MINER VERSUS MODOC: A HISTORY OF CONFLICT OVER
RESOURCE USAGE IN THE WATERSHEDS OF
NORTHEASTERN CALIFORNIA DURING
THE GOLD RUSH ERA

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in
Geography

by
Alex Hayes
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ABSTRACT

MINER VERSUS MODOC: A HISTORY OF CONFLICT OVER
RESOURCE USAGE IN THE WATERSHEDS OF
NORTHEASTERN CALIFORNIA DURING
THE GOLD RUSH ERA

by

Alex Hayes

Master of Arts in Geography
California State University, Chico
Summer 2012

The subject of this thesis is to study the environmental history of conflict over resources between gold miners and the Modoc people during the Gold Rush Era in Northeastern California. The main question that the study seeks to answer is how did gold mining in the watersheds of Northeastern California during the mid-Nineteenth Century upset the traditional lifestyle of the Modoc people? After having introduced the research question, a review of pertinent literature is conducted in order to compare contemporary scholarly views on how environmental history is studied. A traditional view of the story of miner and Native Californian interactions is then presented in order to show how this study is different than a traditional historical study by incorporating environmental effects in the study. After the traditional story is discussed, the methodol-
ology section is introduced. This section describes the primary methodology used in researching the land usage techniques of the miners and Modocs. The Modoc’s lifestyle and their land use techniques are then compared to the lifestyle of the gold miners and what aspects of their lifestyle may have led to classes with the Modocs. There then is a discussion of how miners upset the Modocs lifestyle by both attacking their fishing camps and destroying the rivers by siltation from their mining. What is shown by this study is that although environmental destruction was a cause of conflict between the miners and Modoc people it was not the only cause of conflict.
CHAPTER I

INTRODUCTION

To study the history of The California Gold Rush presents a unique opportunity to examine the changing environment and the changing peoples of Northeastern California. For thousands of years the land was the home to Native Americans, the most prominent of whom were the Modoc people. Change took hold in the early 1850s when gold miners began to arrive in land that, unlike land in the Gold Country (close to present day Sacramento), had been previously untouched by gold miners. This land was located in Northeastern California, in a part of a geographic area called the Klamath Basin. The meeting of these two distinct groups of people, the gold miners, and the Modoc people on the waterways of the Modoc homeland set the stage for a unique chapter in American history. The lifestyles of gold miner and Modoc were both derived from the waterways of Northern California, but both groups had different views as to how the watersheds could be best used.

To the Modoc, the waterways of their homeland were the main place in which they got their food and means of sustenance. Since the watersheds of Northeastern California provided the Modocs with most of their food, the Modocs treated these waters with great respect. The Modocs tried not to overharvest the plants and animals within the
watershed, nor did they try and alter the watershed by diverting waterways either. The way that the Modocs managed the watersheds was in essence, for long term usage. Because the Modocs took from the watersheds only what they needed, and did not make any major alternations to the flow of water through the watershed, the waterways of the Modoc homeland were able to function healthily for many millennia. When gold miners arrived in the Modoc’s homeland in the early 1850s they saw something completely different from what the Modoc’s saw in the watersheds. To the miners, this land provided an opportunity to get rich quickly from the gold that lay in the same land and water from which the Modoc got their means of sustenance. Instead of managing for long-term conservation of the watersheds like the Modocs did, the miners managed the land for short term resource extraction. The miners were not aware of the significance that the land had for the Modocs, and that it offered so much in the way of food resources for the Modocs. Such differences of opinion over the usage of the same land would inevitably lead to conflict between the two groups. How the conflict came about is the subject of the research of this study.

Research Question

Studying both Modoc and gold miner conflict over land usage in the Modoc homeland provides a unique opportunity to study different worldviews over land usage at the time of contact between these two different groups during the mid-Nineteenth Century. While the miners saw the watersheds of the Modoc Plateau as a source of wealth in the form of gold, the Modoc people saw the watersheds as an essential part of their lifestyle as it was from this very water that they got their means of subsistence. The
miners saw the waters as a way of getting rich quickly and mined them voraciously in their search for gold. The miner’s views on land usage were different than Modocs, who managed the waterways as a source of food. The Modocs harvested both plants and animal resources from the waterways of their homeland, and took only the resources that they needed to survive. The primary intention of this study is to answer the question: How did gold mining in the watersheds of Northeastern California during the mid-Nineteenth Century upset the traditional lifestyle of the Modoc people?

Before the study can begin in detail, it is first necessary for a review of the pertinent literature. A review of the literature shows what has been written on the definition of environmental history; what methods have been used to study environmental history; and how the methods discussed have been applied to the study of Native Americans, and gold miners during the California Gold Rush.
CHAPTER II

LITERATURE REVIEW

Introduction to Environmental History

Environmental history holds a special place among American scholars. The studying of environmental history began only a few decades ago, making it one of the more recent aspects of history to be studied. Names such as Donald Worster, William Cronon, and Carolyn Merchant have helped give environmental history recognition as a unique way of studying history. Worster defines the subject of environmental history as the studying of “the role and place of nature in human life” (Worster 1990, 1089).

Environmental history provides a number of different methods of examining how people interacted with their environment over time.

Donald Worster describes environmental history as a discipline in which the interactions of past societies with the nonhuman world is studied. Environmental history is unique due to the fact that it is multidisciplinary. These methods include using sources that discuss subjects like ecology, plant life, and geology in order to provide a bigger picture of the natural world in which people lived. Additionally, environmental history also seeks to examine the technology and methods of subsistence that people have used to shape the environment according to their way of living. The final thing that environmental history focuses on, according to Worster, are ideas that people have had
about their surrounding environment and how the ideas shaped their respective lifestyle in relationship to their nonhuman environment (Worster 1990, 1089-1090).

Worster himself is primarily interested in examining how people got their food from the surrounding environment and how these methods of procuring food have changed over time. According to Worster, if we are to better understand the connection of humans to nature, food production is a good place to start. Worster introduces the concept of an agroecosystem, which is an ecosystem that has been reorganized and reshaped by people, so that it can produce food more efficiently for those people (Worster 1990, 1093).

His study of historic agroecosystems show how people adapt to dealing with issues such as low soil fertility, drought, and pests (Worster 1990, 1096). Small scale traditional forms of agriculture did not affect the ecosystems in a negative way. During the eighteenth and nineteenth century, land was made a commodity with the introduction of modern capitalism. With the advancement of capitalism, traditional respect that people had of land as a provider began to change into viewing land as a commodity. According to Worster, any past reverence for the land vanished so that the free market could function without any restraint (Worster 1990, 1101). By examining its environmental history, Worster believes that we can examine the real significance of nature in our lives and discover just how much nature has affected and shaped humans over time (Worster 1990, 1106).

Worster’s views on environmental history have been examined and critiqued by William Cronon. While Cronon agrees with Worster’s basic definition of environmental history, he notes that Worster’s focus on food production and technology
as being potentially too materialistic, and that it does not focus enough on people’s
cultures and beliefs in relationship to the environment where they live (Cronon 1990,
1122-1124).

Cronon believes that in order to properly study environmental history, one
must study relationships within a system like ecologists. When Cronon speaks of
relationships in environmental history, he notes that there are questions that should be
asked when studying relationships. He writes that some relationship based questions that
could be asked include: “How much of the output of their biological system do people
store to provide food during the least productive seasons?” and “On what organisms do
they most rely on for their own subsistence?” Focusing on relationship based questions
such as these can give researchers an idea of how a particular people viewed the world
around them, and what their main method of subsistence was in their respective lifestyles
(Cronon 1990, 1126-1127). Cronon’s focus on relationships provides something of a
contrast to Worster’s focus on technology and modes of production. Environmental
history is multidisciplinary; there are many angles from which it can be studied.

Carolyn Merchant uses an approach coming from a different direction than
either Worster who focuses on means of production, or Cronon who focuses on
relationships. She examines environmental history from a gender perspective and the
different roles men and women have had historically with respect to the environment.
Among the differences she points out are that in traditional societies women performed
chores like collecting plants, making baskets and clothing, and tending crops. Men on the
other hand had completely different roles and traditionally hunted and fished and cleared
forests and brush by burning (Merchant 1990, 1117-1118). Merchant notes that
environmental histories that are written with the roles of different genders in mind provide a more complete picture of how people interacted with the environment around them. Unlike either Worster’s or Cronon’s approach, her approach is more focused on the humans themselves rather than on just systems or relationships discussed by Worster and Cronon.

