companies such as the St. Mary's Land Company; more often through deals and acquisitions with other companies such as Iron Cliffs and the Marquette Iron Company, as well as the purchase of railroads and cargo ships to reduce the high costs of transportation (Wurst 2017).

Iron Cliffs was another company exploiting iron along the Marquette iron range. CCI bought them in 1890. The purchase netted CCI 50,000 acres of land in the U.P. (Reynolds and Dawson 2011: 82). The charcoal-fired Pioneer furnace in Negaunee was also acquired in the purchase but by 1893 it was beyond its use life. It could have been an excuse for CCI to move away from charcoal-fired iron but Mather recommended that the Pioneer furnace be replaced. Austin Farrell, the furnace manager, spent some time in Germany observing how they processed charcoal. Germans were using special blast furnaces equipped with retorts "that collected the waste gases from the coking process and extracted various marketable chemicals" (Reynolds and Dawson 2011: 119). The result was multiple marketable products such as acetic acid, methyl alcohol, acetone, formaldehyde, and lime acetate. With this in mind, CCI established a furnace in Gladstone, near Escanaba, that went into operation in 1896. The new Pioneer furnace in Marquette fired up soon after and Coalwood provided the cordwood to keep it going.

CCI acquired the Munising Company and the Munising Railway in 1900, which resulted in another 80,000 acres of land and fifty miles of railroad. Over one million acres of U.P. timber land was purchased by CCI in 1901 from the Detroit, Mackinac, and Marquette Railroad. These acquisitions and new constructions formed the basis for the development of lumber resources of nearly untouched timber in what became known as the Coalwood district near Munising with the purpose to supply cordwood for the Marquette furnace. In addition, CCI developed joint stock companies in the Munising area to create markets for their resources and by-products and to concentrate, and thus cheapen, labor in the area (Wurst 2017). These companies included

the Munising Woodenware factory, the Munising Tannery, Piqua Handle and Manufacturing Company, and the Munising paper mill.

2.3. Coalwood: 1901-1912

Munising was still a budding town in 1901 while corporate interests were trying to attract more industry, families, labor, and business to the area. The areas inland and to the southwest of Munising were flush with timberland recently acquired by CCI. The Marquette furnace to the west of Munising was just getting started and needed a solid supply of cordwood for charcoal and wood chemical production. The area where Coalwood was situated provided dry, sandy soil and flat land that created favorable conditions for year-round chopping and transportation of timber. Coalwood represents one of CCI's first forays into lumber camps. CCI did very little to establish Coalwood (CCI Annual Report 1901). They picked a suitable location, dropped a well, built two boarding houses, a store, and a home for the overseer. Soon, as active logging started in February 1901, twenty-five more residences were constructed, most likely by workers or boarding house developers. CCI only charged for access to the well.

Coalwood wasn't your standard lumber camp. Many lumber camps of the water-pine era featured one to three log buildings and consisted of at least a bunkhouse and a cookhouse (Rohe 1986). After the log structures of the earlier nineteenth century, buildings began to have lumber roofs that soon gave way to balloon frame lumber dwellings with tarpaper exteriors as building technologies developed (Rohe 1986:27). This coincides nicely with rail-hardwood era logging. Figure 2.2 shows the balloon frame and tarpaper exteriors. Even so, the image of a lumber camp continued to conjure images of a bunkhouse and a cookhouse. This is where Coalwood diverges with a different organization. According to CCI records and architectural remains there were at least twenty-five structures at Coalwood, representing family

homes, boarding houses, a store, and the overseers house (CCI Annual Report 1901, NMU). There was even a sauna that suggests Finnish occupation (Drake and Drake 2007). Coalwood was very much a lumber camp but one could also call it a town; it was a town full of people.

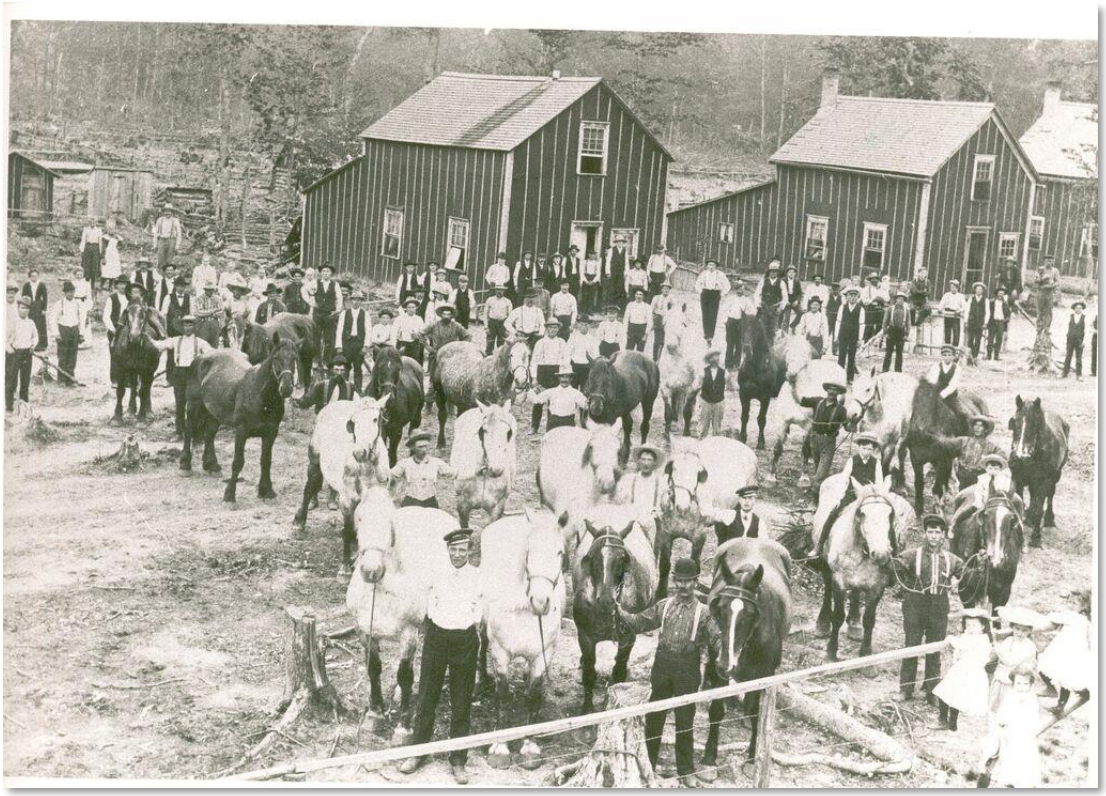


Figure 2.4. The only known photo of Coalwood, Source: Archives of Michigan

According to CCI's 1901 annual report, 250 people lived at Coalwood. In 1902 there was an average of 76 choppers (CCI Annual Report 1902). Perhaps it was more of a town than a lumber camp though its primary industry was logging. The large size of the community is evident from the only known photo of the camp (Figure 2.3). This photo, taken circa 1901, appears to show the entire community. Based on the elevated perspective and position, the photo was likely taken from a loader or car on the railroad tracks that bisected the town. This would suggest that the structures shown are in the southeast

quadrant of the site and correspond to Features 40-45 mapped in 1987 as shown in Figure 2.5. You can also see the many women and children, not to mention working horses, in the photo (Wurst 2016).

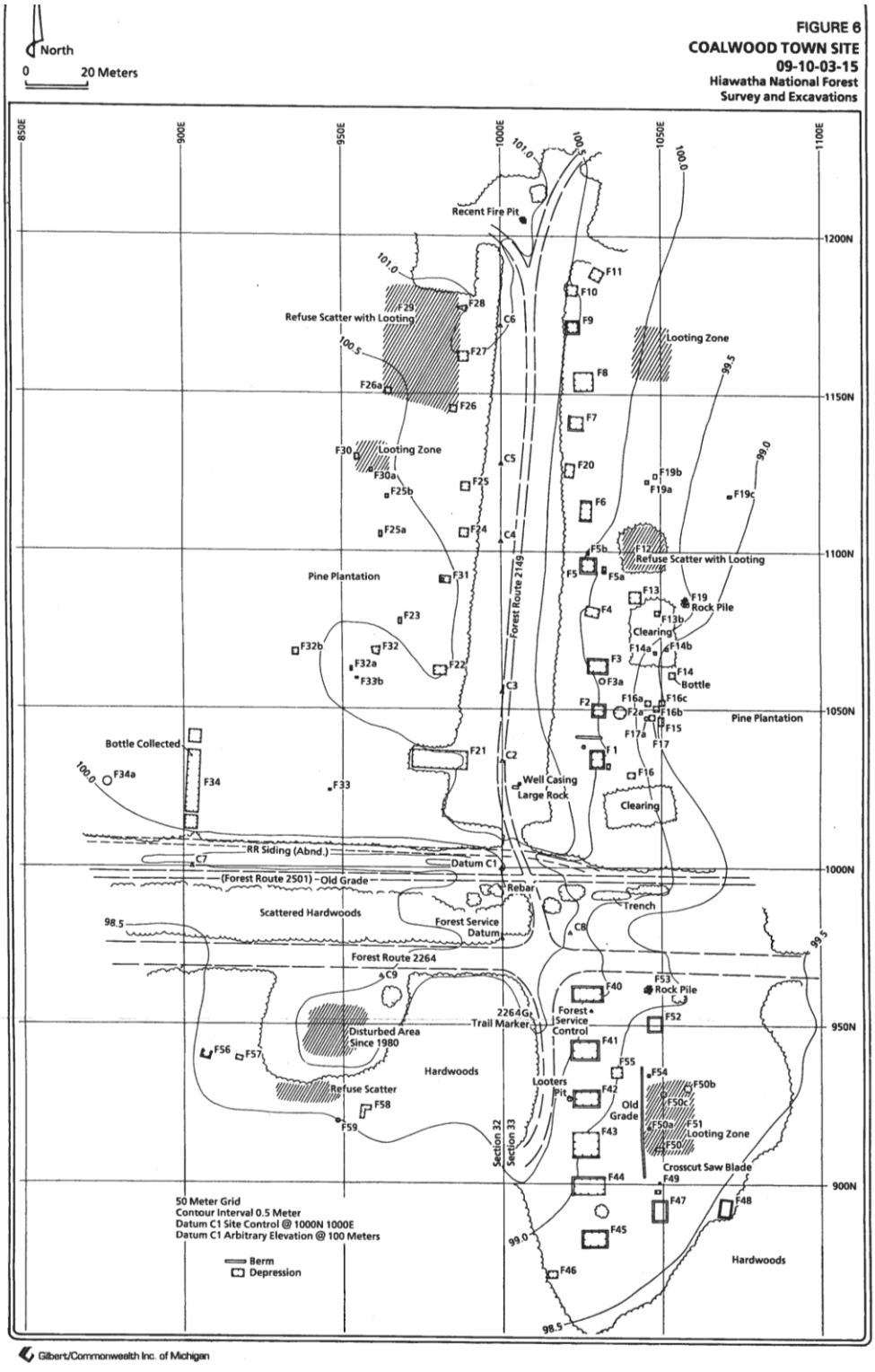


Figure 2.5. Map of Coalwood, Source: 1988 Gilbert/Commonwealth

Workers at Coalwood were paid by the cord. This meant that wages were related to the amount of lumber chopped. Coalwood was a large town but that also meant that it couldn't be moved easily like the three building camps from the water-pine era. Table 2.1 shows the average number of workers at Coalwood and their average cord production. It makes sense that production would decrease as choppers needed to travel further from town as time progressed.

Table 2.1.

Number of Workers at Coalwood, Source: Wurst 2016

Year	Average # Men	Average # cords per worker
1901	63	54
1902	76	60
1903	52	42
1904	87	43
1905	71	34
1906	95	No Data
1907	93	No Data
1908	217	33
1909	34	47
1910	77	45
1911	24	49
1912	29	39

There was a general store at Coalwood. Swanberg (1986) noted that the store (Feature 21) was owned by Isadore Cyr of Escanaba, but was managed by his brother-in-law William Roberge (185). Roberge managed the store at Coalwood from 1906 until 1910. In 1910, Roberge outright bought the store from Cry and moved it to Forest Lake, another CCI camp to the west. Roberge is listed in the 1910 census for Au Train Township. This helps pin down some of the other occupants of Coalwood following the census-taker's route. Roberge (28) is listed as a general retail merchant, living with his wife Clerida (27). Both were born in Michigan but had Canadian parents. Roberge is

followed in the census by seventeen Finnish households, all headed by 'wood cutters' except for one blacksmith working in lumber, and one household headed by a widow with no occupation listed. This sequence of Finnish wood cutters ends with the households of three railroad section foremen born, respectively, in Sweden, Norway, and Kansas. It is just as likely that these families also lived at Coalwood (Wurst 2016).

Figure 2.2 and the census records show that there were families there. The composition of these households, summarized in Table 2.2, shows a great deal of variability. They range in size from two to eleven, with the number of children ranging from zero to seven, and number of boarders from zero to six. Boarders are included in only four of these seventeen households (Wurst 2016). Children would be running around and there would be women nearby. Not only is the responsibility of a family seen as reliability, the unpaid labor of women and children was instrumental in organizing their everyday lives and augmenting meager wages (Howe 2015). Two oral histories shed eyes on the camps through childhood memories.

Table 2.2.

Composition of Households for Coalwood's Finnish woodcutters, Source: 1910 Census

House #	Household Head	Other Family	Size	# Children	# Boarders
44	Iojala	Wife	2	0	0
45	Vouraneu	Wife	8	0	6
46	Hakala	Wife, Brother	10	3	4
47	Vitanen	Wife	11	4	5
48	Maki	Wife	6	4	0
49	Mattson (widow)		8	7	0
50	Posio	Wife	8	6	0
51	Artale	Wife	2	0	0
52	Kallio	Wife	9	7	0
53	Landgren	Wife	3	1	0
54	Seteri	Wife	3	1	0
55	Valimake	Wife	3	1	0
56	Cuska	Wife	5	3	0
57	Leis	Wife	3	0	1
58	Serene	Wife	2	0	0
59	Harumaki	Brother	2	0	0
60	Leis	Wife	3	1	0

Frank Debelak and Robert Lustic grew up in the Coalwood district and spent time moving among the camps. Their oral histories were collected by the Hiawatha National Forest in the 1990s and provide a glimpse into what life was like in these lumber camps of the early 1900s, including labor, music and other leisure activities.

Frank Debelak was born in St. Mary's, Pennsylvania in 1905. Soon after that his family moved to the Coalwood district and spent some time at Roscoe. Roscoe was established by CCI so they could more evenly distribute the workers in response to the organized strikes that were prevalent at the time (Wurst 2017). Debelak told stories of games of "goat" and memorable comic

storytellers, tales of picking up bottles to return for some extra cash, a murder, and the destruction of a concertina bought for $18 and thrown in the potbellied stove so the previous owner would stop practicing (Debelak 1991). Among the stories of his childhood growing up in the area, Debelak also listed dozens of accordion players at the end of his oral account (Debelak 1991). That he would remember the accordion players suggests that music was common and important to life in the camps.

Robert Lustic was raised in the Coalwood district as well. He related the sorts of leisure activities people participated in. The interviewer, Godfrey, asked him, "Okay, what about music and dancing? Was there in let's say in Finnish camps and Slovenian camps?" (Lustick 1994:55). He replied:

> *Lustick: Yes, all the time.*
>
> *Godfrey: All the time.*
>
> *Lustick: All the time there were, there was so many accordion players especially in the Slovenians. Like the little button box. Of course, I play that myself, and I got a banjo that's sixty-four years old. I play the banjo. In lumber camp, there so many of these guys that knew how to play the old button box. They'd have these little get togethers and dance. Camps that--, all the camps didn't have these families living in these little shacks. A lot of the company camps were just strictly lumber camps, and even if you were married, you went to the lumber camp and stayed there for a week. Then you came out on the weekend--, you came home to your family. But other places, where they had families and the girls were probably sixteen, seventeen, then they'd get together and have these little dances up there. So that was some of the pass time also" (55).*

According to Lustic, it seemed that musical events such as dances were focused primarily as entertainment for the younger generation. Even after the active time of Coalwood, 1901-1912, musicians continued to influence the area.

Les Ross, Sr. grew up down the road from Coalwood in Alger County in the 1930s. He learned his lumberjack style harmonica through the depression and played music throughout his life. Oren Tikkanen, Randy Seppala, and Les Ross, Sr. got together to record an album they called *Lumberjakki*, a macaronic play on words in the English and Finnish languages. The focus of the album is Les Ross, Sr. and his lumberjack style harmonica playing traditional Finnish compositions and some originals.

An original song stands out for its commentary on worker mobility during this era: "Työmiehen Matkat Michiganissa" (The Workingman's Travels in Michigan). The complete lyrics can be found in Appendix B. It tells the story of a young man and the places in Michigan he worked. His journey began in Eben Junction, not far from Coalwood, where he learned to play harmonica from the lumberjacks there. He traveled to Detroit and landed at the Ford factory. He also picked up a partner. Then he made his way to the Copper Country to work in the copper mines at Calumet & Hecla as a trammer. From there he moved on to CCI as a lumberman. It's the type of story that many a worker during this era was familiar with.

In 1938, the Library of Congress sent folklorist and song collector Alan Lomax to the region to conduct a folk music survey of the Great Lakes (Library of Congress). The Library of Congress recognized the need to document the diverse cultures that settled in the Upper Midwest. Lomax traveled through Alger County and Munising collecting songs from ordinary people. He ended up collecting over 400 recordings throughout Michigan and Wisconsin with about twenty coming from the area surrounding the Coalwood district.

2.4. Conclusion

The Upper Peninsula is a suitable place to study the past because it has been the host to Native Americans, the fur trade, copper mining, iron mining, and logging industries for nearly 200 years. Immigrants from all over Europe

and even the world have found a path to the U.P. Music from the Native Americans, *voyageurs* and other immigrants could be heard among the dense forests and vast lakes. Nestled in the middle of the U.P. just southwest of Munising is Coalwood, a lumber camp established by CCI at the beginning of the twentieth century. It was a large camp of over twenty-five buildings that provided a base for many loggers and their families for just over a decade. It is here where our story takes place. It is here where hundreds of people lived their lives for a time. It is here where there was music.

