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A Fight for Food: The Assault on Traditional California Indian Food Ways, 1769-1873

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by

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ABSTRACT OF THE THESIS

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Professor Benjamin L Madley, Chair

In his book, *An American Genocide: The United States and The California Indian Catastrophe, 1846-1873*, the historian Benjamin Madley highlighted the intentional destruction of traditional California Indian foods, by the United States Army, vigilantes, and volunteer California state militiamen as a genocidal tactic. This thesis explores the wider intentional destruction of California Indian foods and assault on traditional California Indian foodways during the long conquest of California, beginning with the Spanish invasion of 1769, continuing under Mexicans from 1821 to 1846, and concluding with early United States rule between 1846 and 1873. This thesis will examine the effects that the destruction of California Indian foods had on traditional California Indian food ways and consequently California Indian people as well as how California Indian people kept their foodways alive against great odds.

The thesis of David E. Streamer is approved.

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Growing up on Southern California's Los Coyotes Indian Reservation, I saw firsthand the lifestyle diseases affecting several of my family members and fellow tribal citizens. This drew my attention to thinking about the historical sources of these lifestyle diseases. Although we know that these lifestyle diseases, such as diabetes and heart disease, are the product of colonization and that these diseases are the long terms effects of colonialism, there is something unusual about their origins here in California. I discovered this while reading about eighteenth and nineteenth-century California Indian interactions with Spanish, Mexican, and United States regimes. A number of scholars and authors have documented and uncovered the deadly history of California's colonization. Eleven of them provided the interpretive and research backbone for this thesis. They include, the historical demographer Sherburne F. Cook, the anthropologist Robert F. Heizer, the Native American Studies scholar Jack Norton, the ethnoecologist M. Kat Anderson, the independent historian William B. Secrest, and the academic historians Albert L. Hertado, Clifford E. Trafzer, Joel R. Hyder, Steven W. Hackel, Brendan C. Lindsay, and Benjamin Madley, who is my thesis advisor. Although only one of them is the member of a California Indian community (Jack Norton), and some of their work may be considered controversial, their research and interpretations have established a strong foundation of facts and analysis that California Indian scholars like myself can build upon. It would take decades to reproduce all of their painstaking research and analysis.

Benjamin Madley was particularly influential in my research and writing of this thesis. His extensive work and first book, *An American Genocide: The United States and The California Indian Catastrophe 1846-1873*, was the primary influence for this project. *An American Genocide* contains a wealth of primary sources that are key to understanding the assault on

California Indian foods and foodways. As an advisor he continuously encouraged me and provided me with guidance that helped me finish this project. In the future, I hope to continue writing about the history of California Indian foodways and being a part of the larger project of building a clearer and more comprehensive history of California Indians. By understanding the violent history of colonialism in California we can better understand the lifestyle diseases that continue to persist into the present.

INTRODUCTION

The history of California's violent colonization during the years 1769-1873 is unknown to the vast majority of people who inhabit the Golden State. Contemporary notions of California Indians continue to be largely shaped by the extremely limited and underdeveloped fourth-grade California public school mission curriculum and the more recent rise of tribal gaming enterprises. Historian Zevi Gutfreund wrote in his 2010 article, "Standing up to Sugar Cubes: The Contest over Ethnic Identity in California's Fourth-Grade Mission Curriculum" that, "The pastoral appearance of the renovated missions, as well as representations in dioramas and children's books, has left generations of California children with the impression that the missions were idyllic sanctuaries or the Catholic padres and Indians who lived there."¹ The dual emphasis on romantic interpretations of the Franciscan missions and misunderstandings of modern gaming masks the genocides committed against California Indians between 1769 and 1873. In addition, they perpetuate false perceptions of California Indian communities. However, the violence and distinctiveness of the official Spanish, Mexican, and U.S. policies aimed against California Indians between 1769 and 1873 is well documented. A number of scholars have written about the crimes committed against California Indian people by the invaders. Indeed, many academics have deemed some or all of the events that transpired during these years genocide. The genocides committed in California between 1846 and 1873 have had lasting repercussions for California Indian individuals, families, communities, and whole nations. One of those lasting repercussions has been the legacy of intentionally targeting and destroying traditional California Indian food

¹ Zevi Gutfreund, "Standing up to Sugar Cubes: The Contest over Ethnic Identity in California's Fourth-Grade Mission Curriculum," (Southern California Quarterly, Vol. 92, No. 2 (Summer 2010), 163.

stores and food sources. The results of these colonial policies continue to adversely affect California Indians.

One of the major repercussions visible today is the health epidemic that plagues California Indian communities on and off reservations and rancherias. There is not yet a large amount of data specific to twenty-first century California Indian health statistics. However, the California Health Interview Survey, run through the University of California, Los Angeles Fielding School of Public Health, conducted several health related surveys from 2001 to 2016 throughout California. These surveys have provided numerical statistics based on a variety of categories ranging from race/ethnicity, age, gender, income level, etc. Their studies have shown some of the health disparities for people of California tribal heritage. One survey conducted in, 2003, 2005, 2007, 2009, 2011, 2012, 2013 and 2014 asked 296,000 adults of California tribal heritage and 3,783,000 adults not of California tribal heritage the following question: Other than during pregnancy, had/has a doctor ever told you that you have diabetes or sugar diabetes? Respondents' answers suggested that of the eight years, adults of California tribal heritage averaged statistically higher with 15.35 per cent of adults answering yes, compared to 10.2 per cent of adults not of California tribal heritage answering yes to the same question.² However, some years were staggering in the differences between the populations. The 2005 survey reported that 26.0 per cent of adults from California tribal heritage answered yes compared to 8.6 per cent for adults not from California tribal heritage.³ The most recent survey, conducted in

² To access data visit: ask.chis.ucla.edu. Topic: Ever diagnosed with diabetes; Compare topics: under demographic select California Tribal Heritage; Limit population: all ages, all genders, select all races except for American Indian/Alaskan Native and Native Hawaiian/Pacific Islander; Years: select the years from 2003-2014; Then select "Get data".

³ *Ibid.*

2014, showed 27.9 per cent of adults from California tribal heritage answered yes compared to only 4.6 per cent of adults not from California tribal heritage.⁴ While these numbers provide a glimpse into the some of the major problems created by the actions of colonizers in California there needs to be more work done to secure more concrete health statistics for California Indian people.

This California Indian health epidemic is not a phenomenon created solely by modernization. Rather, it is also the consequence of the intentional destruction of traditional California Indian food stores, the stealing of traditional food, the intentional destruction of implements used for gathering and hunting traditional food, and the intentional and unintentional destruction of traditional food sources. This thesis will examine traditional California Indian food ways prior to colonization, before exploring how each era of colonization, including the Spanish era (1769-1821), the Mexican era (1821-1846), and the early United States Era (1846-1873), contributed to the decline and destruction of traditional California Indian foods and foodways. By utilizing the findings of previous scholars and authors, this thesis will begin to examine the effects and mortality created by the destruction and loss of traditional California Indian food sources. This thesis will also touch on the survival of traditional California Indian foodways despite the mass destruction inflicted upon traditional California Indian foods and speculate about the potential benefits of revitalizing traditional California Indian foods.

HISTORIOGRAPHY

Over the course of the past one hundred and fifty years, authors, anthropologists, historians, and other scholars have been documenting and recording the destructive events that

⁴ To access data visit: ask.chis.ucla.edu and follow steps in footnote 2.

took place throughout California between 1769 and 1873. In particular, several twentieth- and twenty-first-century scholars have closely analyzed how the actions of eighteenth- and nineteenth-century colonists led to the catastrophic population decline of California Indians during these years. The physiologist and historical demographer Sherburne F. Cook published several of the earliest twentieth-century academic works on the treatment of California's Indigenous peoples during these years in a series of essays published in the 1940s. This thesis will draw from three of Cook's important essays: "The Indian Versus the Spanish Mission," "The Physical and Demographic Reaction of the Nonmission Indians in Colonial and Provincial California," and "The American Invasion, 1848-1870," all of which appeared in 1943.⁵ In these essays, Cook pulled from an array of primary and archival sources located almost exclusively in the University of California at Berkeley's Bancroft Library, as well as many of his own publications.