Another approach to studying environmental history is taken by Arthur McEvoy. In his book *The Fisherman’s Problem: Ecology and Law in The California Fisheries 1850-1980*, McEvoy discusses environmental history in the context of California’s fishing industry during the nineteenth and twentieth century, and examines how human activities affected California’s fish stocks. McEvoy’s methods of study takes into account both fish ecology and human fishing industries. He writes that human fishing economies often failed to take into account the biotic and abiotic factors of fishing. McEvoy makes the point that fishes are sensitive to environmental factors that are beyond the control of humans. Environmental factors that have the potential to affect fish populations include levels of oxygen and sediments in the water, and the temperature of the water (McEvoy 1986, 47).

McEvoy mentions that climactic factors in particular, such as the changing temperatures in the water, can have significant effects on fish populations. An increase or decrease in water temperature can lead to massive die-offs of small fishes like sardines and anchovies. The depletion in the numbers of small fish can in turn affect populations of larger fish such as salmon. As a consequence of changing environmental conditions such as climatic conditions, human fishing industries can likewise be affected negatively (McEvoy 1986, 7-8). McEvoy makes a very clear point about how dependent humans are
on the non-human environment for their livelihoods, and that the slightest change in environmental conditions can have far-reaching consequences for humans as well as animals.

Other environmental historians such as Kathryn Morse examine how people’s attitude toward the environment has changed over time. In *The Nature of Gold: An Environmental History of the Klondike Gold Rush*, Morse examines the attitudes of gold miners during the nineteenth century. According to Morse, Americans in the nineteenth century viewed the pursuit of gold as a natural human instinct, as opposed to something that has been taught to them culturally. Morse points out that viewing the pursuit of gold as something that was natural, was an aspect of nineteenth century American culture (Morse 2003, 16). Many of the miners, who were going off to mine gold in the unknown territory of the American West, believed that they were merely following their natural instinct. To the miners, undertaking such a long journey to search for gold was not altogether unusual by the standards of the day.

Environmental historians have written extensively on Native American history. In *The American Indian and the Problem of History*, Calvin Martin points out that there are special considerations that must be made when studying Native American history. Martin points out the fundamental difference between modern Western history and Native American history is that Western history has more of an anthropomorphic view on history, as opposed to a Native American view, which views history in a more biologic sense. In other words, Native Americans tend to see man and nature as being more closely linked than contemporary Western history which focuses more on humans and less on nature. Since these views are so different Western historians have developed
a disdain for Native American interpretations of history and seek to create their own version of Native American history by looking at it from an anthropocentric point of view instead of a biologic one (Martin 1987, 6-9). Martin then also notes that a number of contemporary environmental historians are guilty of looking at Native Americans in just this way, and as a result do not give a complete picture of Native American history.

William Cronon is among those authors reviewed by Martin that write on the subject of Native American history. According to Martin, who reviewed Cronon’s book, *Changes in the Land: Indians Colonists and the Ecology of New England*, Cronon describes Native Americans as having viewed beavers and indeed all game animals as resources, rather than living beings, in the same way as humans. It is added that prior to the fur trade the Native Americans did not hunt beaver very much because there was not a large demand for them. Martin makes a point that traditional Native Americans viewed large game animals as in many ways superior in skill and prowess then humans were, and thus had a tremendous amount of respect for the animals that they hunted. Animals were not viewed as commodities by Native Americans, but rather as living beings on the same level as humans themselves. Historical studies that only view Native American history from a Western anthropomorphic view of history do not provide a balanced view on Native American history (Martin 1987, 10).

Cronon for his part does not write of Native Americans exclusively in *Changes in the Land*. What Cronon is doing in this book is a comparative environmental history detailing the environmental views and uses of colonists in New England with those of the Native Americans. From Cronon’s perspective, colonists viewed the land in terms of commodities, or in terms of things that could be created from the land and then
bought and sold. From the colonists point of view the buying and selling of these commodities gave them wealth. The views of the Native Americans were completely different on the other hand. Prestige and wealth were things that were maintained not through the buying and selling of goods, but through family connections and personal alliances. The Natives saw the land around them as providing them with means of subsistence, not wealth and prestige as there were very few material items in their culture that conferred wealth and prestige to other people (Cronon 1983, 166-167).

True to Martin’s criticism, Cronon does not look at history from a Native American perspective and does not mention the spiritual value the animals had for the Native Americans in his book. In the section on discussing beaver that Martin mentioned, Cronon links the Indians conservation of beavers before the arrival of colonists to their seasonal rotation to different areas of land rather than out of spiritual respect. However, Cronon does make an important observation that because the beaver became a commodity, Native Americans sought to protect it by creating hunting territories that were occupied by certain families. These families would then hunt every third year and only hunt a limited number of beaver to ensure their survival (Cronon 1983, 105). One way of looking at this change in land use on the part of Native Americans, is that they were astute realists who realized that times had changed. The Native Americans then changed their lifestyles in order to protect an animal that they both respected and needed for their own survival in a rapidly changing world for Native Americans.

Literature written on contemporary studies in American environmental history can provide a number of different ways of examining how people lived in relationship to the land that they lived on. Donald Worster provides an effective definition of what
environmental history is and how people form systems of sustenance with the land. William Cronon’s method of study follows the specific relationships groups of people had with their surrounding environment. Carolyn Merchant makes some points that both men and women had different gender roles with respect to their relationship to the environment. Arthur McEvoy’s study shows how dependent humans are on the non-human environment for their survival, and that slightest change in environmental conditions can have far-reaching consequences. Kathryn Morse principally examines how people’s attitudes toward the environment have changed over time. Calvin Martin makes an important point with Native American History, in that it must be viewed differently than traditional Western history. All of these different methodologies provide a unique way of examining environmental history. There is no one method for studying environmental history, and each method can be used, depending on the subject being studied, and the time period in which the study is taking place.
CHAPTER III

THE TRADITIONAL STORY

The Traditional Story of Miner and Native American Relations During the California Gold Rush

The traditional story of white miner and Native American relations during the California Gold Rush is typically told from the perspective of political, rather than environmental history. Typical histories written of the California Gold Rush discuss events and interactions between white gold miners and Native Americans within the diggings around Sacramento where most of gold mining took place. These histories typically include events such as treaty negotiations, or major skirmishes that happened between whites and Native Americans over disagreements between the two groups. In many histories of the California Gold Rush, the Native Americans are often given a secondary role. Native Americans are portrayed as either victims of white brutality, or unfortunate bystanders who were swept aside by modernity. It is the white miners who are given the main role as the protagonist of the story of the California Gold Rush, living a hard life out in the wilderness, mining the untapped wealth that the goldfields held.

The stereotypical portrayal of a gold miner from the era of the California Gold Rush is a tough, independent, long-haired male who worked all day mining gold in the streams of California and who spent their free time carousing and getting drunk (Blodgett
This over-romanticized portrayal of a gold miner that has become something of a culture hero in the history of the United States. Another key characteristic of the traditional history of The California Gold Rush, and of the gold miners was that they were heralds of Manifest Destiny, of the expansion of civilization into the wilderness of the American West (Johnson 2000, 25).

In contrast to the image of the gold miner as being a frontier hero and a bringer of progress, the Native Americans of California are not given as nearly a heroic portrayal as the gold miners. In many histories written on the California Gold Rush, Native Californians are often given the roles of supporting characters. The places where Native Californians are mentioned most typically in histories on the California Gold Rush are when Native Californians are the victims of depredations by whites (Brands 2002, 306). The other instance in which Native Californians are mentioned in the history of the California Gold Rush are during treaty negotiations with the U.S. Government (Johnson 2000, 230-232).