The next two chapters will introduce two ways to think about music and sound. Chapter three focuses on the immateriality of sound or sound as an artifact and using artifacts to access the sounds of the past. This continues my goal of increasing the awareness of the soundscapes of the past. Chapter four will focus on musical remains and how they can help identify instruments and open new doors to approaching the music of the past through musical reed plates.

3. The Sounds of a Place

"No two people on earth are alike, and it's got to be that way in music or it isn't music." – Billie Holiday

The wide variety and number of musical instruments found at Coalwood indicates that music was an important part of the lives of the choppers and their families. Oral histories of Frank Debelak and Robert Lustic hint at the importance of music in the Coalwood district (Debelak 1991, Lustic 1994). And yet, archaeologists have seldom considered the importance of music. There are two goals in this chapter. My first goal is to argue for the power of sound in people's lives and how the concept of *soundscape* can add an important dimension to the typical archaeological exploration of material culture and landscape. The second goal is to address the complexity of music by examining informal and formal music ensembles and how informal songs can provide insight into historical narratives that might have otherwise been lost.

There is no real material evidence (such as recordings) for the actual sounds produced and experienced by the people that lived at Coalwood, but we can use the music of an era, ethnicity, or locality, and we can use the material traces uncovered during excavations to reveal the types of sounds. Benjamin argued that we should consider sound as an artifact, something he termed a *sonifact* (Benjamin 2013). Indeed, sound can be an artifact and I suggest that archaeologists should consider sound in the historical landscape through the archaeological record. Every field archaeologist is familiar with the sounds trowels make. Changes in tone as the trowel slides through soils reveals when a soil change has been reached. The tip of the trowel might tap on a suspicious object to see what it might be. The resulting *ting* or *dunk* mean very different

things. These personal experiences are embodied by the excavator and are an integral part of the excavation. Although I do not suggest that archaeologists must include detailed descriptions of every sound of the excavation process, it is a very real, tangible experience that can be used to recognize the importance of sounds.

Artifacts recovered at Coalwood represent a broad range of categories that straddle the domestic and working worlds. Ceramics, tinware, and bottle glass speak to the types of tableware they used and the types of beverages they consumed. Domestic related artifacts are represented by sewing machine parts and washboards. Marbles and porcelain dolls indicate the presence of children. Work related artifacts are represented by tools such as axes and files. Entertainment occurred mostly through social interaction, sports and gaming, and live performances. Labor and family life intermixed to some degree. Material culture like this was recovered at Coalwood during archaeological excavations. We can use them to access the sounds of Coalwood.

3.1. The Sounds of Coalwood

Culturally produced sounds began before the rising of the sun in lumber camps. Natural sounds always exist. Wild birds sang their songs in whatever forest canopy was left surrounding the town or on the ground stealing from the chickens pecking for gullet stones. The local rooster might signal the start of the day as rodents scurried through underbrush scavenging for food. Wind rustled through the needles of the pines and the leaves of the hardwoods.

Human sounds started at the crack of dawn as bodies roused from their slumber. Food was important to loggers. Its preparation represents one of the first culturally produced sounds of the day. Logging was an energy intensive endeavor. Studies have shown that the labor of logging requires more than 8 calories per minute, or 5,000 to 6,000 calories a day or more (Conlin 1979:167-68). The sounds of cooking could be heard as cooks prepared the

morning meal. Potatoes and beef, sometimes pork, would fry in pans. Water was put to boil. The hinges of wood stove doors squeaked as firewood was tossed in. In regular logging camps, the camp cook was responsible for meals but at Coalwood it was different. Family dwellings would most likely take care of their own food needs while the boarding houses took care of theirs. This negotiation could result in more diverse diets that diverts from the common image of a lumber camp primarily infused with sides of beef and starchy foods (Conlin 1979). These families may have been able to keep foods of their home countries alive in their homes. The cooks might have called family or boarders to the meal with a shout, triangle, or dinner horn.

Teamsters might have played harmonicas to calm the horses during morning chores. Coalwood was active at the beginning of the rail era but horsepower was still used drag logs from the forests to the rail lines. The sound of the choppers conversations faded as they began their journey into the forest, a journey that became longer as harvesting progressed. Then the sounds of domestic chores would command the soundscape in town. Children would prepare for their day, dressing and eating breakfast in preparation for school. Chickens would be clucking and scratching for feed. Laundry needed to be done. The sounds of water splashing as clothes were scraped on zinc washboards. Washboard fragments were found at Feature 43, a boarding house on the south side of town. Washboards could also have been used as a rhythmic musical instrument for more adventurous days of entertainment. Clothes needed to be mended. Water needed to be retrieved from the one well in town.

The choppers would be hard at work in the forest. The sounds of trees falling, axes cutting, men calling, and horses whinnying would fill the forest. Perhaps the workers would be singing songs. They would sing songs they knew. The songs might be ethnic in nature, representing where they come from. The songs might express pride in their work. As Virtanen suggested,

sometimes lost history can be expressed through songs (2010). “Minä Syvyydessä Alla Maan Käyn Työssä Toimien” (In the Deep Underground I go to Work), a song recorded by Alan Lomax during his time in the Upper Peninsula in 1938 has recently been partially translated from the original Finnish by Susanna Linna and Tom Dubois (Library of Congress American Folklife Center n.d.). The complete lyrics can be found in Appendix B. Although it is a song for miners, lumberjacks are mentioned:

> *The miner has pride*
> *That men working*
> *above the ground can’t understand*
> *How? Those pretty boys, porridge-eaters, lumberjacks*
> *As far as we’re concerned, they’re just a bunch of milksops*

According to these lyrics, lumberjacks are referred to as milksops, also known as milk drinkers, a term that was used euphemistically to suggest that a man may not be a complete man because he still drinks milk. In other words, a child. That brazenness was a sign of the times. Perhaps lumberjacks had songs that made fun of the miners.

Once the day’s work was done, the men would return home. There might be some leisure time to rest from their day’s toil. The many rasps and files we found in domestic contexts at Coalwood suggest that the choppers spent time sharpening their tools at or near the homes. Dinnertime would come, bringing the sounds of meal preparation once again. Conlin (1974) described mealtime as a silent time that focused on eating only. No conversation. No complaining. We do not know if meals at Coalwood were like those stories told of other lumber camps. If the meal was silent, the only sounds would be those of eating. Metal utensils scraping on ceramic plates, sometimes tin, and the sounds of mouths chewing.

After dinner, there might be enough time and energy in the evening for leisure activities. Musicians might kick up a tune on the concertina,

harmonica, accordion, or other popular instruments such as fiddles, guitars, or mandolins. Or they might practice for themselves for an upcoming event until weariness crept in from the labor of the day. Some choppers might read or tell stories, others might play card games, and others might whittle away at chunks of wood.

Figure 3.1. Loggers in a bunk with various instruments, Source: Hartwick Pines Logging Museum, Photo by author.

A photograph hanging at the Hartwick Pines Logging Museum in Figure 3.1 shows seven men with their entertainment. An accordion, tambourine, a type of xylophone, as well as a phonograph appeared to provide the sound. Other sorts of entertainment were limited to card games, sporting games, conversation, and music and dancing, not to mention the alcohol, tobacco, and

drug use that commonly goes hand in hand with leisure activities (Franzen 1995).

The sounds and music of a place add crucial elements to the consideration of what life was like in the past. Using material culture as a sounding board, so to speak, can reveal the sounds of the past. The people of Coalwood lived a life that extended beyond the labor of capitalist industry. The women and children of the town created sounds that brought life to the day. Material culture can also reveal some of the instruments that were in the community and is the focus of chapter four.

The next section will explore some possibilities as to how music may have been expressed at Coalwood. Music can be a social experience where the type of music one plays or performs very often depends on institutional relationships, ethnic identity, the audience, and the social situation, whether a typical day or a special event such as a wedding, funeral, or other rite of passage. Music can be expressed in any number of arrangements and musical ensembles. What follows is a short exploration of formal and informal music ensembles meant to introduce that music is a complex social behavior that can provide very different social functions.

3.2. Formal and Informal Music

Music is part of human social interaction and should be considered as part of the daily life of the people that we study. For the purposes of this study, the performance of music can be categorized into two categories: formal and informal music. Formal music can be defined as being associated with an institution of some sort, which could include a company, town, or other sort of formal (sponsored) gathering of musicians. Informal music is music that happens when musicians get together. Some could call them jam sessions but it could also be represented by informal groups with rotating members. Another difference is in the repertoire. Formal music tends to be classified as

classical music as well as national songs and religious works. Informal music trends towards a more personal engagement with the music that suggests ethnic songs and new compositions that address the current social situation and songs about specific locations. This is, of course, a simplification of the types of songs that a musical group might play. I want to stress that these two categories do not suggest a mutually exclusive dichotomy. Any group can play any song in any number of arrangements. Musicians can also migrate between informal and formal musical groups. There is a certain amount of mobility and freedom that comes with informal music that mirrors the freedom of mobility that many choppers practiced.

Paul Reckner's (2009) Ph.D. dissertation about the Ludlow Mining Colony in Colorado touched on how musical ensembles sometimes played dual roles in solidifying workers or pro-company and nationalistic leanings during labor disputes. Formal music tended to be pro-company or nationalistic in nature and sponsored by the company or local government. Informal music was generated by the workers and their families living in the camps as part of their resistance to the company and brought attention to the relationship between capital and labor.

The companies exerted a measure of control over formal music when it came to the songs played and where the performance occurred. Pro-company songs would extoll the virtues of the company staff. Musical groups acted as a conduit that communicated the ideology of the dominant group.

With informal music, the artists choose the songs they want to perform. They may be just practicing or performing for a small audience. The audience may influence musical selections and help them feel involved in the creative process. Informal music provides an opportunity for the audience and musicians to discover new types of music, including alternative lyrics of popular songs that might tell a story about the local region (Virtanen 2010),

original autobiographical tunes (Ross, Sr., n.d.), or ways to comment on or resist their everyday work experience. Some groups, like the Finnish, created a large collection of songs that address radical labor issues.

Highlighting the distinction between formal and informal music is not making an argument about which type of music making is best. Both informal and formal music have their place. Highlighting this distinction, however, helps us recognize that music is a complex behavior that can have very different functions.

3.3. The Power of Song

Although the historical record is slim regarding music in the Coalwood district during its activity, we can use what we know about musical behaviors from the area to consider what music would have been available. This will expand the possibility of Coalwood sounds by examining a few song lyrics of labor relations and autobiographical expressions. These types of songs can reveal elements of the past normally lost to the historical record.

The song, "Kaivantomiehen Laulu," published in Hancock in *Uusi Työväen Laulukirja* (1909), addresses the relationship between labor and capital (Tikkanen 2014). I learned this song from Oren Tikkanen, a storyteller and musician. This miner's song sings of the darkness and toil underground; it sings of the sweetheart in a clean bed; it sings of freedom. The final verse is priceless. It captures a ray of hope in the "heart of hell" and an urge to action against the structural violence of labor exploitation, even if the response called for physical violence.

I long for the freedom of humanity
and of the oppressed proletariat.
I long for the sharper struggle,
to see the blood roses bloom.

Physical violence already erupted between capital and labor in the final decades of the 1800s and would boil over across the country in 1913. National Guard militias called in to quell labor demonstrators in the Ludlow tent colony resulted in the deaths of dozens of men, women, and children (Reckner 2009). The militia was also called to the Copper Country of the Upper Peninsula and established camp in Calumet to intimidate local unrest (Lankton 2010, Hoagland 2010). Labor unrest was addressed in the Coalwood district by managing where groups would be concentrated. In 1904, the Roscoe lumber camp was established to spread out the number of choppers at Coalwood after all the workers in the camps along the Munising Railroad went on strike. Two years later, an influx of Slovenian immigrants further blunted the potential for labor organizing by spreading people out (CCI Annual Report). Songs like "Kaivantomiehen Laulu" and others like it helped people address the structural violence of capitalist ideology and recorded a snapshot of the time.

Music lyrics could also be used to cement personal identity. Musicians brought instruments with them in addition to the musical knowledge that reminds them of people and things left behind. But time in a new land is also an opportunity to learn new music. It is normal for groups to huddle together for comfort and security but there are also plenty of opportunities for cross-cultural interactions (Virtanen 2010, Leary 2010). Music has been a marker of ethnicity and can even reflect geographic relationships: "in immigrant communities, musical instruments help maintain cultural identity, as the Italian mandolin did in the United States in the late nineteenth century, before it was appropriated into the broader culture" (Moore et al. 2015:14). In my experience as an active musician playing music from all over the world with lyrics in multiple languages, I have discovered that many people experience a certain amount of nostalgia when they listen to music that represents their heritage. Dave Bezotte, a Copper Country musician, has family that came from a town northeast of Montreal called Berthier. His family carried a song with

them to the U.P. from there called *Sur la Route de Berthier* (On the Road to Berthier). The lyrics speak of a man breaking rocks along the road to Berthier when a woman in a carriage comes by and tells the man that he has chosen a poor occupation in life. In classic French form, the man responds that this is what he must do to keep his family fed and safe, and that it is his labor that makes the road as nice as it is. His job may not be exciting, but it is his job and it helps him accomplish his goals in life. A bit of *joie de vivre* (joy of life) comes across in his response. People from all over bring songs with them and it gives them something of their previous lives to hold onto.

Lyrics can also be used to create and maintain a memory of things forgotten through more traditional documentary records. Hilary Virtanen explores one of these songs in an article for the *Journal of Finnish Studies* in 2010. Performed by Gusti Similä, an immigrant from Finland who settled in the upper Midwest of the U.S., "Over Ten Years We Have Lived in Corbin" (Finnish title: "Yli kymmenen vuotta Korpiinissa oli jo asuttu") proves to be a sustainable memory of cultural and social events not to mention a parody of "It's a Long Way to Tipperary." Similä sings about a local merchant in the town of Corbin that was inflating prices.

> *"While we're slaving over lumber work,*
> *That cock-eyed Mäkinen is fixing the prices.*
> *A dollar-and-a-half shirt he wants to sell for two and a quarter.*
> *And still he assures us it's no cheapskate goods." (Similä 1938).*

Through historical sources, Virtanen discovered that the place names and even the people were real. This suggests that song lyrics can be considered historical documents that provide clues to life in the past.

In this chapter, I have tried to demonstrate that even though sounds may be ephemeral and fleeting, we can still access them through the material record using common artifacts. Benjamin (2013) referred to them as sonifacts.

Ceramics, tools, and household goods can be used as a conduit to build a recreation of sounds. Formal and informal ensembles are different ways of engaging with music. Although the documentary record surrounding Coalwood is spares, engagement with music and lyrics from other areas can shed light on the social situation of the time. Those lyrics can provide insight into immigration, ethnicity, and lost history.

In the next chapter, I will provide a survey of the intersections of music and archaeology. There are numerous ways to study music that consider material culture but the emphasis has been on the instruments themselves. And then I will explore ways of using musical remains, particularly musical reed plates, to understand the sorts of instruments that were available at Coalwood. These musical remains provide material evidence of the diversity of instruments.

4. A Materiality of Music

"Music does a lot of things for a lot of people. It's transporting, for sure. It can take you right back, years back, to the very moment certain things happened in your life. It's uplifting, it's encouraging, it's strengthening." – Aretha Franklin

In the last chapter, I explored a way to access the intangible sounds of a place by using material culture recovered at Coalwood. Formal and informal musical ensembles were introduced, as well as making historical connections through contemporaneous compositions. In this chapter, I will look at the intersections of archaeology and music, and then I'll demystify the musical reed plate.

Much of the literature dealing with music tends to focus on its ethereal nature, musical compositions, and instruments (Moore et al. 2015; Virtanen 2010). The disciplines that focus on music are musicology, ethnomusicology, music theory, music history, and organology as well as a physics of music. The primary material culture for these disciplines is musical instruments, sheet music, and the documentary record. Music is and was a matter of performance, entertainment, and spirituality. It takes place in the moment and then it is gone. Their argument is that music is intangible and perhaps it is. But sometimes material traces do get left behind. For this study I want to focus on material culture. I want to explore what sorts of materiality might music leave behind. More specifically, what might archaeologists find during an excavation and what does this tell us about their music?

Although many archaeologists have found musical reed plates, possibly even a complete or nearly complete harmonica, the chances of finding other musical instruments is much less common. Musical instruments are durable

goods that have a long use life and are often considered heirloom objects. They are objects that people pass down through their descendants, sometimes for many generations. I inherited a hundred-year-old fiddle from my father that he got from his father. Frank Debelak had his hundred-year-old accordion (Debelak 1991). Musical instruments can be considered valuable, some more than others. The harmonica bought for a few pennies pales in value to the accordion or fiddle. But musical instruments are made of many parts and some of those parts such as strings and reeds need to be replaced regularly. These items were made of metal and have a better chance of surviving soil conditions. Fiddle strings should be replaced about once a month or more dependent upon use. Recommendations from reed manufactures state that they should be replaced yearly. Did people maintain their instruments to these standards? Perhaps not. But, a concertina with a bum reed or two just won't do. And next week the band is going to need that concertina for the big dance. Once a musical reed has gone bad, it's better to replace it than repair it. The faulty reed would get tossed in the midden with the rest of the broken things. A new one, probably a set, would have to be ordered as a replacement. This makes musical reeds, although found in low densities, ripe for use as an archaeological artifact with interpretive potential.