In exploring California Indian history between 1769 and 1846, Cook addressed the role that food played and how it contributed to the decline of the California Indian population. In his seminal analysis of the Spanish Mission Era, Cook described the shortage of food and the dietary shift that missionization imposed upon California Indian people. He also calculated the quantities of the foods consumed by California Indians within the mission system during the Spanish period. Although aware of the lack of foods available to California Indians in the missions he was reluctant to attribute the large population decline in California during the Spanish era to starvation. He stated: "acute starvation may be ruled out, except in very unusual individual

⁵ Sherburne F. Cook, "The Indian Versus the Spanish Mission," *Ibero-Americana* 21 (January 23, 1943); Sherburne F. Cook, "The Physical and Demographic Reaction of the Nonmission Indians in Colonial and Provincial California," *Ibero-Americana* 22 (February 10, 1943); Sherburne F. Cook, "The American Invasion, 1848-1870," *Ibero-Americana* 23 (April 20, 1943).

cases.”⁶ For the period 1805-1848 Cook provided no evidence of food shortages or the destruction of traditional California Indian foods. However, during what he called the “American Invasion, 1848-1870,” Cook acknowledged that food destruction was very apparent and intentional. Yet, Cook was not convinced of the severe implications that food destruction had for California Indian populations. He stated: “It is probable that seldom was food so scarce that the California Indians perished of actual starvation. However, partial starvation must have been quite common.”⁷ Cook’s path breaking and still important work demonstrated the severe disruption that colonization had on traditional California Indian food ways. However, he did not fully address the severity of that disruption or the actual demographic implications that it had for California Indians.

In the 1974 edited volume, *The Destruction of California Indians*, the anthropologist Robert F. Heizer republished one-hundred and forty-five mid-nineteenth century primary source accounts from United States Army officers, the United States Superintendent of Indian Affairs in California, federal Indian Agents, and newspaper articles to let readers draw their own conclusions about the events that transpired in California during the U.S. Era of colonization.⁸ The twelve chapters present important sources relevant to specific topics but none are dedicated exclusively to the destruction of traditional California Indian foods or food ways. However, this curated collection of letters and newspaper articles does contain numerous examples of the destruction of traditional California Indian food stores, the destruction or removal of their

⁶ Cook, “Indian Versus the Spanish Mission,” 34.

⁷ Cook, “American Invasion, 1848-1870,” 36.

⁸ Robert F. Heizer, *The Destruction of California Indians* (Nebraska: Bison Books, Reprint Edition 1993,) xvi.

hunting implements, and the contamination of their traditional food sources. Heizer also did select texts highlighting starvation on federal Indian reservations in nineteenth-century California. *The Destruction of California Indians* is also important for its republishing of detailed firsthand accounts by non-Indians of what life was like for California Indians under early U.S. colonization. Still, in this particular collection of primary sources, Heizer offered no additional insight or analysis of the destruction of traditional California Indian foods or foodways, outside of providing the written sources.

In 1979, ethnic studies scholar Jack Norton (Hupa-Cherokee) added to the conversation, with his important book, *Genocide in Northwestern California, When Our Worlds Cried*.⁹ Providing a scholarly California Indian perspective, Norton referenced the earlier works of Robert F. Heizer, the nineteenth-century author A.J. Bledsoe, and several newspaper articles from the mid to late 1800's to compose a history of the genocide carried out in northwestern California under nineteenth-century U.S. rule. Norton wove the destruction of traditional California Indian food sources and the landscape into his narrative but these themes are not a focus in this book. Aside from providing a few examples, Norton provided no indication of the impact that deforestation, gold mining, or the general environmental transformation of northwestern had on its California Indian inhabitants or their traditional food systems and subsequent depopulation. Still, *Genocide in Northwestern California, When Our Worlds Cried* is fundamental to the historiography of the California genocide under United States rule. Perhaps most importantly, Norton was the first scholar to apply the 1948 United Nations Convention on

⁹ Jack Norton, *Genocide in Northwestern California, When Our Worlds Cried* (San Francisco: Indian Historian Press, 1979).

the Prevention and Punishment of the Crime of Genocide Convention to analyze California Indian history.

Nine years later, the historian Albert L. Hurtado presented a different emphasis on the experiences of California Indians in his book, *Indian Survival on the California Frontier*.¹⁰ Hurtado drew on the published works of numerous historians and scholars of Indigenous California as well as many primary and archival sources. Hurtado's main focus in this book was on California Indian integration into white society, primarily through the labor force, in the mid-nineteenth century. Hurtado emphasized how California Indians adapted to survive drastic societal shifts and population decline. Hurtado's analysis of the destruction of traditional food was very limited in this text. His greatest contribution to the discussion of the destruction of traditional foodways was his demonstration of how newcomers imposed Hispanic and Anglo-American family structures on traditional California Indian families, disrupting their respective roles for hunting, gathering and cooking, as well as how U.S. laws infringed upon California Indians' abilities to practice traditional forms of sustenance.¹¹ Hurtado also briefly mentioned how forced labor disrupted traditional California Indian hunting and gathering cycles, creating food shortages in the winter.¹² He also discussed the destructive environmental impact of gold mining and demonstrated how it adversely affected California fish populations.¹³ Although he provided no substantial evidence of it, Hurtado asserted that starvation was likely the second

¹⁰ Albert L. Hurtado, *Indian Survival on the California Frontier* (New Haven, Connecticut: Yale University Press, 1988; New Edition 1990).

¹¹ Hurtado, *Indian Survival*, 15-29.

¹² *Ibid.*, 59.

¹³ *Ibid.*, 100-124.

leading killer of California Indians when he stated, “Some reasons for population decline are obvious. Disease, starvation and violence, probably in that order accounted for thousands of deaths.”¹⁴

Like Robert F. Heizer, the historians Clifford E. Trafzer and Joel R. Hyder republished primary source accounts, consisting of newspaper articles from the 1850s and 1860s, documenting crimes committed against California Indians, in their 1999 book, *Exterminate Them!: Written Accounts of the Murder, Rape, and Enslavement of Native Americans during the California Gold Rush*.¹⁵ In their introduction, Trafzer and Hyder mentioned how the destruction of the environment and traditional California Indian food sources caused a major decline in customary food supplies during the Spanish, Mexican, and U.S. eras.¹⁶ In their introduction, they also touched on the impact that livestock during the Spanish era and mining during the U.S. era had on California’s flora and fauna.¹⁷ Among the documents that they republished, there are also several examples of the intentional destruction of large California Indian food stores during the gold mining period. Although they provided several examples of traditional food destruction and acknowledged that such destruction negatively impacted California Indians, they did not explicitly state that it led to starvation or that it had other detrimental impacts on California Indian communities.

¹⁴ Hurtado, *Indian Survival*, 212.

¹⁵ Clifford E. Trafzer and Joel R. Hyder, *Exterminate Them!: Written Accounts of the Murder, Rape, and Enslavement of Native Americans during the California Gold Rush* (East Lansing, Michigan: Michigan State University Press, 1999).

¹⁶ *Ibid.*, 3.

¹⁷ *Ibid.*, 8.

Published three years later, author William B. Secrest's 2002 history, *When the Great Spirit Died: The Destruction of the California Indians 1850-1860*, cites primary sources and other scholars works to reject the common misconception that Indian "wars" took place during the gold rush era.¹⁸ Secrest's brief introduction and chapter, "Preceding 1850," addressed the abundance of resources in pre-contact California. He also addressed the working conditions on Charles Stone and Ben Kelsey's ranch in what is now Lake County during the late Mexican era, and how it changed the local Pomo Indian diet and kept people in perpetual starvation.¹⁹ In addition, Secrest referenced a few examples that described instances of raids by gold miners that ended with the raiders burning all the targeted California Indians' food supplies. However, unlike some previous scholars and authors, Secrest never stated that the destruction of traditional California Indian food stores and supplies was an important tactic for killing California Indians.