During the California Gold Rush, the United States Government did make a number of treaties with Native Californian tribes. Treaties were made with tribes such as the Miwok in 1851, which promised them material goods such as clothing and blankets in return for the Miwoks leaving relocating from their traditional homelands in the foothills of the Sierra Nevada and relocating to the San Joaquin Valley. However, the United States government never ratified any of the treaties, owing to opposition from the California state government (Johnson 2000, 230-232). Relations between whites and Native Americans began to sour especially since the whites began to encroach further on native lands and continued to harass them.
The history of atrocities done to Native Americans during the California Gold Rush has been well documented in contemporary history. Clifford E. Trafzer and Joel Hyer, who have written on conflict between miners and Natives during the California Gold Rush, point out that some Native Americans initially responded to the gold discovery by becoming miners themselves. Many whites responded by cheating the Native Americans out of their gold. One way the whites did this was by paying natives in trade goods such as blankets, clothing, and meat. The whites then inflated the value of these goods so the Native Americans received fewer goods for the amount of gold they unearthed (Trafzer and Hyer 1999, 16).

White traders would often have two prices for the same goods, one for whites and one for Native Americans. A common trick used by whites to separate native miners from their gold was to use a two ounce weight (known as a “Digger Ounce”) when trading gold with natives instead of a one-ounce weight that was used with white miners. This could be used to secure gold from native miners at half the price that white miners were paid (Trafzer and Hyer 1999, 16). Depredations such as these made against the Native tribes of California did not ease the tension that existed between the whites and Native Americans. Unfortunately being cheated out of their gold was not the only depredation that the Natives were subjected.

What Trafzer and Hyer mention though is that encroachment by miners on to Native American lands led to violent attacks on the miners and the miners responded with ferocious brutality. Bands of miners often attacked groups of Native Americans that had nothing to do with attacks on miners (Trafzer and Hyer 1999, 17). Trafzer and Hyer do an admirable job of describing the extent of the atrocities done to Native Californians during
the California Gold Rush. However they are not specific in describing in detail what the miners did to harass the Native Americans. There is also no description the specific geographic areas where the conflict between the miners and Natives took place. It is the lack of detail as to what caused the conflict and where it happened that provides an incomplete picture of the conflict between whites and Native Americans during the California Gold Rush.

The history of the California Gold Rush has too often been skewed to show miners as the bringers of progress and civilization to an untamed wilderness. The story told of the Native Californians is just the opposite. The Native Californians are shown as victims of the same progress and civilization that was brought to their homeland by the miners. The main issue with the traditional story of conflict between miner and Native American is the lack of detail as to what actually caused the conflict between the two groups. The main object of this study is to show how the differences in how the opposing viewpoints on environmental usage of the Modoc people and the gold miners caused conflict between the two groups during The California Gold Rush.

The study is also unique in two respects: that it examines conflict between miners and Natives in Northeastern California; and that it pays particular attention to resource usage between the two groups. Northeastern California is not an area that is given a lot of attention with regard to the California Gold Rush. Most studies being done on The California Gold Rush focus the area around the Sacramento Valley where most of the gold was mined.

The history of gold mining Northeastern California is unique in that not a lot of research has been done on mining in this geographic area. The approach of this study
also attempts to find out what happened to cause the conflict between whites and Native Americans; with an emphasis on how resource usage may have contributed to the causation of conflict. Looking at this conflict between whites and Native Americans from an environmental history perspective can provide a way of examining this conflict in a way that is not typically used in conventional historical studies.
CHAPTER IV

METHODOLOGY

My methodology for my study is mostly qualitative, and I focus on two distinctive study areas. My first study area involves the main land usage techniques of the gold miners, and their views on land usage. My second study area was the main land usage techniques of the Modoc, and their views on land usage. The information that I discovered from these study areas were then used to answer the main question of my study: How did gold mining in the Modoc homeland during the mid-Nineteenth Century upset the traditional land uses of the Modoc people?

The main sources that I used to find out the land use patterns and views of the Modoc people were predominantly tribal histories and ethnographic studies. My main ethnographic sources were Handbook of the Indians of California, by Alfred Kroeber, Native Americans: An Encyclopedia of History, Culture, and Peoples, by Barry M. Pritzker, California Indians and Their Environment, by Kent G. Lightfoot and Otis Parrish, and Primitive Pragmatists, by Verne F. Ray. Each of these sources contained valuable information on the Modoc’s methods of subsistence; their home range is within California, and their views on land usage. I used these sources to build a picture of what the Modoc’s lifestyle was like, and what aspects of their lifestyle could have led to conflict with miners within their homeland.
When I was studying the ethnographic material on the Modoc people, I looked for specific examples of how they procured their livelihoods from the surrounding environments. I was principally interested in three distinct study areas within this study section. The first study of interest to me was where the main geographic locations were where the Modoc people got their food and where those locations were in relation to the mining camps. I created a map in order to provide a visual representation of the location of the fishing camps which I will go into greater detail on near the end of the methodology section. My second area of interest was what plant and animal food sources the Modocs were particularly dependent on within these main geographic locations. My third area of study was what tools and techniques the Modocs used to harvest their food from the surrounding environment. The tools and techniques section focuses on what the most common methods that are used by the Modocs to hunt and gather food within their homeland.

Focusing on the methods of how the Modoc people derived their lifestyle from the environment is similar to the techniques used by Donald Worster. As Worster’s prime focus was on how traditional societies managed the environment for food, his techniques have been very helpful in helping me conduct my research on Modoc subsistence systems. By examining the three study areas mentioned previously, I was able to get an idea of the basic geographic locations of where the Modoc people got their food from and what land usage views and techniques could have led to conflict with the gold miners. This section on the Modocs land use will make up the most of the section on the Modocs themselves in the content of this study. Understanding the Modocs land
usage techniques will be able to show what how their lifestyle came into conflict with the lifestyle of the gold miners.

In addition to studying the Modoc’s land uses, I was also interested in Modoc culture, and what their core values were as a people. By studying the social structures and core values of the Modocs, one can gain insight to the reasons why the Modocs lived their lives the way they did. Within this section of my research, I looked for aspects of Modoc life such as what the basic structure of a Modoc family is, and what life is like in a Modoc village. I was especially interested in finding out what qualities the Modocs valued in themselves as a people, and how the Modocs viewed the world around them.

In order to find out why the Modocs practiced the land uses that they did, it is necessary to have a basic understanding of their worldview, and what their core values are as a people. In this section of research I used Cronon’s methods of examining conflict between cultures in relation to environment, such as the examples provided in Changes In The Land. Understanding Modoc culture is essential to understanding both why the Modocs lived the way that they did, and what aspects of their lifestyle mattered most to them. If the conflict between miner and Modoc is to be properly understood, the culture of the Modoc must be studied to provide an understanding of how the Modocs may have viewed mining on their homeland. If mining activity did indeed cause conflict between miner and Modoc, a study of the Modoc’s culture can show what aspects of their lifestyle could have been threatened by mining activities. Although I will not spend as much time discussing Modoc culture as I will their land uses, a basic introduction to their culture is necessary to show just how much their lifestyle was different from that of the gold miners.
My sources for researching the gold miners and their land usage techniques were distinctly different from the sources I used to do research on the Modoc people. For my research of the gold miners, I used a variety of different sources to find out the key points of their lifestyle and how they derived their livelihoods in Northeastern California. My sources that I used to study the miners and their lifestyles included a variety of primary and secondary sources. My secondary sources were primarily histories written about The California Gold Rush. The sources on Gold Rush History were used to create a basic outline of the history of gold mining in California and what the main gold mining techniques were, that were used by the miners. I also used my secondary sources to get a basic geographic idea of where mining took place on the Modoc homeland. The sources that provided most of the information that I discovered about the miners and their interactions with the Modocs were primary sources.