4.1. Intersections of archaeology and music

Musical instruments have always occurred in low-density in many kinds of archaeological sites. Bone flutes, ocarinas, and percussion instruments have been uncovered that date from 25,000 to 45,000 years ago (BBC 2012). The situation is different for historical archaeology. The quantity and types of products available because of industrial mass production exploded in the nineteenth century. Perhaps the only cheap and disposable musical instrument prior to this time would have been the jaw harp. The creation of the harmonica met a consumer market for a cheap, accessible, and quick to

learn musical instrument. Not to mention a replaceable part or two inside. Archaeologists commonly find the odd reed plate or two, but they are rarely mentioned specifically in the literature, and they are even less often used as an interpretive artifact.

Donald (2003:125-126) makes a case for the research potential of archaeology and musical intersections when she states that, "in addition to what we find in historical accounts, ethnographies, and mythology, important information on the role of music can be gained from archaeological assemblages by analyzing the variability in types and numbers of instruments, the standardization of manufacture, and the development of new kinds of instruments." Other research comes from the disciplines of organology and art history in the form of tracing the development of instruments using material culture (Moore et al. 2015; Bonnani 1964). The specific material culture they used were the instruments themselves.

Moore et al. (2015) provide a quick history of musical instruments and what they can reveal. They addressed the spiritual connections of music and performance. They also speak to the physical aspects of music, namely, the instruments themselves. The volume features a collection of musical instruments from cultures around the world. While some scholars have addressed musical instruments, specific parts of musical instruments such as tuning knobs, strings, decorative plates, and reed plates have been neglected.

There are only a few references to harmonicas that I have found in the archaeological literature. What follows are examples of the ways that harmonicas have been approached as an artifact type.

Gunnerson (1969) did a study on the material culture of Apaches in New Mexico. Gunnerson uses Spanish documents to determine who might have been living at a site in northeastern New Mexico. Gunnerson suggests that the recovered assemblage was associated with a group known as the

Jicarillas that dated from 1706 to the mid-1800s when the U.S. occupied New Mexico. Foundations were excavated and pottery, chipped stone artifacts, ground stone artifacts, bone and shell artifacts, and objects of non-Indian manufacture were recovered. In objects of non-Indian manufacture we find mention of what is most likely a harmonica. Gunnerson states, "Included among the trade items collected on the surface are a slotted strip of zinc (apparently part of the plate of a harmonica to which the reeds had been riveted), a strip of brass 52mm. long and 9.6mm. wide with three holes in each end (possibly a belt loop), scraps of sheet brass and iron, and part of a barrel hoop 3.8 mm. wide" (Gunnerson 1969:34). Although the article didn't focus on much interpretation the identification of the harmonica reed plate is not made confidently. The description sounds like a harmonica reed plate, but the object figures in no further interpretation. The author only mentioned that it was recovered.

Allen (1973) performed an archaeological examination undertaken to understand "the immediate physical problems faced by the settlers and their solutions to them" at Port Essington in Australia (Allen 1973:45). The article uses historical documentation and the material record to examine how the people lived at a primarily military fort. Ceramics and house foundations provide the primary evidence but an interesting mention of harmonica reeds occurs in the conclusion: "Harmonica reeds recovered during excavations bear testimony to the simple entertainments to be had living in the Australian bush, and the growth of Australian bush ballads, adapting the traditional songs of Britain, can be readily understood in conditions such as those at Port Essington" (Allen 1973:58). Neither entertainment or leisure activities were addressed anywhere else in the article. The harmonica reeds are not analyzed at all, even though they are used to suggest an influence on the evolution of local songs and their origin in Britain. It is a broad statement with little evidence to back it up.

Viljonen (2014) used archaeology to examine the Clanwilliam farm in South Africa. Harmonicas are mentioned only as an artifact that was found to represent entertainment (Viljonen 2014:63). No other mention is made and the focus of the article is on ceramics. The author fails to consider harmonicas as a tool to explore the means of entertainment at the site.

4.2. Material Culture

The realm of material culture studies encompasses many disciplines that use material culture as evidence: Art History, Architecture, Folklore, Organology, and Archaeology to name just a few (Deetz 1977; Morrall 2009; Pennell 2009; Prown 1982; Tilley 2006).

There have been material culture studies that have addressed the potential of instruments to reveal things about the past as well as instruments of the past. The authors of *Musical Instruments: Highlights of the Metropolitan Museum of Art* share just a few of the things that instruments can reveal.

> Studying old instruments yields important clues to faded musical traditions. Their construction, form, decoration, and wear patterns reveal information about the type of music they played, who played them, and how they were played. Perhaps most important, they provide tangible evidence of an ephemeral art and of distant, sometimes lost, musical cultures (Moore et al. 2015:15).

They go further and discuss the ability of instruments and music in general as a method of communication, which can have both negative and positive outcomes. Song lyrics can carry political messages that can be contentious or racist, but can also serve to inspire cooperation, positive messages, and as reminders of identity (Virtanen 2010). As with any power, it can be influential in negative and positive ways. Ethnic identity was an important thing for many groups.

An art historical approach provides a survey of music representation in art. Following in art historical tradition, *Music in Art: A Guide to Imagery*, focuses primarily on mythical and mostly western imagery to interpret the use of instruments depicted in past art (Ausoni 2009). Although this is relevant, there are other interpretations that can be explored. The interpretation of imagery and symbols is cultural and can vary widely depending on cultural group. It is necessary to think of the context of when and where it was created, which the volume does well. But what about how other groups interpreted it? This is largely ignored in favor of a westernized, christian, ideological perspective. Religious iconography is not universal. One thing that many cultures have in common is a recognition of music as a link in a spiritual sense (Moore et al. 2015).

The conversations about free-reed instruments have focused on the instruments and social history (Atlas 1999; Gawboy 2009; Worrall 2010). I would like to propose an extension of these concepts to include reed plates where material culture concepts can be applied. Although there are many types of reed instruments, only a few have managed to find their way into the material record. The study of instruments has focused on the actual instruments rather than the parts that make up the whole. It is time to take a closer look at musical reed plates.

4.3. The Reed

A reed is the part of a free-reed instrument that creates the distinct tone associated with those types of instruments. It serves the same function as the strings on a guitar or other stringed instrument. They produce sound. The principle of how the reed functions can be found in any grassy field. Pick up a blade of grass and stretch it between your fingers, put it to your lips, and blow. As you blow over the reed it will begin to vibrate and create a humming or a

whistling sound. It isn't easy and takes quite a bit of practice to make it consistent. But the mass manufactured reed plate made it easy.

A single reed may only produce one pitch, or note. They have been used in many forms. Many early horns and steam alarms used reeds as the sound producer. There are dozens of instruments that use the reed in some form. The Hornbostel-Sachs Taxonomy of musical instruments is a common tool to use when classifying instruments. It is also useful to see relationships among instruments. Figure 4.1 shows a taxonomy of musical instruments based on the Hornbostel-Sachs taxonomy zoomed into the beating reed and free reed categories (Doktorksky n.d). As you can see, the human voice is considered a reed instrument although it is a beating double reed. Very different from the free reed. The jaw harp, an unframed free reed instrument, is represented in nearly every culture in some form or another (Missen 2010). Then there are the framed reeds. The reeds found at Coalwood represent framed free reeds. This is where we will focus. A few modern instruments that use framed free reeds are harmonicas, concertinas, accordions, bandoneons, and reed organs. Although not unique from the many experiments people have made using strings, percussion, or pitched tubes, the use of the reed has been applied in a wide array of instruments.

<table>
<tr><td rowspan="2">Beating Reed Instruments

reeds strike against another object</td><td colspan="2">Single Reed</td><td>Organ Reed Pipes
hautbois, fagotto, chalumeau, krummhorn, clairon, trompette, trompette en chamade, trombone, tuba, etc.</td></tr>
<tr><td colspan="2">Double Reed</td><td>Human Voice (*1)</td></tr>
<tr><td rowspan="15">Free-Reed Instruments

reeds vibrate freely without striking anything</td><td rowspan="4">Unframed Reed</td><td rowspan="2">Wind Blown</td><td>Bull-Roarer</td></tr>
<tr><td>Aeolian Harp</td></tr>
<tr><td>Mouth Blown</td><td>Leaf Instrument</td></tr>
<tr><td>Mouth Blown & Plucked</td><td>Jew's Harp</td></tr>
<tr><td rowspan="11">Framed Reed</td><td rowspan="4">Mouth Blown</td><td>Shêng</td></tr>
<tr><td>shô</td></tr>
<tr><td>Khaen</td></tr>
<tr><td>Harmonica</td></tr>
<tr><td rowspan="5">Hand Blown</td><td>Concertina</td></tr>
<tr><td>Bandonéon</td></tr>
<tr><td>Bayan</td></tr>
<tr><td>Accordion</td></tr>
<tr><td>Indian Harmonium</td></tr>
<tr><td rowspan="3">Foot Blown</td><td>Harmonium</td></tr>
<tr><td>Reed Organ</td></tr>
<tr><td>Pedal Concertina</td></tr>
<tr><td rowspan="4">Mechanically Blown</td><td>Barrel Organ</td></tr>
<tr><td>Orchestrion</td></tr>
<tr><td>Pedal Reed Organ</td></tr>
<tr><td>Electric Chord Organ</td></tr>
</table>

Figure 4.1. Hornbostel-Sachs taxonomy of free and beating reed instruments, Source: Doktorsky n.d. http://www.ksanti.net/free-reed/description/taxonomy.html. Accessed 2 April, 2018.

Figure 4.2 provides an example of a reed plate with an attached reed. The pictured reed is for a reed organ. Although, the same type can be found in higher end concertinas. The pictured reed plate came from an Estey pump reed organ built in 1925-1930. The owner, Dave Bezotte, was kind enough to allow me to examine the instrument to document the reed type. It is the most basic type of framed free reed, which makes it easy to see its parts.

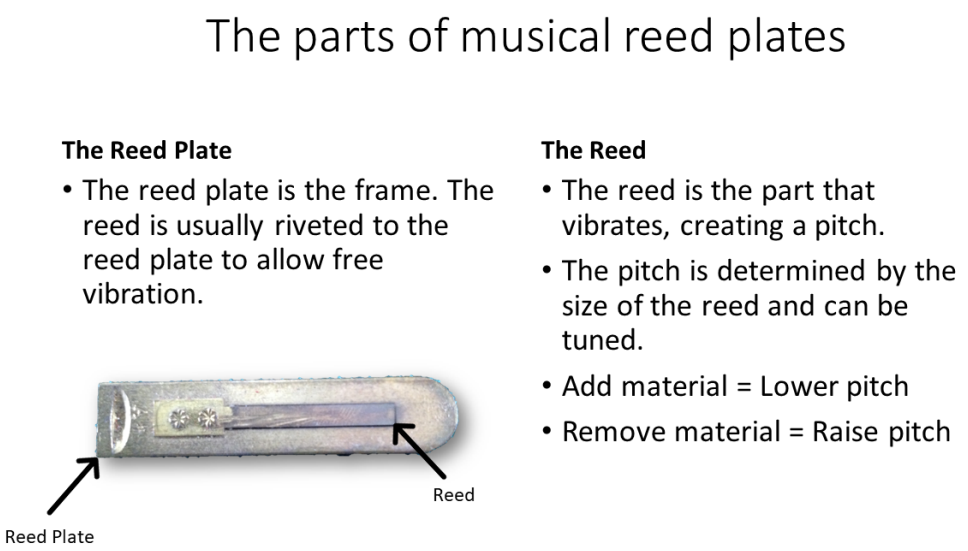


Figure 4.2. The Parts of Musical Reed Plates, Source: Author.

As you can see in Figure 4.2, the reed plate is the frame that holds a reed tongue. An important distinction needs to be made. There is a reed and then there is a reed plate. The reed plate is what the reed is mounted to. The reed is the tongue of metal that vibrates; it is the part that produces the tone.

A reed plate can house one, two, or more reeds. Different instruments have different sorts of reeds. Even one instrument type, the concertina, has three different types of reed plates. Although an innocuous forgotten object, reed plates can reveal a few things about the type of instrument it was part of.

Figure 4.3. A selection of musical reed plates excavated at Coalwood, Source: Author.

Figure 4.3 shows a few examples of musical reed plates recovered at Coalwood. As you can see, reed plates exhibit a great deal of diversity. The top one is for a 24-hole diatonic harmonica. The left one could be found in concertinas or accordions. Traces of the reed can still be seen inside. The second example from the left is for a harmonica; it's broken, so the size can't be determined. But, the reeds are riveted to opposite sides, which suggests it was part of a chromatic harmonica. The second example from the right could be found in concertinas and accordions. It shows two reeds still attached to the reed plate. It is still possible to record a pitch. The example on the right is quite broken, but is from a harmonica. It could be made of a different cuprous alloy, experienced harsher soil conditions, or is older.

When the reeds are missing, reed plates are commonly mistaken as suspender clips or belt buckles. Now these low-density objects can be recognized.

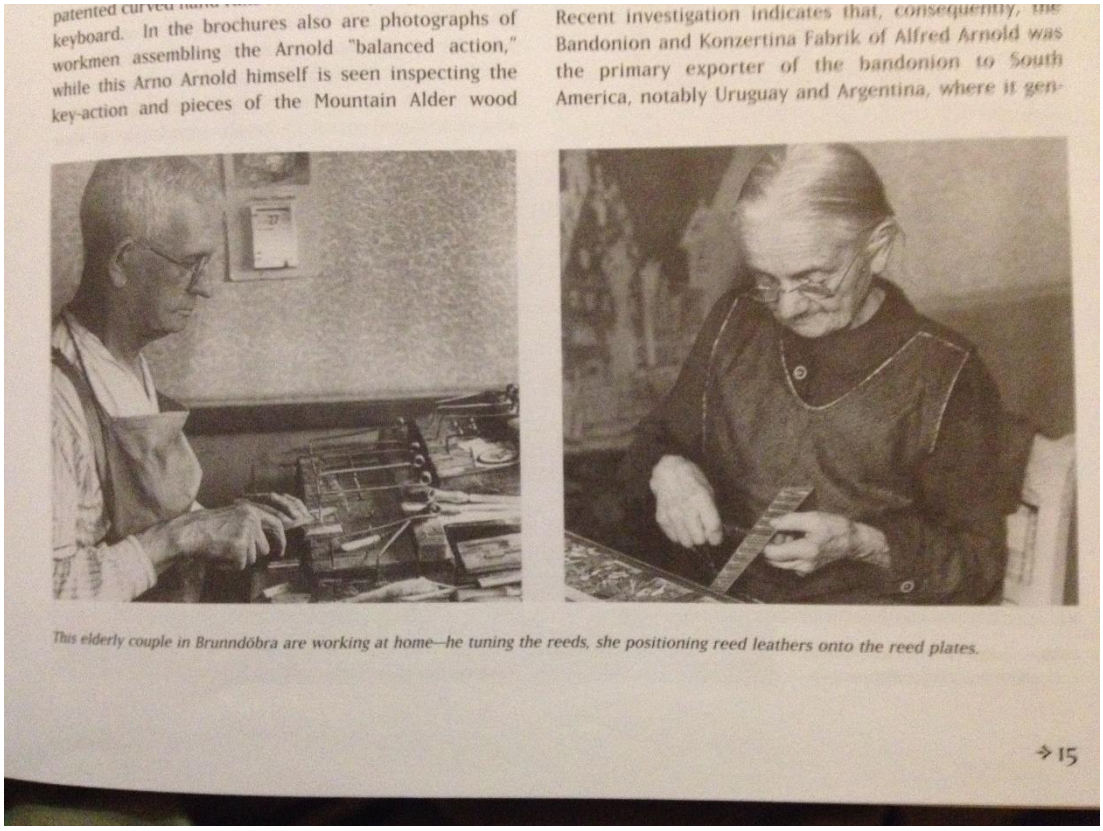
4.4. A Birth of Western Free Reed Instruments

Reed-type instruments have been around for over 2,000 years in some form or another. The 竽 (*sheng*) is an ancient Chinese mouth organ that uses reeds (BBC Trending 2014; Missen 2010). Traditionally the *sheng* was used as an accompaniment with the 唢呐 (*suona)*, a type of horn, and the 笛子 (*dizi)*, a type of flute, creating an interesting trio. Some stories relate that it was a *sheng* that arrived in Germany that promoted interest in the free-reed. Modern reeds started to come to life in the 1830s. LaVern Rippley relates an origin story:

> Already in 1827, Christian Messner started hand carving harmonicas at Trossingen where, in 1855, Christian Weiss initiated manufacturing accordions and, two years later, handed the business to Mathias Hohner [1833-1902] from whom the Hohner production of harmonicas and accordions derives (Rippley 2006:1).

Sir Charles Wheatstone patented a concertina in England in 1829 (Worrall 2007). Carl Friedrich Uhlig also patented another type of concertina in Germany in 1834. Earlier production methods included a cottage industry in the town of Trossingen (Rippley 2006). The stamping of reeds and reed plates didn't require massive machinery or lots of capital. It must have been appealing to locals looking to make extra money. Figure 4.4 shows a couple making reeds in their home. According to Worrall (2007), the concertina most likely made it to America by the mid- to late-1840s. Western reed instruments such as the harmonica, accordion, and concertina began mass production

around 1855 in England and Germany. They were cheap and easy to carry on that long journey to America and it played the music they knew.


patented curved
keyboard. In the brochures also are photographs of workmen assembling the Arnold "balanced action," while this Arno Arnold himself is seen inspecting the key-action and pieces of the Mountain Alder wood

Recent investigation indicates that, consequently, the Bandonion and Konzertina Fabrik of Alfred Arnold was the primary exporter of the bandonion to South America, notably Uruguay and Argentina, where it gen-

This elderly couple in Brunndöbra are working at home—he tuning the reeds, she positioning reed leathers onto the reed plates.

15

Figure 4.4. A couple tuning and making reeds in their home, Source: Rippley 2006:15.