In 2005, the ethnoecologist M. Kat Anderson published one of the most important works for understanding California's environment prior to colonization: *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*.²⁰ Anderson highlighted major factors of ecological change during all three eras of colonization in California, emphasizing the introduction of European livestock. She noted, for example, how cows, horses, sheep, and goats radically changed some ecosystems and how exotic plants came to replace indigenous ones in some regions. Building upon prior scholarship, *Tending the Wild* remains important for comprehending not only ecological change in California but also the ways in which

¹⁸ William B. Secrest, *When the Great Spirit Died: The Destruction of California Indians, 1850-1860* (Fresno, California: Linden Publishing, 2002).

¹⁹ Secrest, *When the Great Spirit Died*, 23-27.

²⁰ M. Kat Anderson, *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources* (Berkeley, California: University of California Press, 2005).

California Indians actively interacted with their environment to ensure that plants continued to produce ample yields for yearly food supplies. Anderson's work did not touch on the intentional destruction of traditional California Indian foods. Yet, it is still a critical book for understanding why food was a targeted commodity and why the major ecological changes wrought by colonialism resulted in mass California Indian population decline between 1769 and 1873.

Historian Steven W. Hackel's 2005 book, *Children of Coyote, Missionaries of Saint Francis: Indian-Spanish Relations in Colonial California, 1769-1850*, provided arguably the most detailed account to date of the shift in traditional California Indian foodways along the Southern and central California coastal regions during the Spanish and Mexican eras.²¹ His extensive archival research examined mission records that documented the influx of European livestock and plants, their proliferation, and how they destroyed and replaced many native California organisms. Hackel also carefully explored and analyzed the degree of the drastic dietary shift from traditional foods to beef and European grains within the mission system. In addition, Hackel discussed Spanish laws that prohibited the fire-based land management systems that California Indians had traditionally utilized to ensure bountiful yields year after year and the devastating impacts of these prohibitions. Hackel's work is critical to understanding how Spanish and Mexican colonization catalyzed enormous ecological and dietary change along the central and Southern California coast, eventually spreading inland in the central and southern regions of California.

²¹ Steven W. Hackel, *Children of Coyote, Missionaries of Saint Frances: Indian-Spanish Relations in Colonial California 1769-1850* (Chapel Hill, North Carolina: University of North Carolina Press, 2005).

Published three years later, historian Brendan C. Lindsay's 2007 book, *Murder State: California's Native American Genocide, 1846-1873*, provided a close analysis of the democratic system established under U.S. colonial rule and how that democratic system contributed to a societal structure that promoted genocide against California Indians between 1846 and 1873.²² Lindsay supported his argument with several newspaper accounts and an array of already published works. Lindsay dedicated only a very small portion of his text to examining the destruction of traditional California Indian foods and foodways. Although brief, Lindsay made a powerful statement discussing how severe the impact of destroying traditional food sources was for California Indians. After he provided a quotation by a California senator describing how U.S. invaders had destroyed and driven off all of the traditional California Indian food sources Lindsay stated: "Genocide by starvation would ensue."²³ This is a very important argument. However, Lindsay failed to prove or elaborate on this assertion, providing minimal evidence within the body of the text to prove his point.

The most recently published work to address the destruction of traditional Indigenous foods ways in California is historian Benjamin Madley's 2016 book, *An American Genocide: The United States and the California Indian Catastrophe, 1846-1873*.²⁴ Madley presented hard to refute evidence supported by over 500 sources to not only reject the common misconceptions of California's history, but also, to present a larger argument in which the events that unfolded

²² Brendan C. Lindsay, *Murder State: California's Native American Genocide, 1846-1873* (Lincoln, Nebraska: University of Nebraska Press, 2015).

²³ Lindsay, *Murder State*, 163.

²⁴ Benjamin Madley, *An American Genocide: The United States and The California Indian Catastrophe, 1846-1873* (New Haven, Connecticut: Yale University Press, 2016).

under United States rule in California constituted genocide, as defined by the United Nations Genocide Convention. One of the most prevalent themes in Madley's book is the destruction and forced shift of traditional California Indian foodways. *An American Genocide* is the first book to feature foodways as an important theme in addressing the history of genocide in California under United States rule.

Madley presented a vivid picture of pre-contact California, before exploring and highlighting the major impacts and population decline that occurred during what he called the Russo-Hispanic Period (1769-1846). His work showcased the traditional foods of each California Indian tribe and region while emphasizing the dramatic and often destructive dietary shift that took place under Spanish, Mexican, and United States colonization. Like Lindsay, Madley recognized the destruction of traditional California Indian food as a genocidal tactic. Unlike Lindsay, he provided hard evidence from a variety of primary sources throughout the text to support his claim. Madley's analysis of traditional California Indian foods is the most detailed and comprehensive out of the scholars who have written on California's past. However, Madley emphasized direct killing and despite the magnitude of the evidence he presented, we still need to better understand the destruction of traditional California Indian foods and foodways as well as their lasting impact.

Each of these eleven scholar's works have contributed to presenting the destructive environmental history of how colonists altered or completely eradicated California ecosystems. Each of them have also helped to deepen our understanding of how the native plants and animals used by California Indians diminished between 1846 and 1873 and consequently contributed to the mass population decline of 1846-1873. Although none of the works are exclusively focused on the destruction of traditional California Indian foods and foodways or that destruction's

lasting effects, they established the foundation and provided numerous archival sources that illustrate how invaders focused on destroying California Indian food and foodways as a means of carrying out genocide in California. Professor Benjamin Madley's extensive work provided the inspiration for this project, as well as an invaluable resource that I have used for reference and guidance in the writing of this thesis.

PRE-CONTACT CALIFORNIA

In order to comprehend the impacts that colonization had on California Indians' traditional food sources and foodways between 1769 and 1873, it is crucial to first understand the environment that California Indians inhabited prior to the Spanish invasion that began in 1769. The indigenous flora and fauna that made up California's rich pre-invasion ecosystem provided a wide variety of resources that allowed California Indians to enjoy a diet high in a variety of vitamins and nutrients. In 1868, the author Titus Fey Cronise provided a descriptive and telling account of the impression that California's natural bounty left on early Spanish colonists in his book, *The Natural Wealth of California*:

No country in the world was as well supplied by nature with food for man, as California, when first discovered by the Spaniards. Every one of its early visitors left records to this effect—they all found its hills, valleys and plains filled with elk, deer, hares, rabbits, quail, and other animals fit for food; and its rivers and lakes swarming with salmon, trout and other fish, their beds and banks covered with muscles, clams, and other edible mollusca; the rocks on its sea shores crowded with seal and otter; and its forests full of trees and plants bearing acorns, seeds and berries.²⁵

²⁵ Titus Fey Cronise, *The Natural Wealth of California: Comprising duly history, geography, topography, and scenery; climate; agriculture and commercial products; geology, zoology and botany; mineralogy, mines and mining processes; manufactures; steamship lines, railroads, and commerce; immigration, a detailed description of each county* (San Francisco, California: H. H. Hancroft & Co., 1868), 21-22.

More than 100 years later, Anderson likewise painted a vivid picture of pre-contact California's biodiversity in *Tending the Wild*. According to Anderson:

These densely growing native wildflowers and grasses of hundreds of varieties such as brodiaeas, yampah, mule ears, farewell-to-springs, lilies, balsam root, tarweeds, evening primroses, wild ryes, deergrass, and California bromes at one time covered large areas of ground not just in open grasslands but also in the open understory of California's coniferous forests, oak woodlands, chaparral and pinyon-juniper forests forming the bulk of the plant diversity in these communities.²⁶

In 2016, Madley emphasized pre-colonial California's cornucopia of natural abundance and food in his book. He described the landscape prior to 1846 stating,

The flora and fauna, in their variety and sheer abundance, would also be unrecognizable to twenty-first-century Californians. Antelopes, deer and elk surged through the vast grasslands of the Central Valley in vast herds... Forests—far larger than today's and filled with huge, old-growth trees—teemed with animals while oak groves proliferated. Shellfish thronged tidal estuaries. Vast schools of fish navigated the rivers and bays.²⁷

These three separate statements underscore the vast number and abundance of natural resources available to California Indians in pre-colonial California.