The primary sources that I utilized came from The Bleyhl Collection, an online collection of historical sources on white and Native Californian relations that is run by the CSU Chico Library. In my research of The Bleyhl Collection, I started my research by searching for interactions between miners and Modocs during The Gold Rush Era in Northeastern California. The time period that I most was interested in was the early to mid-1850s, when the California Rush was going through its most active period. My searching presented me with a variety of sources that detailed interactions between miners and Modocs. These sources included letters and journal entries from the miners themselves, reports from soldiers in the U.S. Army on miner and Modoc interactions, and newspaper articles. I researched each source for three main study objectives. The first thing I looked for was the month and year in which the event between miner and Modoc
took place. The second aspect I looked for was where the event took place, and I was sure to make a reference to the event on the map of Modoc fishing villages and mining camps. The third study area I looked at was what the nature and outcome of the event was, and what caused the event to take place. From examining the events using these study points, I was able to piece together where interactions between miners and Modocs took place, what the effects of these interactions were on both the miners and the Modoc people.

I made it a point to examine what mining techniques were mentioned in the historical sources discussing mining activities in the Modoc homeland. The types of mining used could very well have contributed to tension between the gold miners and Modocs. Mining done in the streams could have affected fish populations which were an important food source for the Modoc people. Sources detailing the mining techniques used by the miners, and the damage that mining did to the streams and rivers of the Modoc homeland can shed light on the conflict between miners and Modocs. My research in this section is similar to the methods used by McEvoy in his research of how changes in the physical aspects of the environment affected fish populations in California. Environmental factors that are mentioned by McEvoy include changes of climatic conditions, such as water level and temperature, and levels of silt within the water all of which have the potential to affect fish. Information gleaned from the primary sources I mentioned can show what caused tensions between miners and Modocs to run so high in Northeastern California during the Gold Rush.

Even though my primary objective was to see how mining contributed to the destruction of any creeks and rivers in the Modoc homeland, I also believed it necessary to see if there other sources of tension for the miners and Modocs. For instance, I could
not rule out miners attacking Modoc villages for being a source of tension for the
Modocs. Since gold miners were known for attacking Native American villages to collect
Native American women and children for slaves, I looked for any indications of instances
of slave taking that are mentioned in the historical records that I searched. I also looked
for instances of Modoc attacks on miners, and what the perceived grievances were for the
attacks from the perspective both the Modoc and gold miner. I believe that by utilizing a
wide range of sources; that I will be able to give a clear picture of precisely what events
caused strain on relations between miner and Modoc during the Gold Rush Era in
Northeastern California.

My last section of research was also the one I collected the fewest sources.
The last sources I collected and researched were primarily scientific sources on the land
and watersheds of the Northeastern California. Worster makes it clear in his research on
defining environmental history, that it must also cover aspects of the physical
environment such as wildlife, plant life and geology in addition to cultural history. Doing
so can provide a more complete picture of the environment in which a people lived in a
particular time period. I was specifically interested in the areas that were used by the
Modoc people and the Euro-American miners must be used to provide a picture of the
land itself and why it was sought after by both Modoc and miner.

The information I was interested in here included basic information on
physical science such as geology, climate, and the makeup of watersheds of the Modoc
homeland. I was also interested in what plant and animal species made their homes on the
Modoc homeland. With regard to plants and animals, I mention a few of the main species
encountered in the Modoc homeland. However, I decided to concentrate most on what
plant and animal species the Modoc depended on for their survival. Because of this factor, most of the research done on plants and animals will be mentioned in conjunction with the Modoc people themselves. By including information on the natural science of the Modoc homeland, a better idea will be given of the setting of the scene for conflict, and why the land mattered so much to both miner and Modoc alike.

I would also like to say a few words about the maps I included and the techniques that I used to create the maps. I created two maps using shape files of Modoc fishing camp locations, mining camp locations, and hydrology within the Klamath River Basin Northern California on ArcGIS 10. The shape files of the Modoc fishing camp locations were then pasted onto a topographic base map of Northeastern California. The first map, which I titled “A view of Modoc fishing camps and mining camps within the main conflict area along the Klamath River” (Figure 1), provides a visual representation of the proximity of mining camps to Modoc fishing camps. This map shows the area of conflict along the Klamath River in detail. My second map, which I titled “A view of Modoc fishing villages, mining camps and U.S. Army Forts within Northeastern California” (Figure 2), provides a more general view of the conflict area in the context of the geographic area of Northeastern California. I also included a map from California Indians and Their Environment, by Kent Lightfoot and Otis Parrish in order to show where the Modoc were located in relation to other Native Californian tribes.

Before the study can begin, I must mention a few limitations that I encountered during the course of my research. The main limitation of this study lies with the limitations of the historical record. When I researched the historical record, in particular the search of The Bleyhl Collection, I made my searching as specific as
Figure 1. A view of Modoc fishing camps within the main conflict area along the Klamath River.
Figure 2. A view of Modoc fishing villages, mining camps, and U.S. Army forts within northeastern California.
possible by looking for instances of interactions between the miners, and specifically the Modoc. There were many interactions listed in The Bleyhl Collection in Northern California. The interactions were listed between miners and “Indians” which could have meant that the Indians may have been Modocs. However due to the lack of specificity I chose not to use any sources that did not mention the Modocs specifically.

Although some historical sources did seem to be referring to a specific place and time when conflict between miner and Modoc could have taken place, the sources lack of specificity meant that I did could not use those sources in my study. Some of the sources referred to events happening during the 1850s in territory that could have been Modoc (along the Klamath River for instance), but I did not use them because the sources could have referred to one of the Modocs neighbors such as the Klamath or Shasta people. An exception to this rule was Bigler’s letter, which referred to all the Indian tribes in Northeastern California which did include the Modocs. The historical record also had further limitations to my original study plan apart from the lack of specific sources.

Another limitation was the lack of environmental effects listed in the historic record. The exception to this was the writings of Joaquin Miller, but his writings were exceptional when it came to describing the effects of mining on the environment. His writings if nothing else prove that mining did have an effect on the Modocs and their lifestyle, but his was one of the few historic sources that pointed out about the environmental effects of mining in Northeastern California during The California Gold Rush.
CHAPTER V

PRINCIPAL FINDINGS

Geography of the Modoc Homeland

The primary setting of the study is Northeastern California, the homeland of the Modoc people, which covers both modern day Siskiyou and Modoc County in California, on the northern border between California and Oregon. The Modoc homeland is located in a larger region, known as the Klamath River basin which covers more than 4 million hectares (10 million acres) and covers present day Jackson, Lake and Klamath counties in Oregon; and Trinity, Humboldt, Del Norte, Siskiyou, and Modoc counties in California. The region is named for the Klamath River, which through its various tributaries, provides the fresh water for this region on the border between Oregon and California (National Research Council of the National Academies 2008, 16-17). The waterways of the Klamath River Basin were relied on by many of the local Native American tribes, which included the Modoc people, and were a very important place in the Modoc’s homeland.

The Modoc homeland itself is a very geographically diverse area. The geology is predominantly igneous and was formed by lava flows. The lava flows created small mountain ranges and hills which created drainage areas for tributaries of the Klamath River. These tributaries then formed the lakes, marshes, and streams of the Modoc
homeland which makes up the core part of the Modoc homeland (Ray 1963, xi). The Modoc homeland contains a wide variety of plants including Tule Reeds, Ponderosa Pine, and Sagebrush being a few of the plant types found on the Modoc homeland. Additionally the Modoc homeland provides a lot of homeland for a variety of animal species (Lightfoot and Parrish 2009, 287-292).

Among the animals found in the Modoc homeland included Mule Deer, Pronghorn, water birds such as ducks and geese, and a large variety of freshwater fishes such as trout, salmon, and suckers (Lightfoot and Parrish 2009, 296-300). For thousands of years the Modocs called this area of Northeastern California their home. The Modocs lived in place that was both geographically diverse and had a wide variety of food sources that the Modocs depended on for their survival.

The Modoc people’s traditional homeland within the Klamath River basin extended from Goose Lake in the East, to the foothills of Mount Shasta in the West. The area of the homeland is very large and encompasses some 5,000 square miles (James 2008, 262). Some of the main waterways used by the Modocs were Lower Klamath Lake, Tule Lake and Clear Lake, and the creeks and streams that fed them (Kroeber 1970, 324). Additionally, the Modocs would also make trips to the Klamath River on the Western border of their homeland when fish runs were plentiful there (Lightfoot and Parrish 2009, 296).