4.5. How is a Reed Plate Made?

When reeds were first being made in the 1820s in Germany they were hand carved (Rippley 2006). Metal reeds began production in Europe and early harmonica producers had experience in clock-making (Marks 2013; Rippley 2006). It is likely that many of the early machines developed for clock-making would have been altered to produce reed plates. The reeds and reed plates were made of cuprous metals like brass or zinc, much like the materials that go into a clock. Once the parts were cut, they would be trimmed. Then the

reeds would be riveted to the reed plate. The next part required a good ear. Depending on the instrument, a set could be dozens, even hundreds of reeds. Each one would need to be tuned for the instrument. Fine adjustments at the tip or the body of the reed changes the pitch. Some reeds require reed leathers to stop air flow. Then the reeds would be mounted on a reed block or into the instrument. Figure 4.5 show reeds on a reed block. The edges of the reed are waxed for an air-tight seal. This is the authors' Scarlatti concertina. A generic, modern, Chinese-made concertina. The E plate, right in front is missing a leather. The dark area around the base of the reed is glue. This instrument needs repair.

Figure 4.5. Concertina reed plates on a reed block. Notice the missing leather, Source: Author

Reeds functioned much better and could be manufactured quicker once specialized machines such as presses, cutters, and dies could be used. These machines were introduced around the 1830s (Gilbert 1966). Most machines did not become common until the 1850s. Even as machines took over the production of reeds, the human ear remains the final judge when it comes to tuning. The human ear still plays a crucial role in the production of reeds.

There are many instruments that have used reeds to make sound. Based on the material evidence recovered at Coalwood, harmonicas, concertinas, and accordions are represented. Among those instruments, harmonicas are most common. Here is a closer look at the harmonica.

4.6. The Harmonica

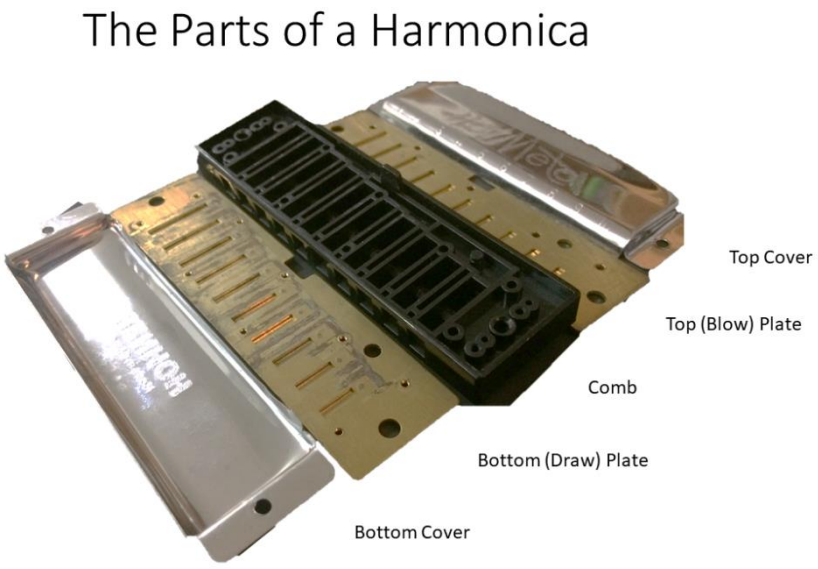


Figure 4.6. The Parts of a Harmonica, Source: Author.

There are thousands of models and dozens of types of harmonicas. Harmonicas have five parts plus a variable number of screws. They have at least two reed plates, a top and a bottom, a top and bottom cover, and a comb. Harmonicas were made with wooden combs, commonly a fruitwood, until the

early twentieth century. Harmonica manufacturers switched to plastic combs since the early 1900s with exceptions for certain models.

Figure 4.6 shows the parts of a Hohner *Hot Metal* diatonic harmonica. There are more extravagant models such as philharmonics, which were used in orchestras, or those that have two or more mouthpieces. Most harmonicas have two reed plates. In diatonic, or Richter tuned, harmonicas one can determine the difference between the top and bottom reed plate. The top reed plate has the reed tongues riveted along the side of the plates where one would blow into the instrument. In other words, they are parallel to one of the long edges. This would be known as the blow plate. Bottom reed plates has reed tongues riveted on the opposite side. This would be known as the draw plate. The rivets follow the holes for the reeds, resulting in different spacing in relation to the long edge. Figure 4.7 illustrates a clear way to identify top and bottom reed plates.

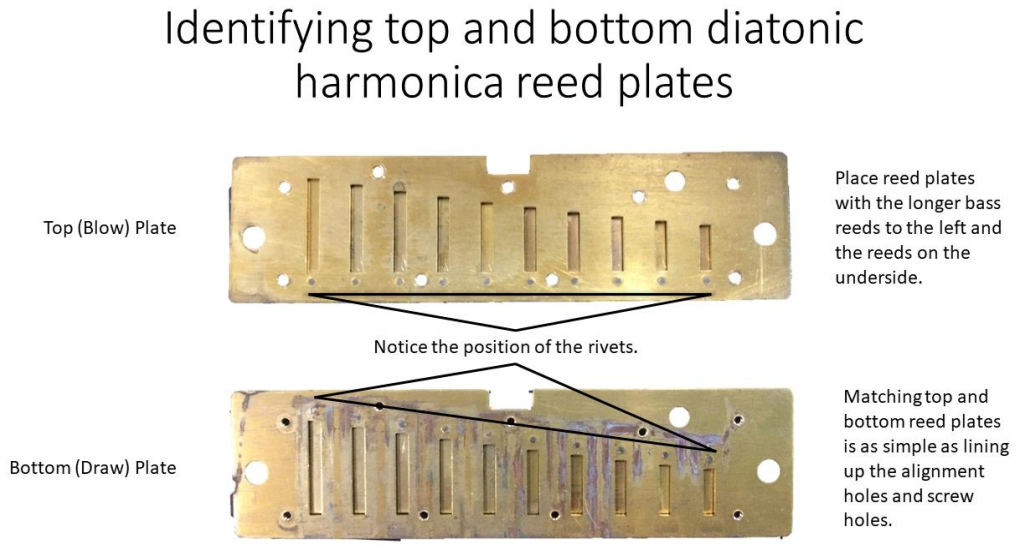


Figure 4.7. Identifying Top and Bottom Diatonic Harmonica Reed Plates, Source: Author.

4.7. Diagnostic possibilities of reed plates

There is a great deal of information that can be derived from reed plates if we do more than simply mention them. First, a reed plates can provide dating information. A beginning date for all manufactured reed plates would be 1821. For mass-manufactured reed plates the dates would begin in the 1850s when companies began shifting to machine production. I do believe that with further research, we could learn more about the companies that produced reeds and where they were manufactured. Harmonicas also suggest a social relationship between technology and industrial production, which may be examined from a social perspective. Harmonicas were considered an instrument of the people (Tikkanen 2016). They were cheap and transitioned well to machine mass production. They were cheap because they were mass-produced. Since they have internal moving parts (the reeds) that would wear out, harmonicas need to be replaced. Thus, reed plates find their way into the archaeological record although in small numbers.

Due to the hidden nature of reed plates, many people are not aware of what they look like. It is a common concept surrounding the insides of things, the parts of the whole. One can see why reed plates may have been ignored as a diagnostic artifact. The same style of reed plate can be used in multiple types of instruments. For example, the accordion reed plate can be used in concertinas and some organ reeds could be used in concertinas.

Due to the limitations of available data, we can only determine the generic type of instruments. Most reed plates don't have maker's marks. So many of them may remain anonymous. There currently exists no curated document that provides information on what reed plate was used in specific instrument models.

Reed plates can provide the key of a harmonica. The key or pitch could be stamped on the reed plate or some of the reeds may be intact. Harmonica

reed plates can reveal the size of the harmonica. Reed plates can also reveal if it was a unisonic (the same pitch in or out) or diasonic (a different pitch in or out) instrument.

4.8. A Musical Reed Plate Typology

To classify musical reed plates by the type of instrument they were in, a musical reed plate typology is helpful. Figure 4.8 presents a basic typology that shows the types of reeds that can be found in harmonicas, concertinas, accordions, and reed organs. All artifacts were recovered at Coalwood except for the previously mentioned reed organ reed provided by Dave Bezotte. The reed organ is a different type of instrument and not commonly found in the material record, but the overlap with concertinas demanded a comparison.

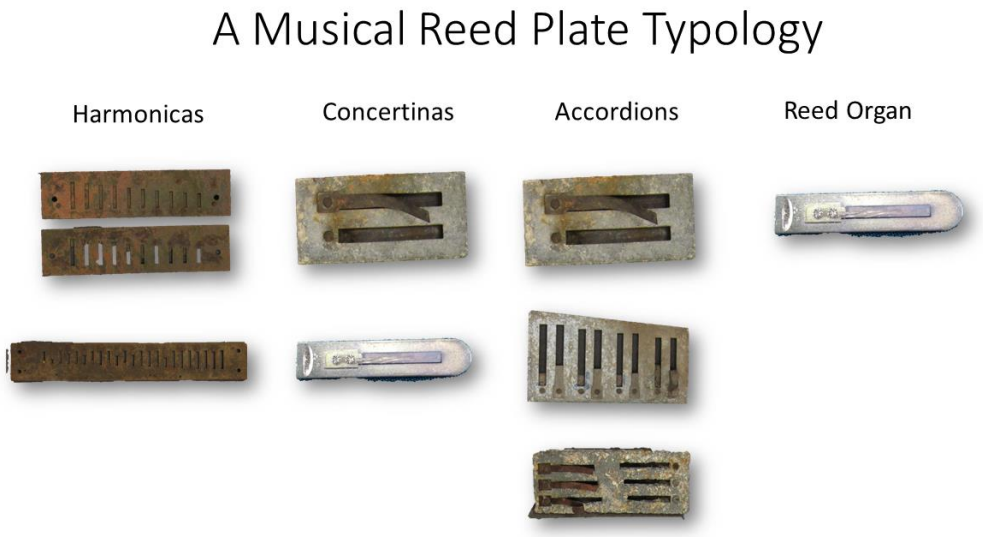


Figure 4.8. A Musical Reed Plate Typology, Source: Author.

A quick glimpse at Figure 4.8 reveals that there is some overlap between instruments and that the reed plates came in a range of sizes and configurations. Indeed, this overlap complicates things. Harmonicas are more

easily recognizable and are found more often in the archaeological record. Because of this, they are more useful as a diagnostic artifact.

Harmonica reeds come in one type. Harmonica reeds look like long rectangles with holes running perpendicular to the long edge. They can be from four inches long to twelve inches or even more. The most common harmonica reeds found were four to five inches. Perhaps the most important thing to record for a harmonica reed is the number of reeds or holes, i.e. 10-hole, 12-hole. For an example, see Appendix A for a detailed record of all musical remains recovered at Coalwood.

Concertina reeds come in two types. Reeds that might be found in concertinas can also be found in accordions. These are the rectangular ones with two reeds parallel to the long edge. They are known as accordion reeds but they are commonly used in beginner and intermediate concertinas. They can vary greatly in size, from one by two inches, up to two by three inches. The second concertina reed is considered a reed organ reed. It seems that concertinas don't have a reed of their own.

Accordion reeds come in three types. The first type has been used in concertinas. The second type is trapezoidal with the reeds running perpendicular to the long edge. There can be many sets of reeds on a single trapezoidal reed plate. The third type is rectangular, with banks of reeds stacked and running parallel to the long edge.

Reed organ reeds come in one type. It is the rectangular type with a single reed. It is rare to find a reed organ reed in archaeological collections.

This chapter focused on how musical artifacts have been treated in some disciplines. The focus has remained on the instruments themselves. The parts of instruments have potential for study as well. The musical reed plate was defined and suggested as a new artifact type that archaeologists can use to

learn about more than simply mentioning as evidence of recreation. There is music, of course, performance, and there is a manufacturing and social history related to the reed. I presented a musical reed plate typology so that other archaeologists can become more familiar with these artifacts and what they represent. This categorization is one step towards identifying these artifacts. The next step is to use Coalwood as a case study using reed plates as evidence as we add another layer of description to the lives of those that lived at Coalwood.

5. The Instruments of Coalwood

"Music is the emotional life of most people." – Leonard Cohen

The goal of this chapter is to apply the qualities of reed plates discussed in the previous chapter to see if we can learn something about the music and daily lives of people who lived at Coalwood. Archaeological interest in Coalwood began in 1988. Since then, there have been many excavations that have yielded rich material assemblages related to these worker's everyday life. In 1988, Gilbert/Commonwealth, Inc. mapped the site and assigned feature numbers that will be used here (Figure 5.1).

Musical remains were recovered in four separate collection events. There were surface collections in 2009 and 2013. There was a two-week excavation in 2014 and a two-week excavation in 2016 focused on the south side. A detailed examination of musical remains recovered in 2009, 2014, and 2016 can be found in Appendix A.

The 2009 surface collection was performed by Jonathan Franzen. A pedestrian survey found artifacts scattered on the surface in the northeast quadrant of the town, most of them musical remains. The area was disturbed, artifacts were most likely dug up by looters, choice artifacts kept, and the remains relocated. These six musical remains are not used in this analysis but have been documented in Appendix A and were also used for the reed plate typology.

The surface collection in 2013 was performed by Dr. LouAnn Wurst and Western Michigan University students. It focused on the north side of Coalwood. Four musical remains were found in three areas, representing Features 3, 4, 10 and 11 as noted on Figure 5.1. These remains have not been documented and are not used in this analysis.

The two-week 2014 excavation was part of the archaeological field school for Western Michigan University students, with project director Dr. LouAnn Wurst. It focused on the northern side of Coalwood. A large variety of reed plates were recovered from multiple contexts. Controlled units were placed in F1, the overseer's house; F8, single-family housing; F21, the store; and F24/25, single-family housing. Sixteen musical remains were recovered. This excavation represents the highest diversity and greatest quantity from the collections.

The 2016 Michigan Tech Archaeological Field School spent two weeks at Coalwood excavating controlled units in the Feature 43 area. Dr. LouAnn Wurst was the project director. Feature 43 is an oval depression about 20 feet in diameter and represents a boarding house. Behind the boarding house, to the east, lies what the 1988 survey referred to as a looting zone. On site the looting zone appears to be a slightly raised area full of depressions. Further to the east the ground lowers to a flat plain until it meets the tree line. Closer inspection of the looting zone suggests that it was likely used as a privy and midden that could be associated with the Feature 43 boarding house. Nine musical remains were recovered.

The 2014 and 2016 collection events provide the data for this analysis. In total, twenty-five musical remains are used. The next section focuses on the distribution and density of the musical remains.

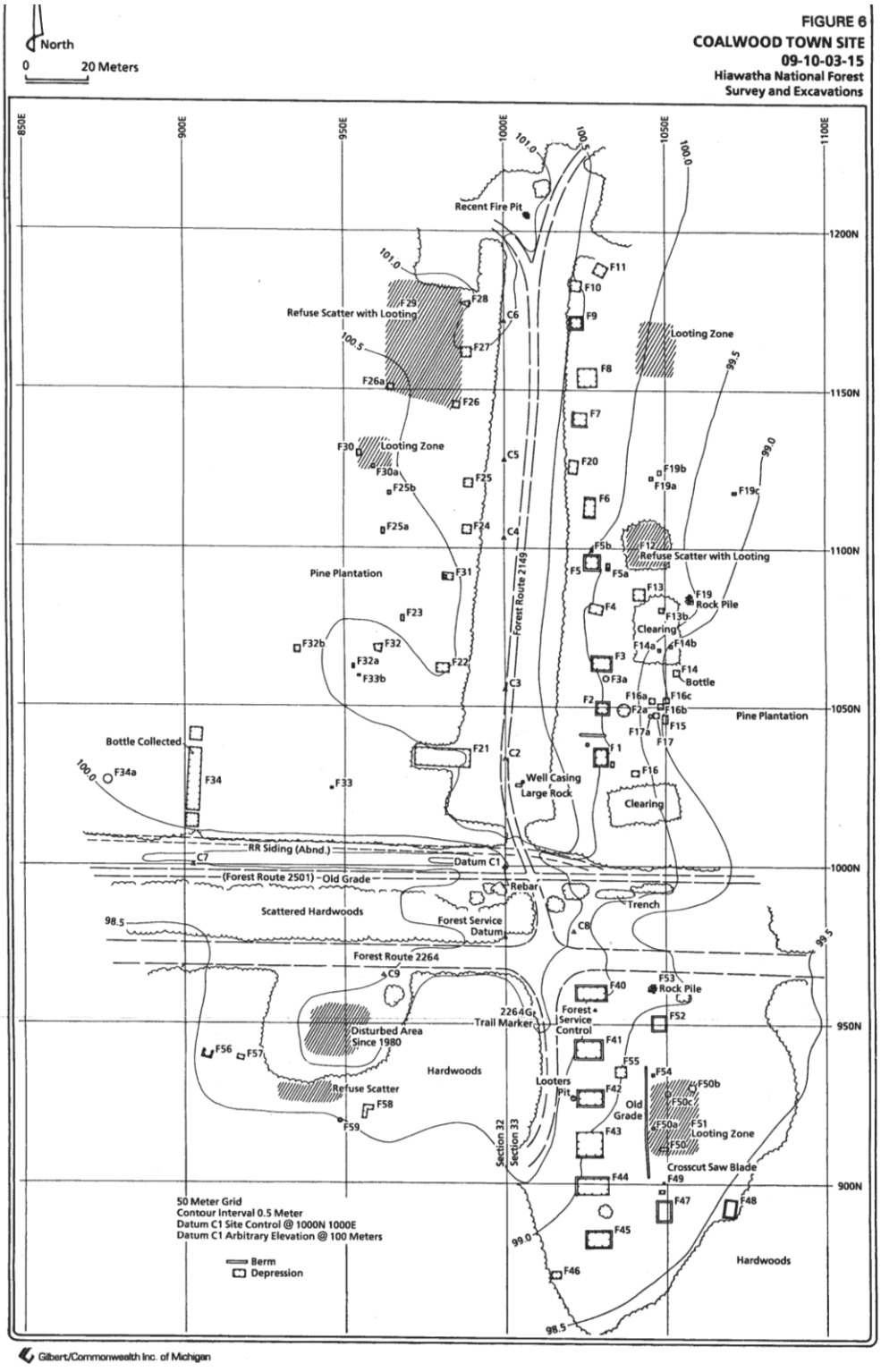


Figure 5.1. Map of Coalwood, Source: Gilbert/Commonwealth 1988

5.1. Analyzing Musical Remains at Coalwood

To understand the role of music at Coalwood, the first step is to examine any evidence for contexts and spatial differences where the reed plates were found. In essence, are there differences in where these objects were found that would tell us something about how music was used in the community? Table 5.1 shows that reed plates were found in low density across all the contexts investigated except for the F21 store. The sample ranges from a low of four to a high of nine, which suggests that musical instruments are found in relatively similar numbers across the areas. It is interesting that no reed plates were found in the store area, especially since a great deal of the archaeological investigation occurred near the front door where many other artifacts were found; the total sample size is commiserate with other house areas. Stores have been considered public spaces and images of people hanging out on the porches of stores playing music is a popular image that has been perpetuated through film and other popular media. This suggests that musical instruments were either not used or not discarded in the store area.