Although California's ecosystems produced the wide variety of plant and animals foods available to California Indians, it was California Indians' proactive cultivation and sustained manipulation of the landscape that ensured they would have ample yields from the plants year after year as well as a large and steady supply of game animals to hunt. Anderson wrote extensively about these practices. She noted how several early writers, photographers, and landscape painters were astonished by the beauty of California, but as she stated: "While they

²⁶ Anderson, *Tending the Wild*, 75.

²⁷ Madley, *American Genocide*, 16.

extolled the ‘natural’ qualities of the California landscape they were really responding to its human influence.”²⁸

California Indians used a variety of techniques to tend the natural environment that included: “burning, irrigating, coppicing, pruning, sowing, tilling, transplanting, and weeding.”²⁹ Anderson noted, “All of these techniques, especially burning represented a disturbance; by applying them in various ecosystems, Indians became agents of controlled, culturally medicated disturbance, using it to maintain plant populations of special importance and habitat diversity.”³⁰ Fire was still the main form of management as it was very “efficient” and “effective” and allowed for the “capability to burn both small patches and extensive tracks of vegetation in a systematic fashion.”³¹ Madley and others agree with this assessment of the importance of California Indians’ “firebased land management.” Indeed, Madley mentioned that it was widely used to maximize hunting and gathering yields.³² Burning had many benefits. According to Anderson, it “increased the abundance of and density of edible tubers, greens, fruits, seeds, and mushrooms; enhanced feed for wildlife; controlled the insects and disease that could damage wild foods and basketry material...It also removed dead material and promoted growth through the recycling of nutrients, decreased plant competition, and maintained specific plant community types.”³³ Madley also mentioned how selective burning increased the amount of forage for

²⁸ Anderson, *Tending the Wild*, 158.

²⁹ *Ibid.*, 135.

³⁰ *Ibid.*, 135.

³¹ *Ibid.*, 136.

³² Madley, *American Genocide*, 18.

³³ Anderson, *Tending the Wild*, 136.

herbivores, which increased the herbivore population as well as the population of carnivores that fed on herbivores, thus ultimately maximizing the total game population that California Indians could utilize for food and other resources.³⁴ There was a strong reciprocal relationship that California Indians had with their environment prior to colonization and it allowed for the environment and the people to thrive.

California Indians' impact on the natural environment contributed to an extensive number of thriving flora and fauna. Anderson noted that of the 6,300 flowering plants, gymnosperms, ferns, and fern allies native to California, hundreds to thousands occurred in each tribal territory and many were incorporated into the tribes' ethnobotany.³⁵ Of the many foods that were in California's diverse pre-colonial ecosystems, there were a few staple foods that many California Indians depended upon and utilized. The anthropologist Martin A. Baumhoff listed these staple foods in the *Handbook of North American Indians*. He stated the staple foods were acorns, fish and other sea food, and large mammals.³⁶

Arguably the most important food for the largest number of California Indians was the acorn. Even where it was not as prevalent, such as in the northwestern coastal regions of California, it was still very important for the Indigenous peoples of those regions. The principal oaks utilized by California Indian people were the Tan Oak (*Lithocarpus densiflora*), the Black Oak (*Quercus kelloggii*), the Blue Oak (*Quercus douglasii*), the Valley Oak (*Quercus lobata*),

³⁴ Madley, *American Genocide*, 18.

³⁵ Anderson, *Tending the Wild*, 42.

³⁶ Martin A. Baumhoff, "Environmental Background" in *Handbook of North American Indians*, General Editor, William C. Sturtevant: Volume 8, California, Robert F. Heizer, Volume Editor (Washington, D.C.: Smithsonian Institute, 1978), 16.

the Coast Live Oak (*Quercus agrifolia*), the Oregon Oak (*Quercus garryana*), the Engelmann Oak (*Quercus engelmannii*), the Maul Oak (*Quercus chrysolepis*), the Interior Live Oak (*Quercus wislizenii*), and the Scrub Oak (*Quercus dumosa*).³⁷ The large variety of oaks that inhabited much of California were widely used by California Indian people for food and building material as well. To make acorn meal palatable and digestible, many California Indians would grind the acorns in to a fine powder and then soak the acorn meal to release the tannic acid. This was one of many ways used to process acorns. They then would make the acorn meal into a porridge, different sorts of breads, or add it to soups to thicken them.³⁸

In 1963, the anthropologist Martin A. Baumhoff republished data collected on the nutritional value of several species of acorns compared to the nutritional value of wheat and barley. The data indicate that while wheat and barley contained higher amounts of protein and carbohydrates than acorns, acorns are significantly higher in fats (some containing up to 18 per cent fat) and fiber, making acorns higher in calories: 2,265 calories per pound compared to 1,479 per pound for wheat.³⁹ The data collected examined whole wheat and barley that underwent minimal processing. Over time the process to produce flour and the flour provided to American Indians has no doubt declined in nutritional value over time.

Of the traditional aquatic California Indian foods, the most important were salmon and other anadromous fishes, more specifically the king or chinook salmon, silver or coho salmon,

³⁷ Baumhoff, "Environmental Background."16.

³⁸ Madley, *American Genocide*, 21.

³⁹ Martin A. Baumhoff, *Ecological Determinants of Aboriginal California Populations*, (University of California Publications in American Archaeology and Ethnology; Volume 49, No. 2 (Berkley CA: University of California Press, 1963), 163.

and steelhead trout.⁴⁰ Along the coastal regions in the south the most common aquatic foods were sea muscles, abalone, Pismo clams, oysters, scallops, and California Venus clams. Along the coastal region of Northern California they were sea muscles, bent nose macoma, and Washington clams and oysters.⁴¹ There were also a variety of sea mammals utilized for food and resources, especially on the northwest coast, including sea lions, sea otters and the harbor seals.⁴²

Land mammals composed a third major staple food for pre-colonial California Indian people. The main ones hunted by California Indians were deer, Roosevelt elk, tule elk, and pronghorned antelope.⁴³

An article published by livestrong.com compared the nutritional value of venison to that of beef and the findings reveal the dramatic nutritional difference between the two meats. The data presented in the article indicate that three ounces of lean beef contain 247 calories and fifteen grams of total fat compared to venison, which contains only 134 calories and three grams of fat.⁴⁴ One of the major differences is the quantity of saturated fats in each kind of meat. The sampled venison contained one-sixth the amount of saturated fat in the sampled beef.⁴⁵ Seeing these numbers, it is not difficult to speculate on how the dramatic dietary shifts imposed by the

⁴⁰ Baumnhoff, "Environmental Background," 16.

⁴¹ *Ibid.*, 17.

⁴² *Ibid.*, 17.

⁴³ *Ibid.*, 17.

⁴⁴ Jessica Bruso, "Nutritional Values of Venison VS. Beef." *Livestrong* (October 3, 2017) <https://www.livestrong.com/article/326549-nutritional-values-of-venison-vs-beef/> (Accessed August 15, 2018).

⁴⁵ *Ibid.*

loss of access to venison, and its replacement by beef, continue to have significant impacts on California Indian health today.

In addition to these staple foods there were a few others that many California Indians depended upon. They included the buckeye, sage or chia seed, and the tuberous roots of the epos or yampa.⁴⁶ There were other staples for specific tribes and regions, but these foods were common for several tribes located over various geographical regions. The loss of traditional foods and customary foodways would create a large nutritional void and dependency on European livestock and grains.

Colonization also reshaped how California Indians think about and interact with food. Prior to colonization, there was no California Indian concept for what we today think of as meals. There was no concept of breakfast, lunch, or dinner. Rather, people ate when they were hungry or when food was available. Gathering and hunting were year round activities that depended on what was available and in season. Also, food preparation was far more extensive and required substantially more time and labor to prepare than foods today. Thus, pre-colonial California Indians ate when they were hungry and appreciated and recognized the relationship that they had with their hard won meals.