An issue with the Modocs living situation was that that the lakes and rivers within the Modoc homeland were spread far apart from one another. There were also very few areas apart from the main waterways mentioned previously mentioned that were rich with food resources. Due to this reason, Modocs were a semi-nomadic people, and
villages were typically distributed at specific waterways within their homeland. Some bands relied mainly on Lower Klamath Lake for their food sources. Other groups of Modocs relied more on Tule Lake, and the Klamath River. If one or more of these waterways were to become degraded, the consequences could be extremely detrimental to the existence of the Modoc people.

The tribes with which the Modocs shared their homeland included the Shasta people to the West, the Northern Paiute to the East and the Achumawi to the South. The Modoc also shared the Northern border of their homeland with the Klamath people of Southern Oregon, and would occasionally join the Klamath on fishing expeditions along the Northern and Western borders of their respective homelands (Lightfoot and Parrish 2009, 296). The Modoc’s lifestyle lasted for thousands of years prior to the arrival of white settlers and miners in the 1850s, who began their mining activities on the border of the territories of the Modoc and Shasta People (see Figure 3). Within their homeland, the Modocs adapted their lifestyles to make the fullest use of the natural resources that were available to them for thousands of years prior to the arrival of whites during the 1850s.

Lifestyle of the Modoc and Its Effects on the Watershed

The Modoc people lived in a patriarchal society with the men being the main decisions makers. Each Modoc village would elect a la gi, or a headman, who would be seen as the main leader for the village. The la gi was seen as the main civic leader of a Modoc village and was looked up to for advice by all other people living in the village. Nevertheless, when the time came to make major decisions, governance was achieved by consensus, and every adult woman and man were allowed to have their say at village
Figure 3. Native California languages.

meetings, although the final decision was up to the la gi (Ray, 1963 3-10). In Modoc society, men and women each had their own gender specific roles, with men hunting and fishing while women gathered plants and cleaned the fish and game that the men hunted. Each role was equally vital in providing food for the tribe, all of which was gathered from the surrounding land.

The land on which the Modoc people lived provided them with all of the resources that they needed to survive, and as such, the Modoc people had a special reverence for their homeland. The land was worshipped by the Modoc people, and prayers were often said to the land for good luck, and when food was scarce. For instance, the Modocs would pray to the rivers to give their families the fish that they needed for food, and to wish the fish good luck in the coming years as well. Since the Modoc knew that they could not survive without the bounty of food provided by the land and water they treated it with a spiritual reverence and had some specific laws regarding the land (Ray 1963, 3-10).

Part of the Modocs reverence and respect for the land and the resulting laws comes from their creation story. The Modocs creation story tells how the Modoc people were brought into the earth by Kumookumps, their creator god, who also created all other living things. According to their creation story, the Modocs, and all other animals were created near Tule Lake, which became the center of their universe (Ray 1963, 18). The idea that all living beings had come from a common place, meant that the Modocs saw themselves as being no different from the animals with which they shared their homeland. As part of their traditional law, when an animal that was sacred to the Modocs was killed by someone, the Modocs prayed to the animal, and vowed to find and kill
whoever had killed the animal. These strong feelings toward the animals with which they shared their land would certainly have played a role in the coming conflict between the miners and Modoc during the 1850s (Ray 1963, 27-28). Although the seasons and times changed, the Modocs dependence on the natural resources within their homeland, and the feelings of respect they had for the land and water did not.

The lifestyle of the Modoc people was heavily dependent on the seasons, and the abundance of different food sources that went with the changing of the seasons. Since resources were available in abundance in only a few distinct water bodies within the Modoc homeland the Modoc people were semi-nomadic. Villages were semi-permanent for this reason and were constructed of materials that were easy to obtain and build with. Modoc winter houses were semi-subterranean with a depth .9 to 1.2 m (3 to 4 feet) and had a roof that was made of wooden poles that was then covered with mats made from tule reeds that grew in the marshes and then a layer of dirt for insulation. A hole at the top of the house served as both the entrance, and as a way for smoke to escape from the fire that burned within the house. Once spring began, winter villages were broken up. The Modocs then dispersed into smaller groups, who then began their search for food along the waterways of the Modoc homeland (Lightfoot and Parrish 2009, 279-281).

The lakes and rivers provided a variety of food sources for the Modoc people, both animal and plant. One of the main vegetable foods that the Modoc’s relied on was a water lily called the wokas (also spelled wocus or wocas), which grew on the surface of the lakes. Modoc women would ride among the wokas beds in the lakes on canoes, gathering the lily bulbs, which were then ground up into a type of flour by the women which could be cooked into a type of bread. The wokas made up a major vegetable staple
of the Modoc diet and was just one of many resources the Modoc people relied on from
the waterways of their homeland. While the Modoc women were involved in gathering
wokas, and other plants in and around the lakes, the Modoc men were engaged in fishing
activities in the creeks and streams of the same area (Kroeber 1970, 324).

The Modoc men were very skilled hunters and fishermen and hunted and
fished a wide variety of animals. Although game animals like deer were important the
Modocs had a particular reliance on the numerous fish species that inhabited the
waterways of their homeland. The species of fish that the Modoc fished for included
salmon, suckers, and trout. The seasons for each fish type of fish varied. Suckers were
typically caught in the spring when sucker runs began in the creeks and streams of the
Modoc homeland. Trout runs began a short time later, typically beginning in the late
spring and lasting through late summer (Ray 1963, 161-162). Both suckers and trout
lived throughout the Modoc homeland and could be fished out of most of the streams and
lakes that made up the central part of the Modoc homeland. Salmon were typically fished
on fishing trips to the Klamath River on the western edge of the Modoc homeland, when
the Modocs joined their neighbors, the Klamath people, on fishing expeditions (Lightfoot
and Parrish 2009, 296). No matter where the Modoc lived within their homeland, they
always depended on fish as a major dietary resource.

The Modocs had a number of tools and techniques which were used to catch
the fish. Different tools and techniques were used depending on what type of water the
Modocs were fishing in, and what type of fish they were after. For fishing in the waters
of the lakes or slow moving bodies of water, the men used a long triangular piece of
netting that had two exterior poles that were held apart by a crossbar. A net such was this was typically dipped from the prow of canoe to catch fish (Kroeber 1970, 324-325).

Fishing in the streams and rivers took an altogether different form, with different tools and techniques. In the lakes, and streams, fish traps and spears were used to catch fish. A typical fish trap was made out of willow that was worked into the shape of a funnel. The traps could hold a few fish and were anchored by rocks in streams to catch fish as they ran up the streams. The shape of the trap kept fish from turning around and swimming out. Specially designed spears were used to harpoon fish in the streams and river. The spears were double pointed and made of pine or fir with the heads being made out of serviceberry wood, and tipped with bone. These spears were typically used from behind blinds made of tule reeds. With a quick thrust, a skilled fisherman would harpoon unsuspecting fish as they swam past the blinds. Both of these techniques were very useful in catching fish from the stream and rivers within the Modoc homeland but they were not the only techniques used (Ray 1963, 195-195).

Krober points out that among Native Californian tribes, Modocs also used fishhooks to catch fish which was not a technique many other tribes used. Fishhooks were of double pointed variety and resembled a downward pointing arrowhead, and were made of bone. The hooks were typically baited and were designed to go into a fishes’ mouth horizontally so that the fish could then be pulled out of the water easily (Kroeber 1970 324-325). The fact that the Modocs had so many methods of fishing on the lakes and rivers shows just how dependent they as a people were on the waterways for food, and how vulnerable they as a people are if any disturbance were to happen to these waterways.
Prior to the arrival of whites in the 1850s the Modoc had to put up with periodic episodes of drought throughout their homeland which would have contributed to lower availability of food resources including fish. Drought can effect freshwater by reducing suitable habitat for the fish and by causing a decrease in levels of oxygen and a rise of temperature in the water. This can cause a reduction in the number of fish in a stream during a drought period (Beche et al. 2009, 778). However, fish have been shown to be quite resilient to drought, and even long-term droughts do not effect fish populations permanently (Beche et al. 2009, 786). It should be additionally mentioned that based on measurements of historic tree rings that the 1850s was not a period of extreme drought in California’s history (Hughes and Brown 1992, 166) The environment of the Modoc homeland was not undergoing any major naturally occurring environmental stress at the time of the gold rush, and that environmental conditions were nominally stable. However, the environmental stability of the Modoc homeland was about to change, due to something that had not previously happened in the waterways of Northeastern California. That something was large scale, intensive, gold mining.