Since reed plates occur in low density, the absolute numbers can be misleading, since areas with more excavation could yield a large artifact assemblage, and thus a larger sample of reed plates. To control for this, Table 5.1 also presents the ratio between the total number of artifacts to musical artifacts for each area.

Table 5.1.

Total artifacts, music related artifacts, and artifact ratios by feature area, Source: Coalwood 2014 and 2016 excavation.

Feature Area	Total # Artifacts	Total # Musical Remains	Ratio Between Artifacts and Musical Remains
F1, Overseer's House	12,823	7	.0545
F8	8,900	4	.0449
F21, Store	8,677	0	0
F24/25	10,036	5	.0498
F43	13,532	9	.0665

This data shows that musical related artifacts may occur in low densities, but those densities appear to be evenly distributed throughout feature areas at Coalwood. The highest ratio is found in the F43 boarding house, followed by the F1 overseer's house, although these differences are not large. The only exception is Feature 21, the store area, where no musical artifacts were found.

The next step is to see if there are any trends when it comes to the types of instruments found at each site area. Table 5.2 shows the total number of music artifacts, the number of musical instruments, and what kinds of instruments are represented. This table shows that most of the instruments are harmonicas, although concertinas/accordions were found at the F24/25 worker house and the F43 boarding house.

Table 5.2.

Illustrates the types of instruments discovered by feature area, Source: Coalwood 2014 and 2016 excavation.

Feature Area	Total # Musical Artifacts	Minimum Number of Instruments	Harmonica	Concertina or Accordion	Unid.
F1, Overseer's House	7	2	2	0	0
F8	4	2	1	0	1
F21, Store	0	0	0	0	0
F24/25	5	4	3	1	0
F43	9	5	4	1	0

Although the looter piles represent an interesting collection that illustrates the diversity of instruments, the fact that they are unprovenienced means that they cannot be used in the analysis portion of this research but are still photographed and detailed in Appendix A to help with identification.

5.2. Discussion

The goal of this chapter was to use musical reed plates as primary data to see if we can learn something about the music and daily lives of people who lived at Coalwood. The musical material remains recovered at Coalwood support Frank Debelak's claims that music and dances were a part of daily life. The even distribution of musical related artifacts speaks more to the importance of music in a broader sense. Rather than restricted to only one or two individuals, it appears that music was commonly practiced by more people living under different roofs. The fact that these instruments were found in many contexts and all the houses indicates that music was not restricted to

special occasions or limited locations. The absence of instruments from the store area might also suggest that music was a family affair – a mundane part of people's everyday life.

These people needed instruments they could rely on. Now and then an individual reed might become stuck or damaged. Reeds are a moving part prone to wear and tear and need to be replaced occasionally just like strings on string instruments, drum heads, and other replaceable parts that produce sound. A broken string is easy to see, but a bum reed needs to be heard to know something is wrong. The widespread distribution of reed plates, although in low density, indicates the need to replace or repair these faulty parts of instruments. Harmonicas were, and continue to be, cheap and plentiful. The Montgomery Ward 1895 catalog has various models of harmonicas, none of which cost more than a dollar. It's the same with the 1902 Sears catalog. Reed plates could be ordered through both catalogs or through a local musical instrument dealer (Rippley 2006). Many instrument dealers during this era offered repair services. When a reed goes bad, harmonicas are more likely to be replaced than repaired. Thus, whole or nearly complete harmonicas are more likely to find their way into the archaeological record when compared to more complex instruments such as concertinas or accordions, items that cost quite a bit more.

Most of the reed plates recovered from Coalwood were found in trash deposits or privies. The location of reed plates in trash middens suggest intentional deposition, likely as the instruments malfunctioned and the reed plates needed replacement. It is possible that reed plates or reeds, because they are made of cuprous metals, could endure longer as the wooden parts of an instrument decomposes. Reed plates are not glued in place. In concertinas and accordions, reed plates are held in place by wax that also provides an air-tight seal. Because of this, the chances of finding wood on a concertina or accordion reed plate is rare. None of the documented concertina or accordion

reed plates for this analysis had wood attached. Harmonica reed plates, on the other hand, can be found with wood attached because wooden combs were used up to the 1920s. No wax was used because they were screwed together. Harmonicas found in privies could also indicate their unintentional deposition as they fell out of someone's pocket while making certain adjustments. Two harmonicas found on the South part of Coalwood may speak to this. The top cover of a Hohner Marine Band harmonica was found at N109 E269, a privy. Top and bottom harmonica reed plates with a mostly intact wooden comb were found at N120.5 E265.5, another privy.

5.3. Conclusion

The goal of this chapter was to use musical remains as the primary data in an archaeological inquiry. There have been excavations at Coalwood for over twenty years. Tens of thousands of artifacts have been recovered. Among all the tableware, bottles, and tools, there was the curiosity of a large collection of musical reed plates. Although a low-density artifact, they have an even distribution across the site. The only area without musical remains was the store. It appears there were people with a reed instruments living in every house across the camp. Obviously, Coalwood was a lumber camp that was full of sounds and music.

6. There was Music

"In memory everything seems to happen to music." – Tennessee Williams

Music was happening in the lumber camps of the Northern Woods, particularly Coalwood. Historical sources suggest music existed in Alger county. The material evidence uncovered at Coalwood suggests that music was widespread in the town. Reed plates for harmonicas, concertinas, and accordions are durable items that have a chance of surviving in the material record and can still be identified. Although once relegated by archaeologists to the miscellaneous artifact category, an aspect of entertainment, or even mistaken as a belt buckle or suspender clip, reed plates can be used to identify the types of instruments and in turn say something about the social situation.

Reed plates are an artifact that occurs in low densities. At Coalwood, they turn out to represent less than a tenth of one percent of the total assemblage. Even so, they still have the potential to reveal aspects of daily life at Coalwood or other locations where reed plates might be found.

Coalwood was a suitable case study for two reasons. One, it is situated in the Upper Peninsula of Michigan, a place that has a complex historical context of indigenous Native American history, American industry, and immigration that peaked around the turn of the twentieth century. The relationship between labor and capital was changing quickly and would continue to change. Immigrants from Finland and Slovenia made an impact in the Coalwood district. Finns were well-known as labor radicals and their music often reflects these beliefs. CCI brought in Slovenians in 1906 to spread out the workers (CCI Annual Report 1905). Finnish and Slovenian immigrants are known for the music they brought with them. Alan Lomax recorded them

during his journey through the area. Song books and oral tradition passed these song along. They brought music with them from the old world, but they also composed new music in the New World as they shared their musical pathways and experienced life. This is music that can still be heard today by contemporary musicians such Oren Tikkanen and Dave Bezotte, among many others.

Sound is often a neglected topic in historical and archaeological literature. Sound is immaterial and ethereal. It comes to life in a moment and dissipates. I believe that we can access the sounds of a place through the material record. Artifacts found at the site can suggest what sounds happened during daily life. Sounds can expand to include music. Although the documentary record surrounding Coalwood is slim, and there is no way to know the actual music that was performed, we can use ethnic music documented for the region to flesh out the experience and give us another layer of description that provides a window into the daily lives of people that lived there.

The material record I used was musical reed plates recovered at Coalwood. Although the reed as a sound producing device can be traced to the beginnings of culture, musical reed plates have a history that starts in the 1820s when harmonicas were being hand carved in Germany and England. As with many products of the time, the early instruments were produced by a cottage industry that shifted to mass production by the 1850s as machines became more accessible and more practical. Harmonicas, concertinas, and accordions spread across the world from there and made their way to the United States through immigration and business interests, becoming popular around 1880s.

Reed plates have diagnostic qualities that can be used by archaeologists to explore the types of instruments and the social situation of the area of study.

There is an astonishing diversity and quantity of reed plates that have been excavated at Coalwood that suggests that much more work could be done to understand these much-neglected objects. Their even distribution among features suggests that the use of reed instruments was widespread at Coalwood. The only exception is Feature 21, the store. The lack of reed plates at this public space suggests that musical instruments were not used there and that perhaps music was localized around family homes and boarding houses. This reinforces the idea that music was an important part of these families' everyday life. Long winters cooped inside against the cold and snow may have contributed to this localization.

6.1. Recommendations for Future Work

There were many avenues of inquiry that I would have liked to pursue during this study, but time, resources, and topical limitations demanded they were ignored. I wanted to document the types and models of instruments available during the time period. It would require producing a database of reed instruments available by producers and year and the type of reed plate in each instrument. The next step would be to find these instruments and document their insides, the reed plates. Since the same reed plates may have been used in more than one model, the resulting query could generate a list of instruments that share that reed plate.

Another line of inquiry would be to trace immigration patterns using census records and other historical evidence to cross-reference availability of instruments through local businesses or catalogs. Many free reed manufacturers were and continue to be in Germany. There could be different sorts of reeds ordered by certain companies and they may have identifiable markings such as alignment holes and holes for screws that could be narrowed to a few models.

6.2. A Return to the Sounds of Coalwood

It was a time before electricity. Trains were commonplace. Horses were still a part of life and Ford automobiles were on the horizon. The upper Peninsula had choppers crawling all over the countryside harvesting lumber that fueled industry and built the infrastructure and communities. Other laborers toiled underground in the copper and iron mines. Men, women, and children lived lives of labor and leisure. These are the activities that created the vibrant soundscape at Coalwood.

Now, Coalwood is a quiet, desolate place. It's full of natural forest noises. Birds, deer, squirrels, ladybugs, ticks. The crackle of dried grass or the sound of the ground soaking in a forgotten rain. The sound of an ATV or logging equipment might be heard. But music is missing. Unless perhaps the odd ATV rider spins through with the radio on or a group of archaeologists goes for another dig, that type of cultural production has come and gone. Just over 100 years ago there was music and bodies walked and lived in the forest. Remember that day in the winter getting off the train and walking to Coalwood? Imagine the sounds that were there. Imagine the music that was.

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Appendix A - Musical Remains found at Coalwood (Includes 2009, 2014, and 2016)

The following is a record of all the musical remains recovered at Coalwood from the 2009 surface collection and the 2014 and 2016 excavations. You can find a photograph of the artifact, detailed notes about each artifact, including measurements, diagnostic qualities, and links to further information. I devised a catalog system for the purposes of this project that meant to tell something about each artifact. A Specimen # was given to each artifact, for example, C2014_A07.

Specimen #: C=CoalwoodYEAR_(H=harmonica, A=accordion, C=concertina)01=arbitrary number

This helped organize the data so it could be easily referenced and found if any new questions surfaced about an artifact. I have adopted the Minimum Number of Vessels (MNV) and applied it to musical artifacts. The MNV for this project is twenty. MNV was determined by a several factors and is different depending on the type of reed plate.

A.1. Determining MNV for Harmonicas

Harmonicas have at least two reed plates or more depending on the model. Although two harmonica reed plates may look similar and be the same size, certain models had alignment holes that can be determined as different models. Current access to information limits model identification unless the top plate is available (Figure A.1). The top and bottom reed plate of a single harmonica have slight differences as well (Figure A.2). Because they are diasonic instruments, those that create a different pitch on the draw or blow, top and bottom plates can often be identified even when the reed plates might be broken or degraded.

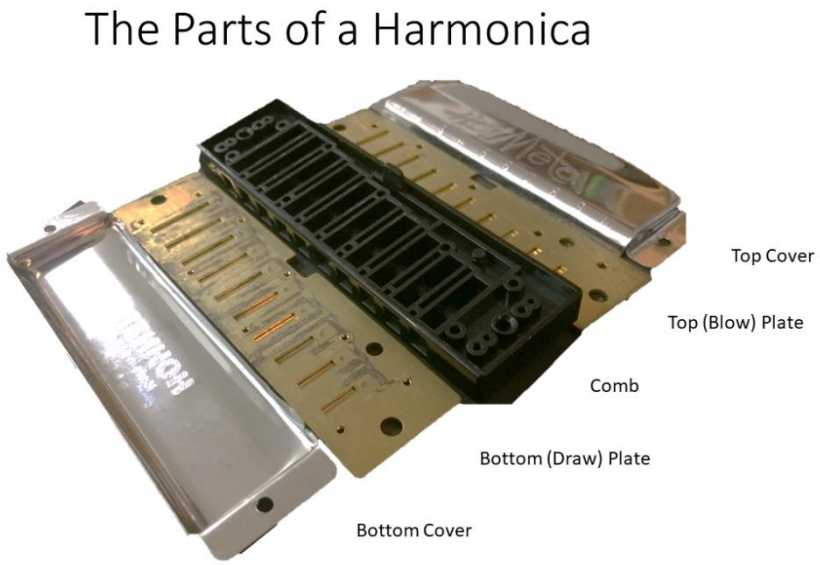

Figure A.1. The Parts of a Harmonica, Source: Author.

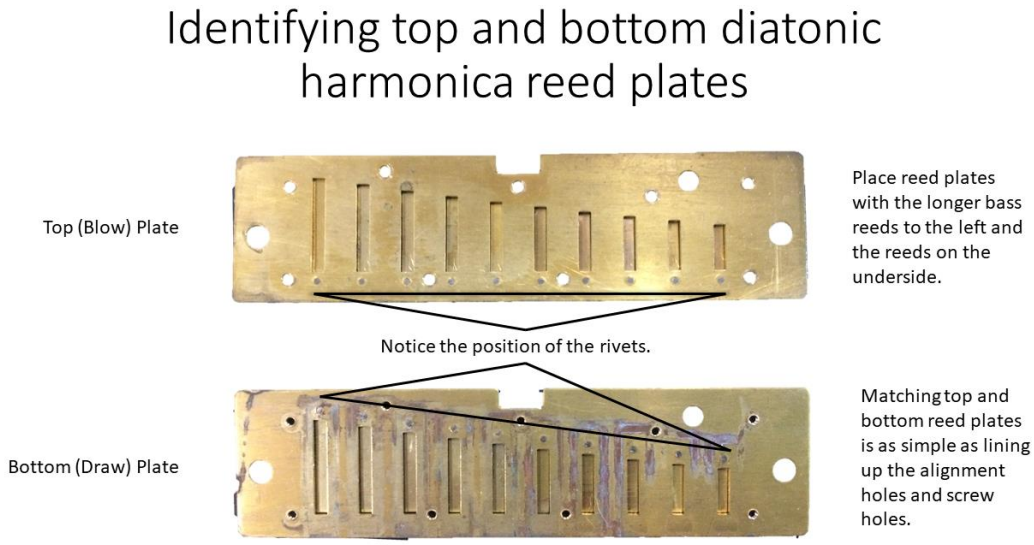

Figure A.2. Identifying Top and Bottom Diatonic Harmonica Reed Plates, Source: Author.

A.2. Determining MNV for Accordions and Concertinas

Accordion and concertina reed plates are more difficult to identify because they were commonly used interchangeably. Best practice suggests that they are grouped together unless identification can be certain. Because these types of instruments can require dozens or more reed plates, determining MNV proves difficult (if impossible), usually resulting in one if they are of the same style. Provenience may also suggest whether they are unique or part of the same instrument.

A.3. Coalwood 2009 Surface Collection performed by Jonathan Franzen

Figure A.3. Specimen #: C2009_H01

Vessel #: 114

Location: North East near Feature 5.

Description: 16-hole chromatic harmonica bottom reed plate. No intact reeds. Reeds are mounted on alternating opposite sides of the reed plate, which suggests it may have been part of an accordion. Measures 110.07mm X 25.05mm X .87mm. Four partial aligning rivets. Two on each end. Two alignment holes along the top edge.

Figure A.4. Specimen #: C2009_H02

Vessel #: 115

Location: North East near Feature 5

Description: Partial chromatic harmonica bottom reed plate. Very corroded and deteriorated. One drilled hole for a screw centered along the short edge. Measures 53.21mm X 24.6mm X 1.41mm.

Figure A.5. Specimen #: C2009_A01

Vessel #: 305

Location: North East near Feature 5.

Description: Trapezoidal accordion reed plate with 8 holes. Could also be from a Chemnitzer concertina. There is one picture in the LaVern Rippley book that suggests this type of reed plate being utilized in the construction of these types of concertinas but there isn't enough information to say for sure. There is no date on the picture. Nor is there commentary on the picture. Perhaps I could contact the author for more information. The holes are grouped in twos, making four pairs of reeds mounted on alternating sides. Measures 73.05mm X 41.15mm and 34.70mm X 1.77mm. There are four of these that may or may not be from the same instrument but only count for one vessel.

Figure A.6. Specimen #: C2009_A02

Vessel #: 305

Location: North East near Feature 5.

Description: Partial trapezoidal accordion reed plate with 9 holes. Artifact is highly corroded and broken. Reeds are paired and mounted on opposite sides. Measures 74.09mm X 32.63mm and 28.96mm X 2.0mm.

Figure A.7. Specimen #: C2009_A03

Vessel #: 305

Location: North East near Feature 5.