So, how did so many California Indians perish from malnutrition and starvation? California Indians endured major ecological changes beginning in 1769. The Spanish era ushered in European livestock, exotic plants, and policies that would destroy many traditional California Indian foods and foodways. Under Mexican rule (1821-1846), the newly introduced European grasses and livestock populations exploded and stretched into new regions of California, bringing more widespread destruction to traditional California Indian food sources. During the

⁴⁶ Baunmhoff, "Environmental Background," 17.

early years of American rule (1846-1873) ecological damage continued and intensified as vast timbering and mining was coupled with widespread colonization and governmental policies aimed at killing and displacing California Indians. The early years of U.S. rule proved to be the most destructive and accounted for the largest population decline for California Indians.

THE SPANISH ERA, 1769-1821

Under Spanish rule, large portions of the California environment changed drastically and Spaniards contributed to the widespread destruction of California Indian food sources and foodways. This was particularly true in the coastal zone between Sonoma and San Diego. In his extended 1943 essay, “The Indian Versus the Spanish Mission,” Cook did not provide many accounts of the destruction of traditional California Indian foods. However, he alluded to the effects that scarcity of food would have had on California Mission Indians when he stated, “if the diet was actually defective, its deficiency undoubtedly operated as a factor predisposing to infectious disease.”⁴⁷ In addition, Cook provided a detailed account of the diet consumed by California Indians within the missions to show where the nutrients they were receiving were being derived from. By examining mission records, Cook determined that the primary foods consumed in the California missions included, “corn, wheat, barley and beans,” “beef, tallow, and lard, from their own sources” and “to an undetermined extent... wild food: acorns, small seeds, grasses, insects, shellfish and the like.”⁴⁸ Using the same mission records, Cook determined that the approximate average daily caloric intake per person in the missions was 2,320 calories (\pm 20 percent).⁴⁹ By comparing the caloric intake to the “civilized” white race,

⁴⁷ Cook, “Indian Versus the Spanish Mission,” 33.

⁴⁸ *Ibid.*, 35.

⁴⁹ *Ibid.*, 47.

3,000 calories per day per man, Cook emphasized, “A suboptimal diet may therefore be regarded as one factor which operated indirectly to check any population increase through its tendency to predispose to disease.”⁵⁰ More importantly, Cook mentioned, “if the aboriginal food sources had remained entirely available to the neophytes, and if the mission diet of meat and grain had been added, the Indians should have enjoyed an excellent nutritional environment.” Cook later stated, “The crux of the matter is that the neophytes were prevented from utilizing their aboriginal food sources even those that were abundant.”⁵¹ Thus, he suggested that mission policies sought to cut California mission Indians off from their traditional food sources and foodways.

For California mission Indians, Cook determined disease to be the primary factor that led to population decline. However, Cook attributed the high prevalence of lethal diseases, as well as the decline in birthrates, to the lack of calories and nutrients in the diet provided to California Indian people at the missions. He stated, “The tremendous incidence of disease, especially continuous, nonepidemic disease, suggests a level of nutrition probably insufficient for ordinary maintenance and certainly below the optimum necessary to provide a high resistance to infection.”⁵² Overall, Cook highlighted a very important theme common throughout all eras of colonization in California: the way in which California Indian diets began to shift from traditional foods, which were rich in variety and nutrients, to European meats and grains that were often only available to California Indian people in insufficient quantities.

⁵⁰ Cook, “Indian Versus the Spanish Mission,” 55.

⁵¹ *Ibid.*, 45-46.

⁵² *Ibid.*, 55.

Dietary change for California Indians happened rapidly through the direct influence and actions of Spanish colonizers during the establishment of the twenty-one missions along the California coast both within and beyond the missions. Historian Steven W. Hackle presented a compelling argument for how Spanish livestock and plant species accounted for massive ecological damage in the coastal region between San Diego and Sonoma. Hackle explained, “These Old World agents of ‘ecological imperialism’ proved innately suited to the new region and so conquered with brutal efficiency, undercutting its peoples and the foods they relied upon through demographic and ecological revolutions that dramatically transformed California’s human and natural landscape.”⁵³ Hackle emphasized the role that Spanish cattle, sheep, and horses played in the destruction of native California plants and ecological niches, as imported herds grew rapidly and expanded further and further from the Spanish missions, pueblos, and presidios. These animals multiplied rapidly in California and literally eradicated some native grasses from certain regions.⁵⁴ Historian John Ryan Fischer reproduced data documenting the increase of cattle in California from 1785 to 1802, showing that the number jumped from 6,813 to 67,782 during this seventeen-year-long span.⁵⁵ By the end of the Spanish era, California missions reportedly owned around 193,234 sheep, 149,730 cattle, and 19,830 horses, while nearly all native plants had been decimated around and near most missions.⁵⁶ The subsequent

⁵³ Hackel, *Children of Coyote, Missionaries of Saint Frances*, 65.

⁵⁴ *Ibid.*, 70-71, 79.

⁵⁵ John Ryan Fischer, *Cattle Colonialism: An Environmental History of the Conquest of California and Hawai‘i* (Chapel Hill, North Carolina: University of North Carolina Press, 2015), 46.

⁵⁶ Hackel, *Children of Coyote, Missionaries of Saint Frances*, 80.

loss of native California food plants and wild game was devastating, driving many California Indians near and around the missions into them in order to avoid starvation.⁵⁷

In addition to the Spaniard's livestock, an array of Old World plants similarly swept through the California coastal prairies and took to the new region rapidly and efficiently. These exotic plants proved even more devastating to California Indian foodways than the Spanish livestock due to the new plants' adaptability, allowing them to succeed many indigenous food sources.⁵⁸ Anderson explained that the coastal prairies, which were teeming with purple needlegrass, nodding needle grass, one-sided blue grass, poverty three-awn, deergrass, and beautiful wildflowers such as miniature lupin, blue dicks, stinkbells, owl's clover, adobe-lily, white broadiaea, clovers, goldfields, fiddleneck, red maids, and yellow carpet, today, "only exist in small pockets" and that their environments have "largely been altered by the introduction of alien species, especially annual grasses."⁵⁹ In order to further demonstrate the loss of traditional plants near and around missions and their replacement by new crops, Hackel utilized archeological findings that examined and determined the composition of remains found in and around the missions. At Mission Santa Cruz, "less than 10 percent of the vegetal remains recovered from Indian housing came from plants native to region" and "by comparison, corn and wheat- the staple of mission agriculture -constituted nearly two-thirds of the recovered remains."⁶⁰ An analysis of the adobe bricks manufactured in the Monterey region during the

⁵⁷ Hackel, *Children of Coyote, Missionaries of Saint Frances*, 80.

⁵⁸ *Ibid.*, 71.

⁵⁹ Anderson, *Tending the Wild*, 28.

⁶⁰ Hackel, *Children of Coyote, Missionaries of Saint Francis*, 90.

1820s, 1830s, and 1840s provided similar findings as the bricks contained a much higher pollen count of European weeds than of native plants.⁶¹

The shift in diet and the lack of food caused numerous health problems for California Indians living within the mission system. Anderson restated Cook's sentiment about how poor diets predisposed California Indians to infectious diseases. As she explained, California Indians' primary food within the mission consisted of "starchy cereal soup and little meat."⁶² In addition to examining the vegetal remains, Hackel also noted that, "beef and mutton made up at least 80 percent of the meat consumed by Indians in some missions."⁶³ Hackel and Anderson's work demonstrated how Spanish missions in California and the foreign species that came with them proved to be catastrophic to California Indians' traditional diets, as it shifted from a once rich and diverse diet that offered a wide variety of nutritional resources to consist of a scarce diet made up almost entirely of domesticated grains, beans, weeds, and domesticated meat.