Introduction to Gold Mining in the California Gold Rush

Before the effects of gold mining in on the Modoc homeland can be discussed, I have included a brief introduction to the gold miners themselves and the mining techniques that they used throughout the California Gold Rush. The miners themselves were a mixed bunch of men who were nothing like the tough pioneers portrayed in the typical histories of the California Gold Rush. Once the prospective miners arrived in
California, they did not behave as the stereotypical pioneer of the American West did, seeking a piece of land to settle and to call their own.

A more accurate description of the miners motives were that they were “exploiters, transients, ready to take, not to build” (Holliday 1981, 297). The first priority on the minds of these miners was to make as much money as possible in the shortest amount of time. Many of the miners were not thinking in the long term and were generally indifferent to the future of California, as they were there for the purpose of taking what gold they could find, and then moving on. With this attitude in place, many miners set out to search for gold, willing to do whatever was necessary to find it.

Most gold mining took place, in the streams and rivers of Northern California. In *Eldorado: The California Gold Rush*, Dale L. Walker describes the gold country of California and the techniques that were used to mine gold by the miners. According to Walker the main part of California where gold mining took place was along a 200 mile oval in Northern California from the Feather River in the North to the Mariposa River in the Southern part of the oval (Walker 2003, 234). In these rivers, miners used a variety of techniques to find gold.

One of the best known gold mining techniques was panning in which miners submerged an iron pan into a river, filled it with dirt and water. The pan was then swirled around with water in it, with the miner picking out the larger pebbles, and little by little the load was reduced to a few pebbles, some sand, and some gold particles. The gold particles could be found after the remaining dirt was dried out and blown away with the heavier gold remaining at the bottom of the pan (Walker 2003, 262).
Another technique employed a rocker which was a wooden box with a finely perforated iron mesh in the bottom. The rocker was rocked back and forth with dirt and water shoveled into it, with gold and sand particles were then caught on a canvas board with wooden cleats (known as riffles) on it that trapped the fine gold and sand particles, allowing larger pieces of gravel to be washed away (Walker 2003, 262).

A third technique utilized a Long Tom which was a large wooden trough ten to thirty feet long at the end of which lay a perforated riffle and under that a “riffle box.” The Long Tom was typically placed on an easy grade near a river and required six to eight men to operate it effectively. The Tom was operated by having dirt shoveled into it followed by water which washed the dirt down to the riffle box over which sand and gold dust settled (Walker 2003, 262).

Each of these techniques was very labor intensive. A rocker could require one miner to use up to three hundred buckets of dirt and water a day in order to find gold hidden amongst the dirt. A Long Tom could handle ten times more dirt than a cradle, and required hundreds of buckets of water per day in order to work properly (Walker 2003, 262).

Nevertheless, each technique if used to its full potential, could yield some respectable rewards for the miners that used them. Using a rocker, one miner and three partners earned $75 in one day, which was split at $25 a man, which was not bad for a day’s work hauling dirt and water in the creeks of Northern California (Walker 2003, 262). One thing that each technique had in common with the other was the intensive usage of sediment and water from the rivers in which the techniques were used. Because each gold mining method required at least three hundred buckets of dirt and water a day,
there were potential unhealthy consequences for the watersheds and the Native Americans that lived by them. The mined dirt could end up washing back into the river, which could endanger the fish that the Native Americans depended on for food.

Mining in the Klamath River Basin and Its Consequences

Gold was discovered in Northeastern California in 1850 on the Klamath River, near where the present day town of Yreka now stands. Some of the richest diggings were in fact, just outside of Yreka, on the Western border of the Modoc’s land and miners started to search throughout Northern California for gold. Diggings began up and down the length of the Klamath River and its various tributaries after gold was discovered in 1850 (Fiorini-Jenner and Hall 2002, 26). In the following year of 1851, gold was discovered on the Modoc’s homeland (Pritzker 1998, 374). In a short time, the Modoc people and many other native peoples living in Northeastern California began to experience encroachment onto their lands by the gold miners.

After gold was discovered, miners began to flock to the Klamath River basin by the thousands. By late 1851, there were more than 5,009 miners mining on the Klamath River and its tributaries (Fiorini-Jenner and Hall 2002, 26-28). The native peoples had had encounters with whites for thirty years prior to the California Gold Rush but those whites were traders who quickly came and went after they had finished trading with the native peoples. Now miners were in coming to Northeastern California in numbers greater than anything the natives had ever seen. Once they arrived in Northeastern California, gold miners wasted no time in getting to work mining in the...
Klamath Basin for the gold that lay within the numerous waterways of Northern California (Fiorini-Jenner and Hall 2002, 18-23).

Mining on the creeks of the Modoc homeland began in 1851, and focused primarily on the creeks east of present day Yreka, California. The main digging sites that were located on the Modoc homeland were located on Cottonwood Creek, The Shasta River, and the Klamath River itself. The earliest digging sites were on the Klamath River, and provided prospectors with eight to sixteen dollars per man per day. While these amounts were not particularly impressive, miners still came nonetheless and richer diggings were discovered close to present day Yreka. The digging sites near Yreka were considered some of the richest in Northeastern California. The miners who mined here used both rockers and sluices (another term for a Long Tom) to mine the gold they needed from the Klamath River and the surrounding tributaries of the Klamath River that included Cottonwood Creek, and the Shasta River (Arnold and Silva 1999, 48-52). The historical record showed a number of effects that mining had on the Modoc people and the miners in both social and environmental ways. In an environmental sense, mining destroyed habitat for the fish that the Modoc people depended on for food. Socially, there were numerous violent conflicts between the miners and the Modoc people.

What the historical record shows was that during the early to middle 1850s there was extensive conflict between miners and Native American groups which included the Modoc. In April 6, 1852, Governor John Bigler of California wrote a letter to General Ethan Allan Hitchcock which concerned hostilities to whites by Native American tribes in Northeastern California. Bigler noted that all of the Indian tribes of the Northeast of California had risen against the whites, the Modoc being among the tribes attacking
whites. Bigler wrote that vandalism acts had occurred saying “They (the Indians) set fire
to the cabins of miners while the latter are at work. They steal from the same cabins”
(Governor John Bigler to General Ethan Allan Hitchcock, April 6, 1852, The Bleyhl
Collection). Bigler did not believe reports from the native tribes themselves that miners
had committed injustices against them.

Rather, Bigler believed that the violence had been committed owing to what
he called the “known character of the Indians-a mischievous disposition and desire for
plunder” (Governor John Bigler to General Ethan Allan Hitchcock, April 6, 1852, The
Bleyhl Collection). This account by Bigler is able to give at least an idea of what Natives
had been doing to incur the wrath of white settlers and miners. Bigler’s account though is
full of prejudice against the Native Tribes saying that violence came naturally to them.
He does not believe that any white person could have anything to do with starting the
violence occurring at that time. Bigler’s observation of Indian hostilities is but one of
many accounts of violence by the Northeastern tribe during the 1850s.

Fort Jones was established in 1852 for the protection of miners on the
Klamath River from attacks by Indians. It was located about fifteen miles from Yreka and
was in a good position to protect miners from attacks by attacks by marauding tribes in
the area (Establishment of Fort Crook and Fort Jones, California, The Bleyhl Collection).
The Klamath River was located eighteen miles from Yreka (Major General John E. Wool
to Colonel Thomas J. Henley, August 10, 1855, The Bleyhl Collection). Fort Jones was
strategically placed close to the Klamath River, where the majority of hostilities between
miners and the Modoc people took place. Since the Modoc had fishing villages along the
The Assistant Surgeon at Fort Jones, Charles L. Keeny, recognized that the Modocs (Murdocs as spelled by him) inspired a special type of fear in the white people living in the area around Fort Jones. According to Keeny, this was because out of all the tribes living in Northeastern California, the Modocs were by far the fiercest warriors. The raids conducted by the Modocs against whites were particularly ferocious and Modocs became the one most feared of the tribes in Northeastern California. The fact that a fort had to be established for the protection of miners was a sign of just how serious the attacks by the Modocs had gotten in the early 1850s in the Klamath Basin (Assistant Surgeon Charles L. Keeny, Sanitary Report, October 1856, The Bleyhl Collection).