Description: Partial trapezoidal accordion reed plate with 9 holes. Artifact is broken and no other artifact found matches. Reeds are paired and mounted on opposite sides. Measures 82.92mm X 36.14mm and 29.32mm X 1.9mm.

Figure A.8. Specimen #: C2009_A04

Vessel #: 305

Location: North East near Feature 5.

Description: Partial trapezoidal accordion reed plate with 10 holes. Artifact is broken with no match. Reeds are paired and mounted on opposite sides. Measures 79.97mm X 33.07mm and 25.69mm X 1.75mm.

A.4. Coalwood 2014

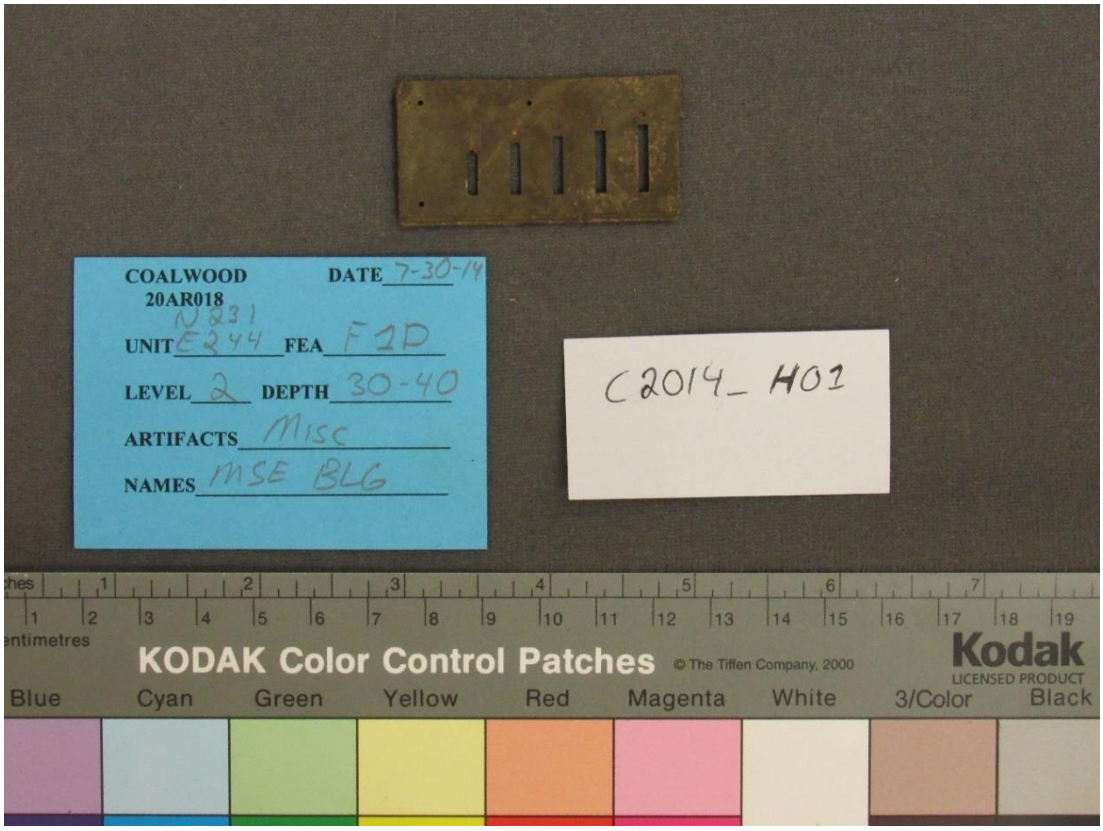

Figure A.9. Specimen #: C2014_H01

Vessel #: 101

Location: (Overseer's house) N231 E244, F1D, Level 2, Depth: 30-40cm

Description: Partial harmonica bottom reed plate. Five reed holes but no intact reeds. No way to determine harmonica size. The reed plate has five tiny holes used for alignment that could reveal a category of possible models. Measures 49.7mm X 25.67mm X .95mm. Has a line along one edge which suggests it is a top plate.

Figure A.10. Specimen #: C2014_H09 (3 pieces)

Vessel #: 106

Location: F1EII, Level 1

Description: Partial harmonica reed plate. Very corroded and bent. No intact reeds but they were mounted on opposite sides. Looks like C2014_A02 but nearly impossible to tell for sure. Still has some wood intact, most likely from the comb of the instrument, which suggests a harmonica. Measures 25.68mm width.

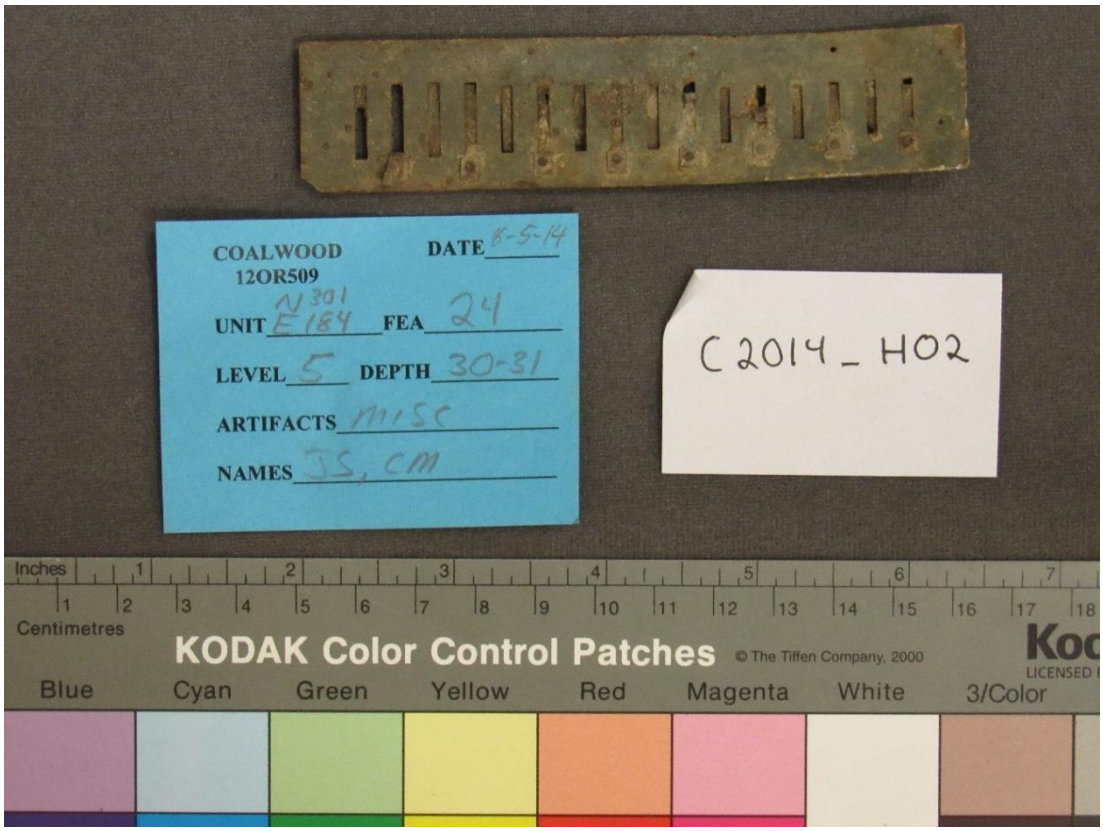

Figure A.11. Specimen #: C2014_H02

Vessel #: 102

Location: N301 E184, F24/25, Level 5, Depth: 30-31cm

Description: 16-hole harmonica reed plate. Reeds are intact but bent, not able to retrieve notes or key of plate. No identifying marks. Eight alignment holes. Small chip removed from one corner. Reeds are mounted alternately on each side. Disonoric. Measures (LXWXT) 111.25mm X 25.35mm X 1.07mm. This is a unique piece. May not be a harmonica. It could be a chromatic harmonica.

Figure A.12. Specimen #: C2014_A01

Vessel #: 301 (combine with Looter Pile #1, Specimen # C2014_A05)

Location: N301 E184, F24/25, Level 6, Depth: 30-40cm

Description: 6-hole accordion reed plate. No intact reeds. Three reeds would have been attached on one side and three on the other. This suggests bisonoric. Measures 76.55mm X 27mm X 2mm. Interior holes. 25.37, 27.46, 28.92, 25.45, 27.51, 29.11. This is the same reed plate style as specimen # C2014_A05 found in Looter Pile #1. Between the two they can only suggest a single vessel even though they were found in different contexts. Accordions could have dozens of reed plates.

Figure A.13. Specimen #: C2014_H03 (2 parts, Top and Bottom)

Vessel #: 103

Location: N301 E183, F24/25, Level 5, Depth: 41cm

Description: Two matching (top and bottom plate) ten-hole harmonica reed plates in E.

Bottom plate measures 100.88mm X 25.22mm X .87mm. Reeds are riveted to one side only. One intact reed. One hole on each end for mounting, 3mm dia. Remnants of four rivet braces that match between the two plates.

Top plate measures 101.05mm X 25.11 X .80mm. Reeds are riveted to one side only. All 10 reeds intact. Should be able to determine key of the harmonica. Notes: F#, C, F, C, E, A#, C, D#, The last two cannot be determined. Common practice would be that the lowest note on the bottom reed plate would determine the key of the instrument. The lowest pitch note the top plate would be one whole step above that, making this a “E” harmonica. Seven nails or rivets braces that match to the bottom plate. One hole on each end for mounting, 3mm dia.

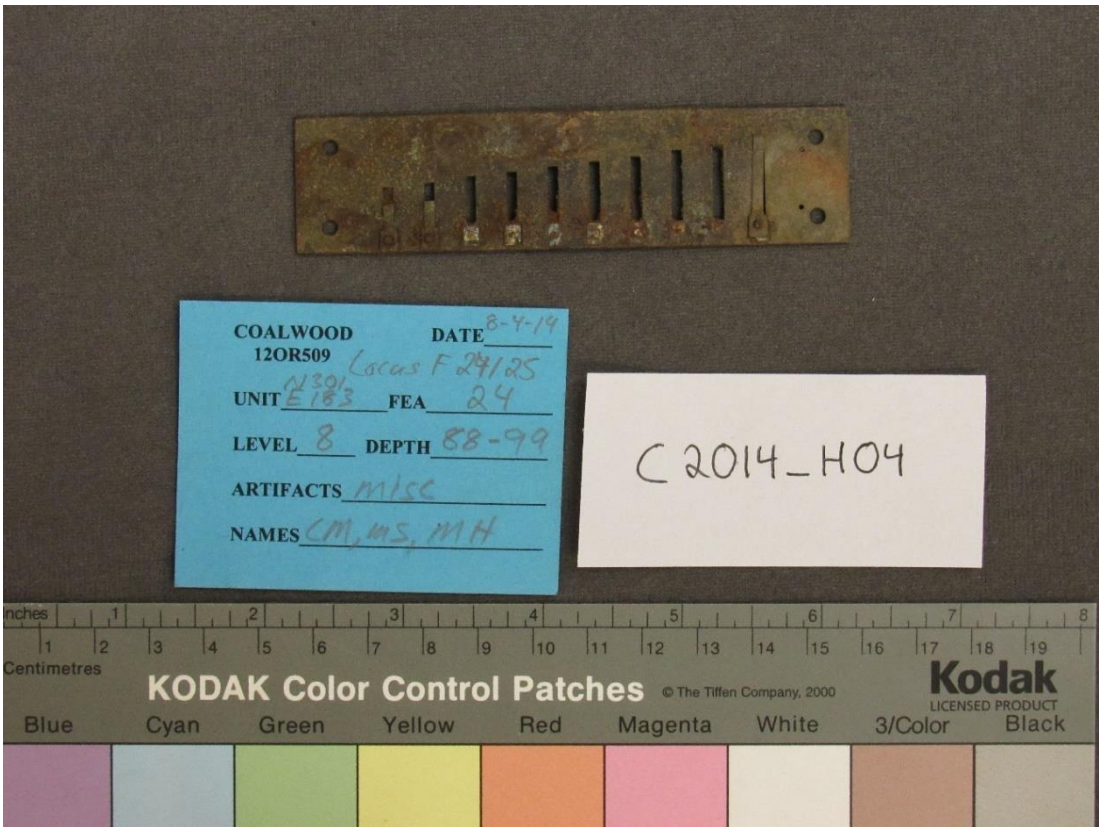

Figure A.14. Specimen #: C2014_H04

Vessel #: 104

Location: N301 E183, F24/25, Level 8, Depth: 88-99cm

Description: 10-hole harmonica top reed plate. Measures 100.8mm X 24.97mm X .83mm. Reeds are riveted to one side only. Four holes (two on each side) for mounting, 2.97mm dia. One intact reed, broken off. Reed has an extra sliver of metal attached to the tip for tuning.

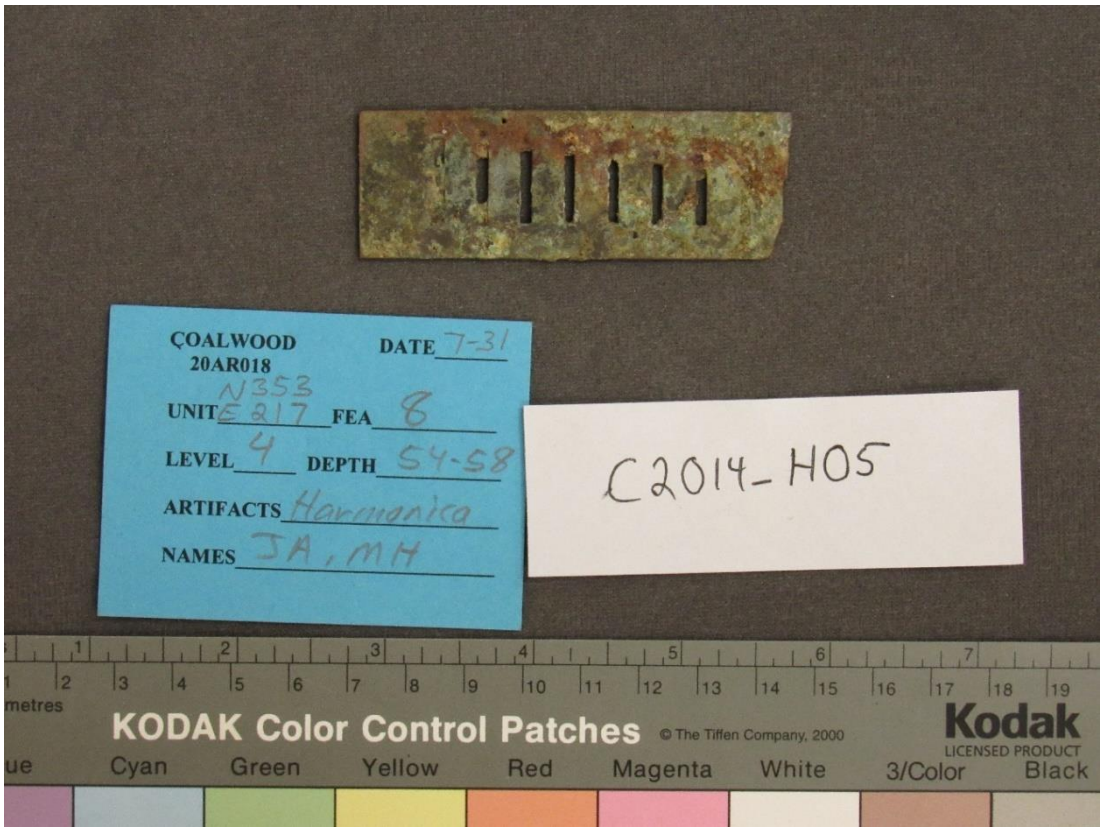

Figure A.15. Specimen #: C2014_H05

Vessel #: 105

Location: N353 E217, F8, Level 4, Depth: 54-58cm

Description: Partial harmonica bottom reed plate. Measures 73.74mm X 25.16mm X 1.08mm. One intact reed but it is covered with gunk so it is unable to be measured for pitch. Reeds are riveted to one side only. Reed appears to have a line of some sort of sealant. Two very tiny holes can be seen for alignment but no mounting holes.