Spanish livestock and plant organisms accounted for the vast majority of damage inflicted upon the natural landscape of the California coastal region during Spanish colonization. However, there were other actions taken by the Spanish that hindered California Indians from tending the natural landscape as they had done for thousands of years before 1769. Stopping California Indians from tending the land in their traditional ways also allowed for Spanish organisms to spread more rapidly and unchecked. Hackel pointed out that, in the late 1700s, "Governor Arrillaga criminalized Indians' customary practice of setting fire to their fields, a strategy long used in native hunting and protoagriculture." Hackel then explained the damage

⁶¹ Hackel, *Children of Coyote, Missionaries of Saint Francis*, 71.

⁶² Anderson, *Tending the Wild*, 74.

⁶³ Hackel, *Children of Coyote, Missionaries of Saint Francis*, 90.

that this policy caused: “No longer permitted to burn the grasses of the countryside and thereby promote the germination and growth of specific seed-bearing plants, Indians must have found themselves increasingly unable to check the advance of European plants and extract a subsistence from the land. After this decree, simply preparing cooked food outside of the mission became risky.”⁶⁴ European plant species spreading unchecked was, as Hackel noted, not the only repercussion.

Hackel also explained that the traditional burning of grasslands “increased the browse for deer” and that when it was no longer allowed, in combination with large herds of Spanish livestock, it reduced the population of deer around the missions and thus decreased the amount of venison in many California Indian diets.⁶⁵ The actions of the Spanish in conjunction with their unintended consequences substantially diminished the number and variety of native plants and animals in the affected regions.

Spanish intervention on the California coast caused major disruptions for traditional California Indian foodways. In turn, it contributed to the first unprovoked population decline California Indians would face during colonization. In the chart provided by Cook labeled, “population decline,” it showed that the number of California Indians dropped from 133,500 in 1770 to 100,000 by 1823.⁶⁶ According to Cook’s estimates, the overall population decline that

⁶⁴ Hackel, *Children of Coyote, Missionaries of Saint Francis*, 337-338.

⁶⁵ *Ibid.*, 90.

⁶⁶ Cook, “Indian Versus Spanish Mission,” 4.

happened due to the missions between 1770 and 1832 was approximately 37,000 individuals.⁶⁷ By 1833, the Franciscans had buried approximately 62,600 California Indians at the missions.⁶⁸

In order to provide a more concrete understanding and of how population decline became so prevalent in the missions, Hackel analyzed Mission San Carlos and the missionaries' thorough records of births and deaths throughout the mission's existence. Hackel reported many troubling statistics about the death rates in Mission San Carlos. First, between 1784 and 1831 the annual crude death rate in Mission San Carlos was 79 deaths per thousand, which was extraordinary for the eighteenth century.⁶⁹ In addition, "37 percent of babies died before their first birthday" and "39 percent of males and 35 percent of females died in their first year of life."⁷⁰ Finally, when comparing the infant mortality rate of Mission San Carlos to that of England and Spain during the seventeenth and eighteenth centuries, he found that it was four times the former and nearly double that of the later.⁷¹ For California Indians within the missions, the death rate far surpassed their birth rates or the survival rates of their children. According to Hackel, "Ultimately, the constant inability of Indians to offset their deaths by births doomed them."⁷² As Hackel and Cook demonstrated, the numbers of California Indians that were malnourished and perished from disease was immense.

⁶⁷ Cook, "Indian Versus Spanish Mission," 5.

⁶⁸ *Ibid.*, 16.

⁶⁹ Hackel, *Children of Coyote, Missionaries of Saint Francis*, 97-101.

⁷⁰ *Ibid.*, 103.

⁷¹ *Ibid.*, 106-107.

⁷² *Ibid.*, 109.

However, it was not California mission Indians' "inability" to "offset their deaths by births" that led to the population decline, but rather, the man-made conditions imposed upon them, including the destruction of their traditional foods and food sources that forced so many California Indians into the missions where they suffered from malnutrition and disease. While the Spanish era proved to be an extremely destructive time for many California Indians, especially those living in the coastal zone between San Diego and Sonoma, it was relatively localized. However, the missions continued into the Mexican era when the death toll continued to increase and the European organisms associated with them continued to multiply and expand.

THE MEXICAN ERA, 1821-1846

Although some scholars note that California remained fairly stable throughout the Mexican era (1821-1846), many of the foreign flora and fauna introduced by the Spanish continued to thrive, increase in numbers, and expand their range during these years. By 1832, the mission livestock population had exploded to include, "420,000 head of cattle, 320,000 sheep, goats, and hogs and 60,000 horses and mules."⁷³ These hundreds of thousands of animals ranged over more and more of California during the Mexican era, as did exotic plant species, invading California Indians' lands, modifying their carefully tended ecologies, and upsetting their traditional food systems. Meanwhile, more and more California Indian lands came under cultivation by newcomers. According to Anderson, this cultivation "wrought major changes in the environment," expanding the assault on California Indian foods and foodways and increasingly bringing changes into interior regions.⁷⁴

⁷³ C.F. Lummis, *The Spanish Pioneers and the California Missions* (Chicago: A.C. McClury and Co., 1929), 332.

⁷⁴ Anderson, *Tending the Wild*, 76.

Indeed, California Indians experienced multiple environmental catastrophes under Mexican rule. Cook stated that from 1805 to 1848, “There was apparently no food shortage” and the “primary sources of native food supply were not disturbed. The oak trees and grasses grew as they always had... consequently, the invading whites did not deplete the native food supply.”⁷⁵ According to Cook’s records, food supply remained intact during the late Spanish and Mexican eras for non-mission Indians. Other scholars have since rejected Cook’s interpretation.

Contrary to Cook, the historian Albert Hurtado discussed the impact that Mexican era trade and labor had on California Indians’ environment and food. Hurtado noted the several ways in which trade disrupted California Indian food ways. He stated that trade forced interior California Indians to “depend on the outside world for their livelihood.” Fur traders “unintentionally imported malaria and other infectious diseases,” and “trapping significantly reduced rich wetlands as the beaver ponds dried up” which consequently impoverished the environment.⁷⁶ For California Indians, trappers and traders turned the lowlands, a region previously rich in traditional foods, into a perilous place.⁷⁷ These newcomers brought deadly imported diseases that resulted in multiple major epidemics for California Indians during the 1820s, 1830s, and 1840s. Large numbers of California Indians died as a result.⁷⁸

In addition to fur trading and trapping, the use of California Indian labor increased during the Mexican era as private ranches and farms proliferated, especially after 1828 when the

⁷⁵ Cook, “California Indian and White Civilization,” 219.

⁷⁶ Hurtado, *Indian Survival*, 53.

⁷⁷ *Ibid.*, 53.

⁷⁸ Madley, *American Genocide*, 38.

Mexican government began making large land grants to private individuals.⁷⁹ These labor systems also had consequences for California Indians' food ways. Hurtado explained how Mexican era colonial labor systems interfered with traditional foods ways and emphasized the impact that they had on California Indian people. For example, at Johann Sutter's ranch, at what is now Sacramento:

Sutter's work schedule happened to overlap with the acorn season, the fall salmon run, and the time of ripe seeds. Agricultural employment kept Indians from hunting deer, elk, and antelope and snaring birds. Sutter's seasonal work provided Indians with the trade goods and temporary subsistence, but it did not replace wild foods that were stored for winter. Thus, the new seasonal round of plowing, planting, and harvesting had to fit into the Indian food cycle or the native people would suffer. The simple fact was often lost on whites, who believed that traditional Indian subsistence patterns were inherently slothful and inefficient and that agriculture was a better way to use California's resources. Indian and white economies both produced surpluses, but agricultural abundance was destined for the commercial marketplace, not for hungry Indians in lean times.⁸⁰

In this passage, Hurtado demonstrated not only Sutter's interference with the customary hunting and gathering of traditional foods but also the mindset of some white colonists who did not see their impact on California Indians' foodways or the significance of traditional California Indian foods. For many Mexican era colonizers, native Californian plants and animals were easily replaced. Yet this transformation had deep ecological effects that permanently transformed California's once abundant ecosystem and simultaneously California Indians' diets and overall health.

Accounts of the feeding of California Indian laborers at Sutter's Ranch in the 1840s detail Sutter's disrespectful treatment of his California Indian employees as well as the poor food that

⁷⁹ Hackel, *Children of Coyote, Missionaries of Saint Frances*, 373-374.