The historical record points to the fact that miners were not always the innocent party in violent interactions with the Modoc. There were clear instances of the actions of the miners being responsible for conflict with the Modocs. One explanation for the violent interactions between miners and Modocs were due to miners harassing Modoc women. A second reason

In January of 1854, the Modocs, together with a band of Shastas, and Rogue River Indians, attacked a mining camp located on Cottonwood Creek and drove off the miner’s horses. The miners counterattacked, and in the ensuing skirmish, four miners were killed. An army patrol of 35 men under a Captain Judah and Captain Smith set out after the Indians, and managed to corner them in a cave on the Klamath River. One other man was killed by gunfire from the Indians in the cave. Eventually, a talk was called between the whites and Indians and Captain Smith found out that the main reason why
the Indians had attacked was because of miners mistreating the women of the tribes involved. How the women were mistreated is not specifically mentioned, but it could have been that women could have been robbed, or sexually assaulted by the miners. What is clear was that the women were mistreated seriously enough to have the men conduct an attack on the miner’s camp. Captain Smith listened to this explanation and accepted this apology from the Indians. No further attempt was made by the army or miners on this particular occasion to harass the Native American tribes involved in this incident (Sutton 1969, 109-111).

It should be remembered that in Modoc society, women were responsible for cleaning fish that the men had caught. It could have been that Modoc women were cleaning fish on the side of Cottonwood Creek when the miners assaulted them. Due to the lack of clear information about the nature of the miners attack on the women it can only be guessed as to what the miners did. Even though this instance of conflict between miner and Modoc was resolved peaceably with the mediation of the U.S. Army; it was not the last time that conflict between miners and Modocs took place along the Klamath River.

A letter from General J. D. Cosby to Governor J. Neely Johnston of California on June 12, 1856, revealed that the Modocs (spelled “Modock” in the letter) were still engaged in robbing and killing miners on the Klamath River. Cosby considered the problem severe enough that he reported that he was going to send thirty men on a mission to find out the strength of the Modocs, and to protect the miners that the Modocs were harassing on the Klamath River. Cosby’s letter reveals that by the mid-1850s the problems between miners and Modocs had not been fully settled and conflict was still rife
in Northeastern California (General J. D Cosby to Governor J. Neely Johnston, June 12, 1856, The Bleyhl Collection). Conflict began to subside by the late 1850s and by 1858, almost of the tribes had been weakened by constant fighting with the mines to the point that they could no longer put up effective resistance to the constant attacks from the miners, and the soldiers who protected the miners (Glassley 1953, 108).

The majority of historical sources on conflict between gold miners and the Modoc people point to miner attacks on Modoc camps, and the harassment of women as being a cause of conflict between these two different groups of people. Many sources studied to not even give a specific cause of conflict between miners and Modocs and simply mention that conflict took place. Very few sources mention what the environmental effects of mining were on the rivers and streams of Northeastern California and how the environmental effects may have affected the local Native American tribes. During the 1850s environmental destruction as the result of mining was not something that was recognized by the majority of whites that lead to the Modocs attacks. However, there were a few whites that did recognize the negative environmental effects that gold mining had on both the rivers, and the Modoc people in Northeastern California

One such white who recognized the extent of the environmental destruction wrought by mining was Joaquin Miller. Miller, who was a traveler in the Northeastern California during the 1850s, described the effects that mining had on the salmon and trout that lived in the Klamath River. Both of these fish made up an important part of the Modoc’s food supply. According to Miller (1874):
Another thing that made it rather hard on the Indians than anything else was the utter failure of the annual run of salmon the summer before, on account of the muddy water. The Klamat, which had poured down from the mountain lakes to the sea as clear as glass, was now made muddy and turbid from the miners washing for gold on its banks and tributaries. The trout turned on their sides and died; the salmon from the sea came in but rarely on account of this; and what few did come were pretty safe from the spears of the Indians because of the coloured water; so that supply, which was more than all others their bread and meat, was entirely cut off. (111)

The extensive usage of rockers and Long Toms required extensive disturbance of the streambed, due to the amount of gravel and water used. It should be remembered that a rocker alone needed three hundred buckets of dirt and water to be used effectively. A Long Tom could handle ten times more dirt and water. It should additionally be remembered that there were more than 5,009 miners who were mining on the Klamath River and its tributaries during the 1850s (Fiorini-Jenner and Hall 2002, 26-28) The sheer number of miners would have added greatly to amount of sediment that got washed into the Klamath River. The result was that water became so murky with kicked up sediment that the salmon and trout could not survive in such inhospitable conditions. A study conducted on the lethality of suspended sediment to fish has shown that there needs to be 100 grams of sediment per liter of water in order for sediment to be lethal (Lake and Hinch 1999, 865). The amount of sediment generated by the miners must have been at this level or even exceeded it given the high numbers of fish that Miller recorded as being dead from the effects of the mining.

Miller noticed the extensive mining of the creeks as being very disturbing to Modoc people, who could not understand why it was that the miners were ripping up the very streams that provided the Modocs with a large part of their food. Miller (1874) commented on the Modoc’s reaction to the mining noting “Why we should tear up the
earth, toil like gnomes from sun up to sun down, rain or sun, destroy the forests and pollute the rivers was to them more than a mystery—it was a terror” (111-112). The terror felt by the Modocs is understandable given how much they as a people depended on the Klamath River for their food.

Since the Modocs relied on the Klamath River as much need source of food, they came to see the miners who mined the creeks of their homeland as guilty of robbing them of a much needed food source. The Modocs were aware of the fact that without the bounty of the river they would not be able to survive. To see the rivers and creeks of their homeland torn up and destroyed, and the fish that they needed to survive dying, the Modocs had an understandable anger toward the miners. The fact that the Modocs also had a strong connection with the rivers, and fish that lived within the rivers, may have served to intensify their anger toward the miners. Since it was part of the Modoc’s tribal law to kill anyone who had intentionally killed an animal sacred to them (Ray 1963, 27-28), this was all the more reason to hate the miners. If the conflict between miners and Modocs is re-examined with the environmental effects of mining considered, then the Modoc’s reasons for fighting the miners is more easily understood, given how much the Klamath River provided for them in the way of food sources.
CHAPTER VI

DISCUSSION AND FINDINGS

Discussion

Although Miller’s source does point to environmental degradation as being a factor in conflict between miners and Modocs, most historical sources point to a different factor that caused the conflict. Most historical sources describe the miners molesting women Native American women and attacking Modoc camps as being the prime cause of conflict between the two groups. The Modocs were not the only tribe affected by miners molesting women, and miners molesting women seems to have been something that most tribes that had homelands near mining operations put up with. Most of the sources within The Bleyhl Collection point to the molestation of women, and miner attacks on villages as being one of the common causes of trouble that led to conflict with the miners. This did not only affect the Modocs, but all tribes within the Klamath Basin, which included the Shasta, and Klamath and the Rogue River Indians as well.

A general problem of the historical record with regard to the miners is that there is a general scarcity of primary sources on the activity of miners written by the miners on the Modocs and what the miners thought of the Modoc. The sources written concerning attacks on miners were written secondhand by someone else who did not observe the interactions personally which was problematic as important details were left out (such as Governor John Bigler). The sources give information detailing miner and
Modoc casualty numbers but give scant details on what caused the interaction. Sources that did give detailed information such as the report detailing the Modoc, Shasta and Rogue River Indian attack on the miners at Cottonwood Creek were the exception within the historical record. The lack of sources by miners could mean that many miners may have been illiterate. Also, many sources such as the one by Bigler, tend to be bigoted and focus on prejudices held against Native Americans, rather than on what both miners and Modocs were doing to cause each other trouble.