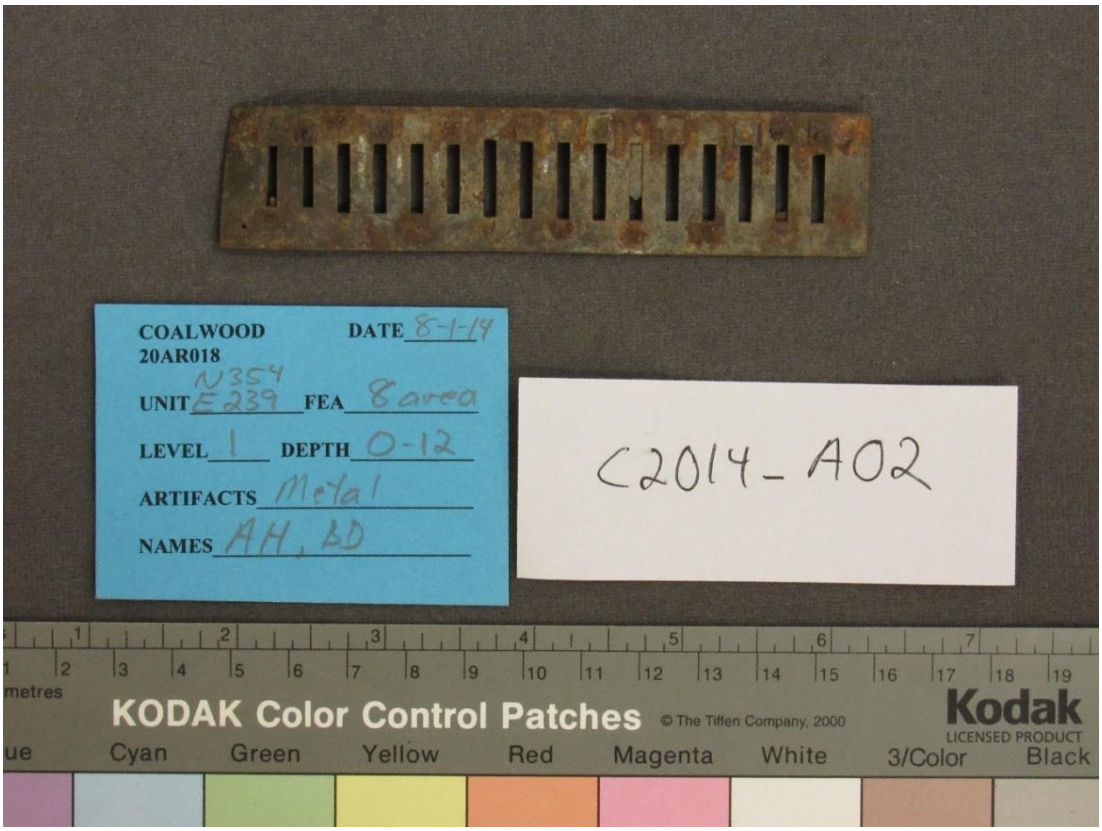

Figure A.16. Specimen #: C2014_A02

Vessel #: 401

Location: N354 E239, F8, Level 1, Depth: 0-12 cm

Description: The curious one. 16- hole accordion reed plate. Could also be from a harmonica but the reed holes are not consistent along one edge, instead, they are centered along the length of the reed plate. This is a curiosity that I have not previously come across. I have seen accordion plates that have a similar structure/format but the plate is very thin (more like a harmonica reed plate), which throws confusion in the mix. Measures 109.91mm X 24.61mm X 1.03mm. No intact reeds. Reeds are riveted alternating on each side of the reed plate. No mounting holes but there are four holes for lining up rivets (two on each end).

Figure A.17. Specimen #: C2014_A03

Vessel #: No Vessel

Location: N354 E239, F8, Level 1, Depth: 0-12cm

Description: Unknown edge plate. Similar to C2014_A04. I don't believe this is a reed plate but it is possible that it is a part of an accordion. Possibly one of the corner brackets that could have been covered by a vent. Has nine mounting locations. Shaped like a trapezoid with a curve. Measures 52.10mm X 38.53-21.96mm X.82mm. Contains some wood and ferrous metal detritus still attached to the corner mounting holes. One larger hole (3.08mm) on the bottom. Both plates were found in the same location in concurrent levels.

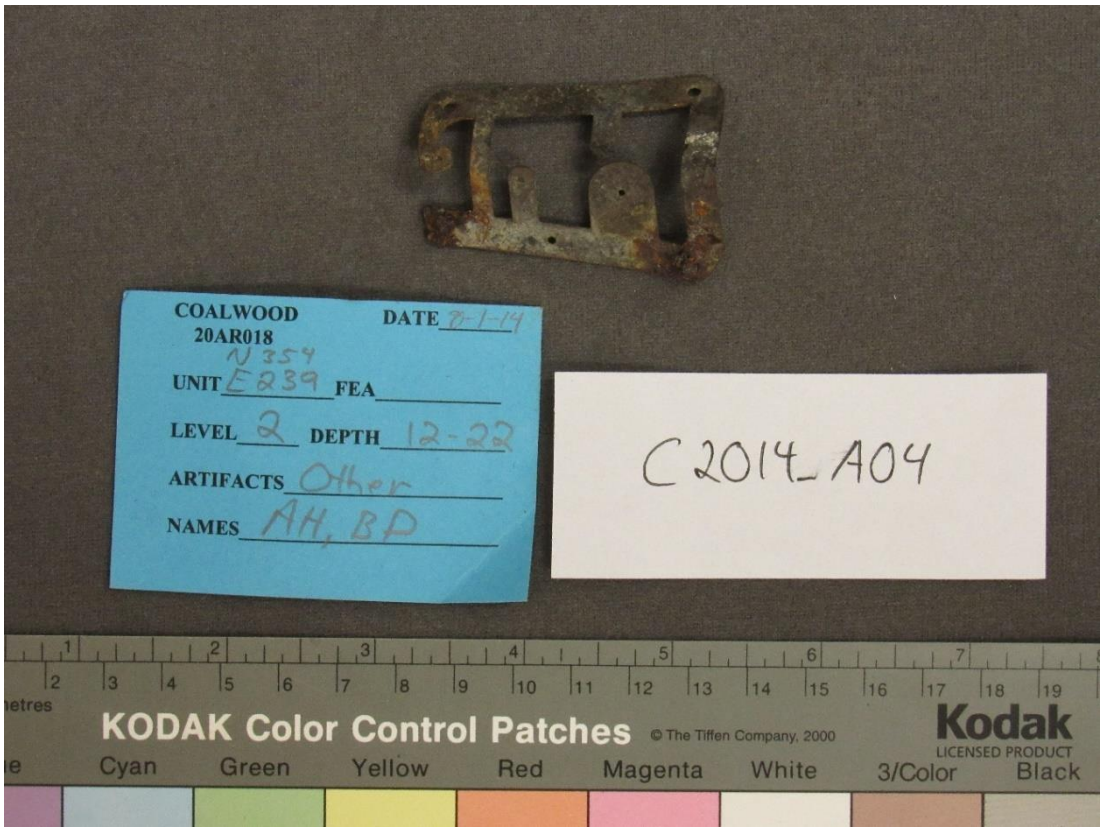

Figure A.18. Specimen #: C2014_A04

Vessel #: No Vessel

Location: N354 E239, F8, Level 2, Depth: 12-22cm

Description: Unknown edge plate. Similar to C2014_A03. I don't believe this is a reed plate but it is possible that it is a part of an accordion. Possibly one of the corner brackets that could have been covered by a vent. Has nine mounting locations that are more visible than C2014_A03. Shaped like a trapezoid with a curve. Measures 50mm X25.67mm-34.34mm X .72mm. Both plates were found in the same location in concurrent levels.

Figure A.19. Specimen #: C2014_A05

Vessel #: 301 (combine with Specimen #: C2014_A01)

Location: Looter Pile #1

Description: 6-hole accordion reed plate. All reeds are intact but only four are complete. Ferrous metal reed plate with cuprous reeds. Three reeds riveted to each side. Measures 63.38mm X 22.77mm X 2.15mm. Very corroded. Although the location and wear is different from Specimen #: C2014_A01, I am including it with the same vessel because it is the same model.

Figure A.20. Specimen #: C2014_H06

Vessel #: 107

Location: Looter Pile #2

Description: 24-hole chromatic harmonica top reed plate. Reeds are riveted alternating on each side. Some partial reeds intact. One complete and represents the highest pitch. The reed plate has a pressed line along one edge that suggests it was a top plate. Four mounting holes (two on each end) 3mm dia. Nine smaller holes for lining up on the comb. Measures 180mm X 29.28mm X .97mm.

Figure A.21. Specimen #: C2014_H07

Vessel #: 108

Location: Looter Pile #2

Description: Partial harmonica reed plate. One hole and two complete reeds. Reeds are mounted on one side only and are quite far apart. Measures 24.28mm X 30.59mm X 1.14mm. Very little to work with here but seems to suggest a different sort of harmonica than the others because of the spacing.

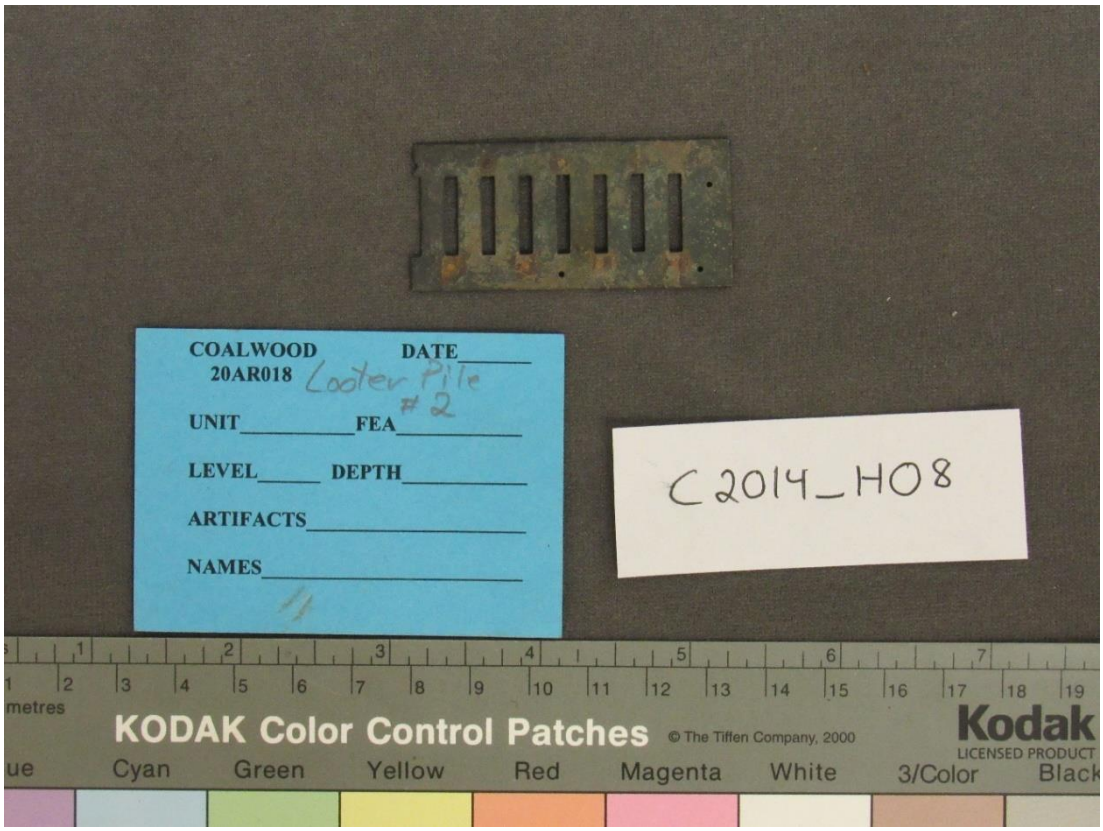

Figure A.22. Specimen #: C2014_H08

Vessel #: 109

Location: Looter Pile #2

Description: Partial harmonica reed plate. Measures 54.47mm X 25.04mm X .89mm. Reeds were riveted on alternating and opposite edges. What does this suggest? It is another one that is different from the others. Shame that it is only a partial plate. I guess it could possibly have something to do with an accordion.

Figure A.23. Specimen #: C2014_A06

Vessel #: 303 (combine with C2014_A07)

Location: Looter Pile #2

Description: 2-hole accordion reed plate. Could also be for a concertina. Measures 46.97mm X 20.97mm X 2.02mm. Holes measure 29.06mm X 3.6mm and 29mm X 3.6mm. Both reeds are intact and are pitched () and (). This means it went to a disonoric instrument.

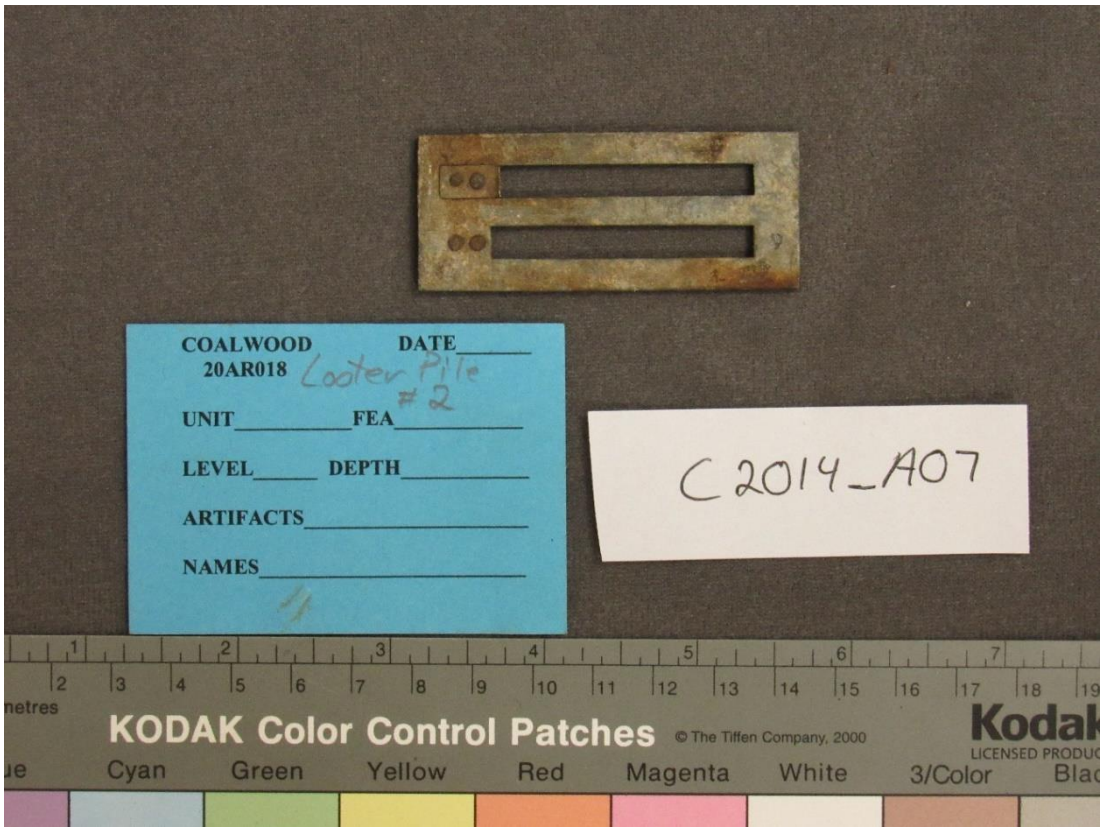

Figure A.24. Specimen #: C2014_A07

Vessel #: 303 (combine with C2014_A06)

Location: Looter Pile #2

Description: 2-hole accordion reed plate. Could also be for a concertina. Measures 63.21mm X 26.02mm X 2.51mm. Both holes measure 43.40mm X 5.58mm. No reeds intact but there are two rivets holding each one to the reed plate and they are on opposite sides which suggests a disonoric instrument.

A.5. Coalwood 2016

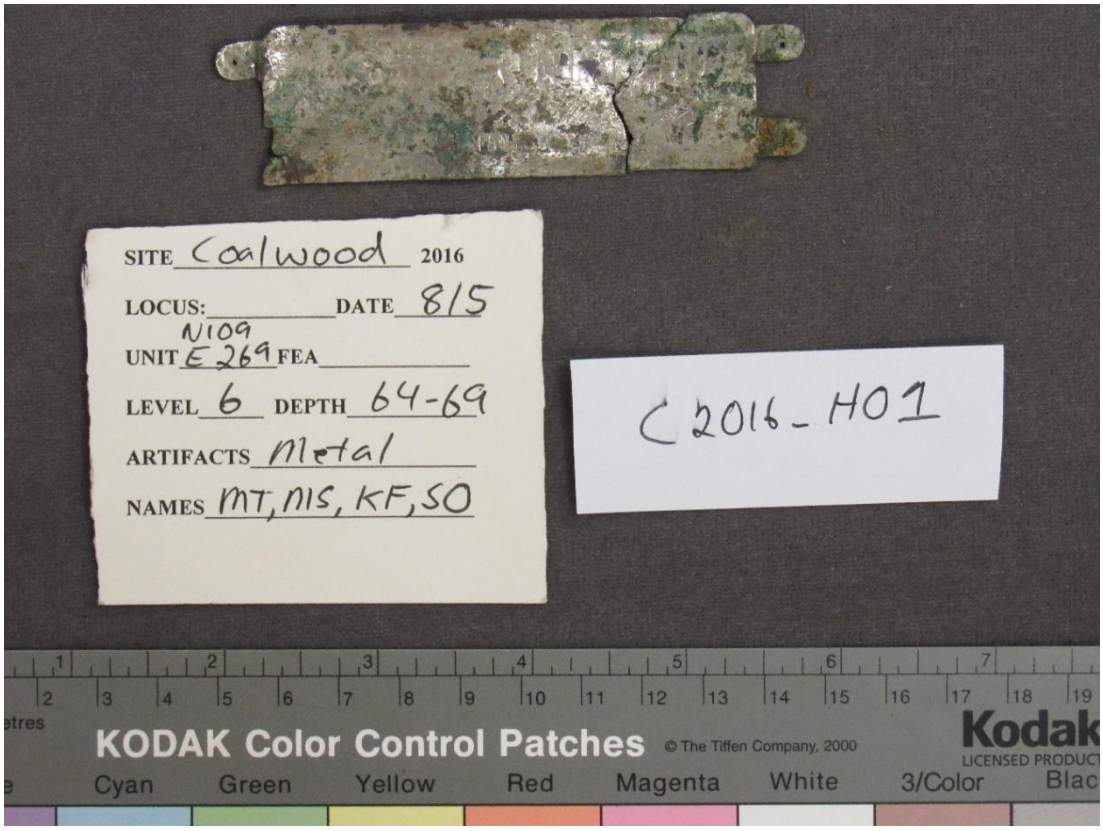

Figure A.25. Specimen #: C2016_H01 (2 pieces)

Vessel #: 110

Location: N109 E269, Level 6, Depth: 64-69

Description: Top cover for a Hohner Marine Band 10-hole harmonica. Made of a cuprous metal with an electrolytic silver coating, possibly known as German silver. The marine band harmonica was patented by M. Hohner in 1897. (Patent picture). But it went through many stylistic changes through the years. According to patmissen.com, it appears to be from the early 1920s but I haven't seen any other sources to cross-reference this with. The plate is highly corroded but can be read. Reads "Made in Germany" along the left side. Moving right there is a logo for the Hohner company that is difficult to make out. "Marine Band" is featured in larger letters along the middle to top portion of the plate. Below that is the signature of Hohner. Below that it says "Patent Aug. 22, 1897" Key of "D" can be read on the right side. The top plate also has two distinct tabs that stick out of each side for mounting. Measures 98mm X 26.12mm X .67mm.