⁸⁰ Hurtado, *Indian Survival*, 56.

he provided to them. Sutter routinely served his California Indian workers slop, making them eat it from troughs like animals. One visitor noted that “all the laborers big and small, ran to the troughs like so many pigs, and fed themselves, with their hands, as long as the troughs contained even moisture.”⁸¹ The food consisted of “the offal (organs and entrails) of slaughtered animals and . . . bran sifted from the ground wheat.”⁸² The visitor further mentioned that, “as bad as it is, they eat it with an apparent high relish; and no doubt it is more palatable and more healthy than the acorn, mush, or atóle, which constitutes the principle food of these Indians in their wild state.”⁸³ Although some colonists believed that California Indians relished the slop, they likely ate it out of desperation and in order to survive.

During the Mexican era, Californios, the long-term Spanish-speaking colonists of California, Europeans, and U.S. citizens continued to transform California environments and, in so doing, assault California Indian foodways. They continued to overgraze California’s landscapes, as their herds expanded into the Central Valley. They continued to cultivate more of the land. And, they cut down more trees. Anderson made these points and explained that, “Oak trees were logged for fuel and to make ox carts and saddle stirrups. Native plants such as California bromes, blue wild rye, and clovers, which produced seeds, grains, and greens used as foods by the Indians, were eaten by the cattle and sheep before they could set seed, and their formerly extensive populations shrank dramatically.”⁸⁴ Practices and organisms introduced by

⁸¹ Edwin Bryant, *What I Saw in California*, 268 in Madley, *American Genocide*, 60

⁸² Madley, *American Genocide*, 60.

⁸³ Bryant, *What I Saw*, 268 in Madley, *American Genocide*, 61.

⁸⁴ Anderson, *Tending the Wild*, 82.

the Spanish proliferated during the Mexican era and continued to have detrimental effects on California's ecosystems and ultimately the traditional foods of California Indians.

Hurtado shed light on some policies drafted during the Mexican era, which contributed to significant loss of land for California Indians during the U.S. era. In 1834, Mexican officials began privatizing mission lands through their secularization plan, which aimed to place California Indians on small plots of land and redistribute "surplus" mission lands to Californios.⁸⁵ According to Hackel, "overall, some ten million acres of land, or 10 percent of the surface area of present day California had passed into private hands by the close of the Mexican period."⁸⁶ This privatization built upon the 1828 land grant system and ultimately led to the creation of hundreds of private ranchos, or ranches, and the further expansion of European style ranching and farming. This set a crucial legal precedent for the theft of California Indian lands, a policy that would continue under United States rule, beginning in 1846, and which contributed to the eventual establishment of federal Indian reservations. Madley explained that California senator William M. Gwin,—"who opposed California Indian enfranchisement during the constitutional convention,"—asserted in 1856 that 'with regard to the title which Indians may have to tracts of land in California, they are disputed,' further insisting, 'they are not recognized as having any titles there by Mexican Law'.⁸⁷ Gwin's words express the impact Mexican era rule and legislation left on California during the U.S. era (1846-1873). However, not everyone agreed. Senator John C. Frémont believed that California Indians did maintain legal title to their

⁸⁵ Hackel, *Children of Coyote, Missionaries of Saint Frances*, 388.

⁸⁶ *Ibid.*, 389.

⁸⁷ Madley, *American Genocide*, 163.

land under Spanish law, but worked to pass a bill eliminating Native American title to California lands.⁸⁸ California Indians were being cut off from their traditional land bases without any legal footing from which to push back against the white colonists stealing their land. This in turn cut them off from large tracks of land that had traditionally been used for gathering and hunting. Now they had to adapt and find new forms of sustenance, usually entering the labor force in order to provide sustenance for themselves.

Although a shorter period of time than the Spanish era, the Mexican era in California saw a boom in the cattle and ranching industry, which allowed for wider and more pervasive ecological damage by cows, pigs, horses, sheep, and other imported livestock. In turn, California Indian food sources were severely damaged or diminished. This was one factor that forced California Indians to turn to labor in order to avoid starvation. In addition, California Indians experienced mass epidemics, killing more than 60,000 individuals between the 1830's and early 1840's.⁸⁹ Madley noted that the combination of deaths due to missionization, epidemics and violence, "critically weakened many California Indian peoples' ability to resist the invasion and violence that began in 1846."⁹⁰It was a period of great death and destruction. Still it would not amount to what was to come during the gold rush and early U.S. rule in California.

THE UNITED STATES ERA, 1846-1873

From the beginning of the Spanish conquest in 1769 to the beginning of the gold rush in 1848, the destruction of California Indian food sources was the product of colonialism: the introduction of invasive and foreign species of plants and animals, many of which had no natural

⁸⁸ Madley, *American Genocide*, 163.

⁸⁹ *Ibid.*, 38.

⁹⁰ *Ibid.*, 40.

predators or competitors in California and thus expanded rapidly in terms of population and geographic range, as well as deforestation. Now, the practice of intentionally destroying food stores and food sources introduced by the Spanish, became more frequent during the U.S. era and ultimately contributed to high death rates and to the near erasure of many traditional foods, traditional foodways, and to the widespread loss of knowledge about traditional California Indian foods and foodways among many California Indian peoples.

The discovery of gold, in January of 1848, made California Indians, in some gold seekers' minds, into perceived barriers to the rapid acquisition of wealth. The increased tension between gold miners and California Indians between 1848 and 1850 prompted the rise of violence and massacres against California Indians that would eventually escalate into a full-fledged killing campaign led by the new California state government. It was between 1848-1873 that the destruction of California Indian food sources shifted from an unfortunate consequence of colonialism to a conscious, genocidal tactic heavily used by vigilantes, California state militiamen, and regular United States Army soldiers.

In Cook's 1943 extended essay, "The Physical and Demographic Reaction of the Nonmission Indians in Colonial and Provincial California," he began to shed important light on the intentional physical destruction of traditional California Indian food sources. He noted: "the custom of wrecking all Indian commodities, including food and food-processing implements was begun by the Spanish in the times of the valley expeditions. This method was adopted and elaborated by the miners of 1849 and 1850 and was invariably practiced by all military and private Indian-fighting parties thereafter."⁹¹ The tactic of intentionally destroying food was carried out in two ways.

⁹¹ Cook, "American Invasion," 32.

First, according to Cook, “the Indian was driven away from his food source, and the food source was removed from the Indian by destruction or otherwise.”⁹² To provide examples of how invaders destroyed traditional food stores and disrupted the food economy, Cook pulled several accounts from A.J. Bledsoe’s 1855, *Indian Wars of the Northwest*. The dates ranged from 1855 to 1864 and Cook listed the accounts of several rancherias that were destroyed or burned down, along with the food provisions that they contained. From the information gathered, Cook provided an estimate of the provisions destroyed: “The stored food supply in this region would normally amount to a good many hundred pounds of fish and an equal amount of acorns, etc. Perhaps a total of 2 tons would not be excessive for an annual average. This means the destruction of at least 300 tons of provisions in 8 years, or about 40 tons per year.”⁹³ This estimate addressed only a small region. It did not include all of Northern California. Nor did it address any of the Central California tribes, Eastern California tribes, or the Southern California tribes. Thus, the total destruction of California Indian food stores during the U.S. period must have been far larger.

Second, Cook provided examples of how the introduction of hydraulic gold mining and the expansion of livestock ranching destroyed valuable California Indian food sources. He stated: “Into the salmon-bearing streams of the Sierra Nevada and north coast ranges dirt and silt began very early to be washed in immense quantities, with the result that comparatively few salmon could get up the rivers to spawn.”⁹⁴ This was due, in large part, to hydraulic mining, which

⁹² Cook, “American Invasion,” 26.

⁹³ *Ibid.*, 33.

⁹⁴ *Ibid.*, 33.