There was also a general lack of sources on the Modocs and the interactions between miners and the Modocs. This can be due to the fact that most of the gold mining happened predominantly in the western part of the Modocs homeland, in the foothills of Mount Shasta where the gold diggings were the richest. The majority of the Modocs homeland was out among the Lava Beds of the Modoc Plateau which was not a rich area for gold mining. The historical record does not mention sources describing the amount of gold mined in the core area of the Modoc homeland, which means there was either little to no gold mined in the main area of the Modocs homeland. There were a number of records of Modocs attacking wagon trains of settlers. Compared to the number of records of Modocs attacking settlers, the number of records of Modoc attacking miners was considerably less.

Findings

The overall results of this study of the environmental history of mining in Northeastern California are mixed. The historical record does not contain enough specific evidence to say that the environmental effects of mining were responsible for the Modocs
rising up against the miners. Most of the historically recorded sources point to miners harassing Native American women and committing injustices against the Modocs themselves as being the prime source of grief for the Modocs during the Gold Rush era in Northeastern California. However, environmental effects cannot be ruled out as a source of conflict between gold miners and Modocs.

Joaquin Miller’s observations in 1874 on the degradation of the Klamath River due to mining, and the Modoc’s reaction to the effects of mining, show that environmental degradation could certainly have been a large factor in the Modoc’s attacking the miners. Given that a miners rocker alone used at least three hundred buckets of water and dirt a day and that there were more than 5,000 miners mining the Klamath River, the amount of silt in the water must have been immense. McEvoy points out that fish are very sensitive to increases in silt levels in the water (McEvoy 1986, 47). What mining did was cause the silt levels in the Klamath River to rise beyond what the salmon and trout could handle, and thousands of them ended up dying because the silt reached levels that proved to be lethal to the fish. Although other environmental factors like temperature and drought levels were generally stable during the 1850’s (Hughes and Brown 1992, 166), the sheer amount of sediment within the water caused the trout to die off in numbers that greatly affected the Modoc’s lifestyle.

It should be remembered that the Modoc had a great reliance on the waterways of their homeland due to the fact that the waterways were a major provider of food for the Modocs. Witnessing the effects of mining certainly must have contributed to Modoc anger toward the miners, as the mining killed off salmon and trout by the thousands, and robbed the Modoc of a much needed supply of food. With such an
important part of their livelihoods at stake, it can be said that the destruction of the
Klamath River may have played an important part in the conflict between miner and
Modoc.

However, there is not enough historical evidence to say that environmental
degradation of the rivers alone was the prime cause of Modoc grievance toward miners.
Despite the lack of historic sources on environmental degradation due to mining I do not
consider this to be a problem. Future research can be done, due to the fact that not all
historic sources were examined. There is certainly potential for further research to be
done on the environmental effects of mining on either the Modoc, or on other Native
American tribes in California during the California Gold Rush.

The effects of mining on the creeks of Northeastern California proved a threat
not just to the salmon and trout, but to the Modoc people’s way of living. For a people
that relied on the waterways of Northeastern California for most of their food, mining had
a detrimental effect on their lifestyle by denying them access to a food source that they
had relied on for generations. The fact that miners also harassed Modoc women and
attacked Modoc villages contributed to igniting an already volatile situation. Although
the miner’s first objective was not to destroy the Modoc’s lifestyle, they nonetheless
affected the Modoc’s lifestyle negatively by the very nature of their own lifestyle which
was completely different from that of the Modoc.

The miners were prepared to go to whatever lengths it took to find the gold
they desired, even if it did mean destroying a creek. Joaquin Miller, who lived among
both the Modoc people and the gold miners, simply said “Perhaps it was because they
were all so busy and intent on getting gold” (1874, 113) to refer to miner’s attitude
toward the rivers that they mined. The miners and Modocs simply had two very different outlooks on usage of the waterways of the Modoc homeland. To the Modocs who had lived in their homeland for thousands of years prior to the arrival of the gold miners, the creeks and streams provided much needed food source in the form of fish.

From the miner’s perspective, the same creeks were used for short-term gain in the form of material wealth, gold. The miners for their part did not understand the spiritual connections that the Modoc had with the water, or foresee the environmental destruction that their way of life would have on the fish in the waterways of the Modoc homeland. The waterways of Northeastern California provide the resources that both the miners and Modoc people needed to sustain their respective lifestyles even though what each sought in the waters was completely different from what the other groups sought. In the end, mining in the creeks of Northeastern California led to the end of the lifestyle of the Modoc people which favored a sustainable harvest of natural resources, with the lifestyle of the gold miners, which favored exploitation of the same natural resources for material gain.
CHAPTER VII

CONCLUSION

The traditional story of interactions between miners and Native Americans during the California Gold Rush has often been studied using the method of political, rather than environmental history. In traditional histories of the California Gold Rush, gold miners are portrayed as a frontier hero, a bringer of progress into the wilderness of California. Native Americans are mentioned in major historical events, such as when treaties are signed with them. Native Americans are also portrayed as the tragic victims of progress that the gold miners brought with them to California. However, if the environmental history of how gold mining affected the environment is studied, a different picture of white and Native American relations emerges.

If history is examined using the method of environmental history, different aspects of history are able to be examined that could not be examined using traditional historical research methods. Studying a people’s relationship to the non-human environment can show aspects of how people’s environmental usages affected both their immediate environment and other people living in the same environment. In the case of this study, gold mining in Northeastern California negatively affected the lifestyle of the Modoc people due to the destruction of the fisheries on the Klamath River during the gold rush era.
What I originally set out to discover in the course of this study was how mining affected the lifestyle of the Modoc people in Northeastern California during the California Gold Rush. Even though I anticipated that mining could have negatively affected the fisheries that the Modoc relied on, I found out that there were other causes of conflict in the historical record between miners and Modocs. Most historical sources point to miners attacking Modoc villages and molesting women as being a prime cause of conflict among miners and Modocs. However, I cannot rule out environmental degradation as being a source of conflict. Even though sources on the environmental effects of mining were rare, they did point to the fact that mining did seriously degrade the rivers in Northeastern California.

I did manage to find one good source in *Unwritten History: Life Amongst the Modocs*, by Joaquin Miller, which does detail the environmental destruction caused by mining to fisheries on the Klamath River that were used by the Modoc people. Miller stated that the mining caused the waters to become heavily filled with sediment which killed off the salmon and trout the Modoc depended on for their survival. This does show that mining did affect the environment of the Modoc people in a negative way, and though it was not the prime cause of conflict between the miners and Modoc people, it was certainly one of the causes of conflict between the two groups.

I can conclude on a few points. The first is that environmental history has a lot of potential to assist in how mining affected Native Americans during the California Gold Rush. The second is that mining was not the prime cause of conflict between miners and Modocs. Based on the historical record miners attacking Modoc fishing villages and molesting women was the prime cause of conflict. The historical record does show that
mining did have an effect on the Modoc people’s lifestyle by destroying the fisheries they relied on, but sources on environmental destruction are not common within the historical record. What my final point is that although the mining did cause environmental destruction which was certainly a cause of conflict between the miners and Modocs, it was not the only cause of conflict between the two groups. I would like to make some recommendations for further studies using environmental history, Native Americans, and gold mining.

There are a number of other possible studies that can be conducted from this study. The first is a study on how mining affected the environment of other Native American tribes. There were a number of sources concerning mining done in the homeland of the Shasta people. An environmental history on mining on the Shasta people would certainly have a lot of potential. There were also a large number of sources written about the effects of mining on the homelands of the Maidu and Miwok people, who lived closer to the Gold Country surrounding present day Sacramento. Studies conducted on the environmental effects of gold mining in the land around Sacramento would have a lot of potential due to the wealth of sources, and the fact the gold mining was far richer then in Northeastern California.

There is also potential for studies to be conducted on how mining affected the environment itself and what the lasting effects on the environment have been. Areas of study in this area of environmental history could be on how gold mining affected historic salmon runs. Another possibility is a study on how mercury contamination led to decline in the health of waterways and what waterways are still affected by mercury
contamination. A study conducted in this way could be done to show how the effects of historic mining still affect California in the present day.
REFERENCES
REFERENCES


Establishment of Fort Crook and Fort Jones, California (#188). The Bleyhl Collection.