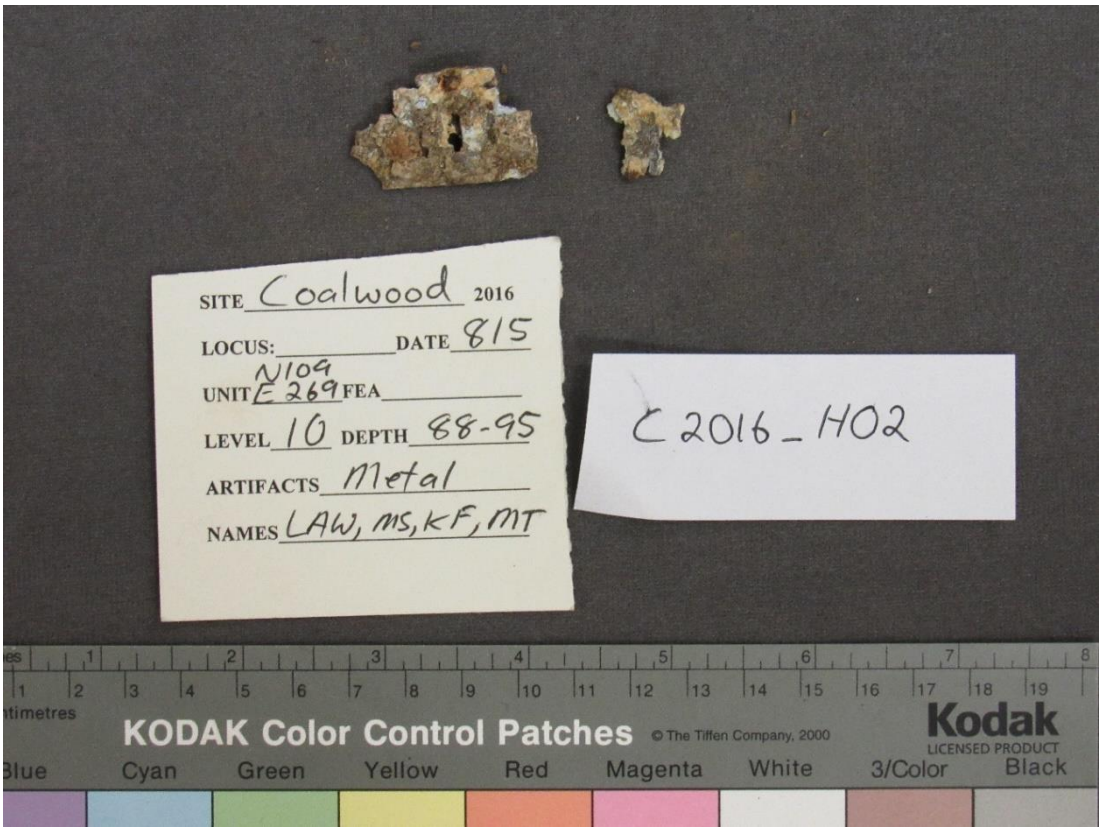

Figure A.26. Specimen #: C2016_H02 (2 pieces)

Vessel #: 111

Location: N109 E269, Level 10, Depth: 88-95

Description: Partial harmonica reed plate with partial wood comb. Very corroded. Not much diagnostic quality here.

Figure A.27. Specimen #: C2016_H03

Vessel #: 112

Location: N114 E241, Level 6, Depth: 66-94

Description: 10-hole harmonica reed plate. No intact reeds. Reeds were riveted (heavier rivets) on one side. Measures 101.20mm X 25.76mm X 1.33mm. Has four holes (2.8mm dia.) for mounting screws (two at each end). Partial wood comb on the bass side.

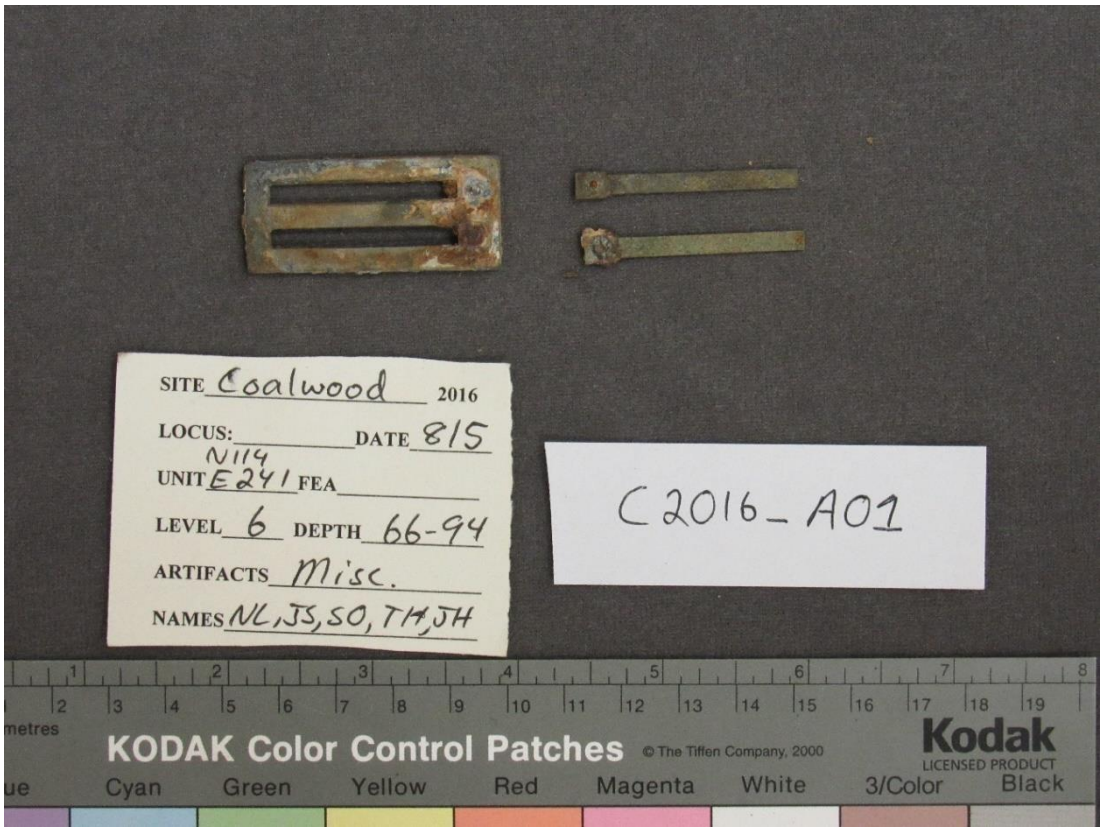

Figure A.28. Specimen #: C2016_A01

Vessel #: 304

Location: N114 E241, Level 6, Depth: 66-94

Description: 2-hole accordion reed plate with two loose reeds. Reeds are mounted on opposite sides along the same edge. Measures 44.97mm X 20mm X 3.14mm. Interior holes are 31.25mm X 3.55 and 32.99mm X 4.47.

Figure A.29. Specimen #: C2016_H04 (2 reed plates and 28 pieces of wooden comb and 2 loose reeds)

Vessel #: 113

Location: N120.5 E265.5, Level 1, Depth: 0-12

Description: Almost complete 10-hole harmonica with two reed plates and wooden comb (most likely pear wood or another sort of fruit wood). Recovered intact but the comb has since degraded and fell apart. No top or bottom covers.

Top reed plate measures 101.47mm X 25.32mm X 1.31mm. One intact reed but too corroded to pitch. Four holes (3mm dia.) with two on each end for mounting and some rivets for lining up. Good portion of wooden comb still stuck to top plate.

Bottom reed plate measures 101.23mm X 25.35mm X 1.02mm. Six reeds intact but too corroded to pitch. Four holes (3mm dia.) with two on each end for mounting and some rivets for lining up. Some wooden comb still stuck to bottom plate.

Partial wood comb in pieces (28). Could be tested for the type of wood.

Appendix B – Catalog of Lyrics and Music

B.1. Kaivantomiehen laulu (Miner's Song)

B.2. Minä syvyydessä maan alla käyn työssä (I in the depths, under the ground go to work)

B.3. Sur La Route de Berthier (On the Road to Berthier)

B.4. Työmiehen Matkat Michiganissa (The Workingman's Travels in Michigan)

B.5. Yli kymmenen vuotta Korpiinissa oli jo astuttu (Over Ten Years We Have Lived in Corbin)

B.1. Kaivantomiehen laulu (Miner's Song)

Source: *Uusi Työväen Laulukirja* (1909), English Translation: Oren Tikkanen

Niin musta on, musta on ikuinen yö ja kellot lyö kaksitoista. Vain torkkuen toverit istuskelee, hikikarpalot kulmillansa	So black, so black is the eternal night, and the clock strikes twelve. Only drowsing comrades sit drowsing with sweat on their brows.
Niin musta on, masta on manalan sy'än josta mä leipäni haen. Kapitaali mun orjakseen ostanut on käsivarteni ja verenkin.	So black, so black is the heart of hell where I earn my bread. Capital has bought my servitude, my arms and even my blood.
Oi armaani, armaani, kalpea oi, tul syömmeni sykkimään sait. Nyt valkella vuoteelas lepäjät kai, iki-vouri mun peittävi vain!	Oh my dear, my dear, pale, oh! How you have made my heart beat! Now on your white bed you surely lie. Only the eternal mountain covers me.
Oi Luoja, oi Luoja, sua kiroa en; en kiroa kohtaloain – Minä kiroan valtoja tyrannien ja vapauttain ikävöitsen.	Oh creator, oh creator, I curse you not, nor do I curse my fate. I curse the powers of tyrants and I long for my freedom.
Minä ikävöin vapautta ihmiskunnan proletaarien sorrettujen – Minä ikävöin taistohon tuimimpahan veriruusuja katsomahan.	I long for the freedom of humanity and of the oppressed proletariat. I long for the sharper struggle, to see the blood roses bloom.

B.2. Minä syvyydessä maan alla käyn työssä (I in the depths, under the ground go to work)

Source: Library of Congress American Folklife Center

Minä syvyydessä alla maan käyn työssä toimien,
Ja häntelissä pyörittää saan kautta voimien.
Minun nimeni on mainari, työn arvon mukahan.
On parempi kuin lanserit, ei kiellä kukahan.

Kuin oman arvon tuntoa on mainimiehellä.
Kun maanpäällystyön miehet ei jaksa sitä käsittää.
Kun kun sorimiehet, grytterit ja kämppäjätkät muut,
ne ompi meidän mielestä kuin mitkäkin maitosuut.

Kuin oman arvon tuntoa on mainimiehellä.
Kun maanpäällystyön miehet ei jaksa sitä käsittää.
Kun kun sorimiehet, grytterit ja kämppäjätkät muut,
ne ompi meidän mielestä kuin mitkäkin maitosuut.

English translation by Susanna Linna and Tom DuBois

In the deep underground I go to work
And twirl tool handles with all my strength.
My name is Miner because I do my job so well.
It's better than being a lancer, there's no denying that.

The miner has pride
That men working
Above the ground can't understand.
How? Those pretty boys, porridge-eaters, lumberjacks--
As far as we're concerned, they're just a bunch of milksops.

B.3. Sur La Route de Berthier (On the Road to Berthier)

Source: Dave Bezotte

Bb F7 Bb Eb Bb
Sur la route de Berthier, Sur la route de Berthier

Bb F7 Bb Eb Bb
Il y avait un cantonnier, Il y avait un cantonnier

F7
Et qui cassiat, Et qui cassait, des tas d'cailloux, des tas d'cailloux

Bb F7 Bb
Et qui cassait des tas d' cailloux pour mettr' sous l'passag' des roués.

Bb Eb F7 Bb
Refrain: Ah! Que la route est belle, belle, que la route est belle, belle a Berthier. (2X)

Un' grand' dam' vint a passer. (2X)
Dans un beau caross'doré (2X)
Et qui liu dit: (2X) Pauvr' cantonnier, (2X)
Et qui lui dit:" Pauvr' cantonnier, to fais un fichu métier, tier, tier, tier.

Refrain: Ah! Que la route est belle, belle, que la route est belle, belle a Berthier. (2X)

Le cantonnier lui répond: (2X)
"Faut que j'nouriss' mes garcons, (2X)
Car si j'roulion (2X) caross' comm' vous, (2X)
Car si j'roulions carross' comm' vous,
Je n'casseriouns point d'cailloux, iou, iou, iou."

Refrain: Ah! Que la route est belle, belle, que la route est belle, belle a Berthier. (2X)

Cette réponse fut remarqué (2X)
Par sa grande simplicité (2X)
C'est c' qui prouv' que (2X)
Les malheureux (2X)
C'est c' qui prouv' que les malheureux
S'ils le sont, c'est malgré eux, z'eux, z'eux, z'eux

Refrain: Ah! Que la route est belle, belle, que la route est belle, belle a Berthier. (2X)

B.4. Työmiehen Matkat Michiganissa (The Workingman's Travels in Michigan)

Source: *Lumber Jakki*, Oren Tikkanen

Ylä Michiganissa olen syntynyt	I was born in Upper Michigan
Olen syntynyt saunassa seila	I was born there in a sauna
Olen syntynyt Ebenin seutoilla	I was born in the Eben vicinity
Seila maan tien varlella seila.	At the edge of a dirt road.
Detroittiin ko laksin mä	When I went to Detroit
Oli suussani Suomen kieli	I knew the Finnish language
Mut kun Woodrown Wilsonnilla hoboilin	But hoboing on Woodrow Wilson Ave
Niin muutui kieli ja mieli	I changed my language and my mind
Sweetheartin mä ketsasin	I found a sweetheart
Jon kansa olin parkissa illoin	And we were in the park
Nice girl she was, you bet she is	Nice girl she was, you bet she is
Voi kun oli fonia silloin.	Boy, we had fun then.
Karavanin kapakassa poikkesiin	At the Caravan Bar
Mä ordasiin munta kertaa	I ordered many times
Nain arvostaan mä hymyliin	
Nuin monen muista vertaa.	There were many different brands.
Fortin factorissa jabin sain	I got a job at the Ford factory
Seilla työnsiin sembli lainis	Working on the assembly line
Mutta vikon pasta sanoin bassille	But after a week I told the boss
Parempi tyntää kupari mainis	The copper mine would be better
Calumettin Heclassa tynsin mä	I got a job for Calumet and Hecla
Seila pukkasin tramma karaa	I pushed a tram car
Ja opin minä pikkaa jusamaan	And learned many uses for a pickaxe
Monen muun asian haaraa.	Like how to use it as a crutch.
CCI'n mainissa toisen jabin sain	I got a job at CCI
Ne ylenti mun timbermanniks'	And they promoted me to timberman
Olin mainari minä arvoltaan	I thought I was a miner
Mut' ne koolassi greenhorniksi.	But they called me a greenhorn.

Figure B.1. Sheet Music for Työmiehen Matkat Michiganissa, Source: Oren Tikkanen.

B.5. Yli kymmenen vuotta Korpiinissa oli jo astuttu (Over Ten Years We Have Lived in Corbin)

Source: Virtanen 2010

Kymmenen vuotta Korpiniissa oli jo asuttu
eikä täällä kauppapuotia viel' oo' näkenyt,
vain Kovaniemi se elelee siellä se kello-peslevi
hän tuumaili että tuostahan se oli reformi

Vaik' on long way to Evlettiin, mistä jauhosäkin saa
It's a long way to Evelettiin
kun ei ole kauppapuotia
Goodbye jo kirkollikkii velverron rakentais
Kotmannin kolikin roppia kauppapuotis' myydän kai.

Ja liikkeen hoitelijaksi ne laittoi rookerin
joka nimeltään oli Mäkinen ja aika täkyri.
Ne tavaraa nyt ostelivat tuolta juutalaiselta.
Ja se arveli että hintaa niille korotta vain saa.

Chorus: Vaik on long way to Evelettiin
mistä ryysyareetun saa.
It's a long way to Evelettiin,
kun ei ole kauppapuotia
Goodby jo kirkollikkii, velverron rakentais'
Kotmannin kolikin roppia kauppapuotis' myydän kai.

Evelettissä sulkatalkona
Kyllä niistä Korpinissa taalan aina saan.
Uusia seillä lasilla ompi näytteillä
vaikka puolet hintoja koh rotta ei joudat tyvitä

Chorus: Vaik' on long way to Evelettiin,
mistä ryysyareetun sais'
Vaik' on long way to Evelettiin
kun ei ole kauppapuotia

Over ten years we've lived in Corbin,
But not a store we've seen
Just Kovaniemi's living there, that timecard tracking thief.
He thinks he'll be able to reform us that way?

But it's a long way to Eveleth,
Where you can buy a sack of flour
It's a long way to Eveleth, since there isn't any store.
Goodbye to the church league, we're going to build a chapel (a store).
Gottman's Colic Syrup will maybe be sold at that store.

And as a manager they chose a crook.
His name is Mäkinen, and he's a schnook.
They were buying all their stuff from that shyster
And he felt he could hike the price just as much as he pleased.

Chorus: But it's a long way to Eveleth,
Where you can get a rag crate.
It's a long way to Eveleth,
'cause there isn't any store.
Goodbye to the church league, maybe we'll build a place.
Gottman's Colic Syrup may be sold there.

In Eveleth we're at a feather bee [to raise money for the store]
Sure you can always get a dollar for one of those in Corbin.
New eyeglasses are on display there,
Though even at half the price they wouldn't be a deal.

[Chorus]

While we're slaving over lumber work,
That cock-eyed Mäkinen is fixing the prices.
A dollar-and-a-half shirt he wants to sell for two and a quarter.
And still he assures us it's no cheapskate goods.

[Chorus]

(Similä, 1938)