“silted up great areas of bottom land and changed the entire face of the country.”⁹⁵ The introduction of industrial equipment allowed for miners—who came from around the world—to rapidly destroy ecosystems in their relentless search for gold. An equally devastating imposition on California’s ecosystems was the further expansion of domesticated animals into regions previously untouched by them. Cook noted, “these introduced animals entered into direct ecological competition with the Indians...For, under the stern protection of the whites, the cattle ate the grasses which produced the Indians’ seeds, and the hogs ate the acorns.”⁹⁶ Cook also provided several primary source reports by white witnesses that demonstrated the heavy toll that livestock had on traditional food sources. Some of the reports stated: “...their supplies in plains and foothills, provided by Providence for generations back, have been consumed by the stock of the white man.” Another reported, “Their Spring and summer food such as clover, wild lettuce, serrino, grass roots, and various kinds of other vegetables...have [been] this season, and will hereafter be, consumed by cattle, horses and hogs before maturity.”⁹⁷ As Hackel’s finding will later demonstrate, livestock became a primary means of sustenance for California Indians and replaced many of their traditional plant foods, but it did not fill the nutritional void that was equally as important.

Heizer’s book, *The Destruction of California Indians*, did not examine how the destruction of traditional food sources contributed to population decline for California Indians. However, several of the letters and newspaper articles that he republished address the destruction of traditional food and food sources as well as the prevalence of starvation among California

⁹⁵ Cook, “American Invasion,” 34.

⁹⁶ *Ibid.*, 35.

⁹⁷ *Ibid.*, 35.

Indians on California reservations. Heizer's text provided detailed firsthand accounts by non-Indians of what life was like for California Indians during the U.S. era of colonization.

In chapter two, "Conditions of Indians," Heizer provided several accounts of how gold mining wreaked havoc on traditional California Indian food sources. In a letter from United States Indian agent Edward Stevenson to Superintendent Thomas Henley on December 31, 1853, Stevenson wrote:

The rivers or tributaries of the Sacramento formerly were clear as crystal and abounded with the finest salmon and other fish... But the miners have turned the streams from their beds and conveyed the water to the dry diggings and after being used until it is so thick with mud that it will scarcely run it returns to its natural channel and with it the soil from a thousand hills, which had driven almost every kind of fish to seek new places of resort where they can enjoy a purer and more natural element. And to prove the old adage that misfortunes never come singly the oaks have for the last three years refused to furnish the acorn, which formed one of the chief articles of Indian food. They have told me that the white man had killed all of their game, had driven the fish from the rivers, had cut down and destroyed the trees and that what were now standing were worthless for they bore no acorns.⁹⁸

Several of the federal Indian agents in Northern California were witnessing the rapid environmental transformation of the region and understood its disastrous impact for California Indians' survival. The destruction of the environments that they had carefully maintained for generations created a nutritional void that California Indians had to address. In a letter from Agent D. A. Enyart to Superintendent Henley on November 3, 1854, Enyart stated: "They have gathered very few acorns this year owing to the great scarcity and are almost entirely destitute of anything to eat and consequently are dependent upon the reservation for subsistence."⁹⁹

⁹⁸ Heizer, *Destruction of California Indians*, 16.

⁹⁹ *Ibid.*, 22.

Unfortunately, the reservation provisions were often inadequate, as we shall see. Even with the production of several types of grains the vast majority of the harvest was distributed to whites, leaving very little to California Indians.

Heizer also provided a few accounts that demonstrate the various forms of food destruction and stealing that took place in Southern California under U.S. rule. In a letter dated April 29, 1856, from Lieutenant Wm. A. Winder to Captain H.S. Burton, Winder stated, “I ascertained from other sources that the whites were in the habit of taking the gardens or other lands without paying them for crops or other improvements...”¹⁰⁰ He later stated, “for many years these Indians have been in the habit of cultivating their fields without fencing, but at present the cattle of the whites overrun and destroy their crops and they have no mean of redress.”¹⁰¹ Many of the Southern California tribes did not have access to abundant natural resources, as the majority of their lands were in an arid, desert or desert-like climate. Due to this, the food that they did cultivate was crucial to their diets during this time and with whites stealing their foods and cattle destroying their crops, some Southern California Indian people had to kill cattle in order to keep from starving.

As many accounts have mentioned, there was usually severe repercussions for stealing white cattle, putting California Indians in a predicament with no good outcome. In a letter from Adam Johnson addressed to the Commissioner of Indian Affairs on July 6, 1850, Jonson stated: “ I have been told of several acts of depredation which were instigated by the chiefs of certain tribes through the apprehension that their people must die of starvation in the consequence of the

¹⁰⁰ Heizer, *Destruction of California Indians*, 87.

¹⁰¹ *Ibid.*, 88.

strangers overrunning their country, feeding their grass, burning their timber, and destroying their dams on the streams.”¹⁰²

Heizer also provided examples of blatant food store destruction by California state militiamen during the Pit River “War” of 1860. One San Francisco newspaper article reported that, “[California State Militia Adjutant General William C.] Kibbe seems to place great importance on the fact that numerous ‘caches’ of roots and other Indian stores were found...Early this spring, and throughout the summer, they were repeatedly assured that the Government would give them nothing this winter. Thus, by hard work, they had ample supplies, that were destroyed.”¹⁰³ The tactic of destroying food stores was common during the 1850s and 1860s. It was most heavily utilized during times of “war” to starve and drive California Indians from their lands. It also worked to incentivize California Indians to move onto reservations where they were promised food and shelter, both of which were minimal or non-existent depending upon the reservation that they were put onto.

The primary sources republished by Heizer also provided insights in the ways in which gold mining contributed to the assault on California Indian foods and foodways. An 1858 letter from George W. Taylor to the *Yreka Union* detailed the havoc that mining and colonists had on California Indians and the conditions they were forced to endure:

As to hunting, if they had arms and ammunition they could obtain but a meagre supply, as nearly all the game has been driven off their hunting grounds by the whites, and they are too weak to trespass with impunity upon the hunting grounds of their neighbors. As to fishing, owing to the obstructions in the river, for which the Indians are not accountable, but few fish have made their appearance this high up the stream; and as for berries suitable for the food of man they are like an “angel’s visits” as far as this region is concerned. The winter is at hand, and then

¹⁰² Heizer, *Destruction of California Indians*, 179.

¹⁰³ *Ibid.*, 95.

the poor Indian has no other resources than to beg, steal or starve; and who doubts or can blame them for the result, if driven to extremities.¹⁰⁴

The letters republished by Heizer provide excellent insight into not only the conditions California Indians were suffering but also of observers clearly telling of the destruction that the invasion of newcomers was causing, admitting that it was the source of suffering and death for California Indian people.

Hurtado too also wrote briefly on the impact that mining had on traditional food sources in his book *Indian Survival on the California Frontier*. He stated: “at first Indian miners could rely on traditional native foods, but they became increasingly scarce as placer mining silted the rivers and ruined the salmon runs, and as whites expropriated the lands and barred Indians from using it.”¹⁰⁵ Other than this brief statement Hurtado did not expand much on the effects of mining in his book *Indian Survival*. However, Hurtado did provide examples of how the laws established under U.S. rule excluded California Indians from their own lands.

On April 22, 1850 the California State Assembly passed an “Act for the Government and Protection of the Indians.” This bill took away several rights of California Indians.¹⁰⁶ In particular, this bill took away the protection of California Indian hunting, fishing, and gathering sites. The law also eliminated the phrase ‘from time immemorial’ in reference to their tenure from rancherias.¹⁰⁷ The Act essentially eliminated California Indians ability to practice traditional forms of sustenance by diminishing their rights to any land and made it illegal to

¹⁰⁴ Heizer, *Destruction of California Indians*, 208.

¹⁰⁵ Hurtado, *Indian Survival*, 122.

¹⁰⁶ *Ibid.*, 129.

¹⁰⁷ *Ibid.*, 130.

“trespass” on lands that they had used since creation. In addition to destroying natural resources and barring California Indians from using their lands, California law also prohibited the practice of burning as a form of resource management and increased crop production.¹⁰⁸ This restriction was carried on from the time of Spanish colonization and as Anderson and Madley mentioned, it had severe impacts that limited the ability of California’s native species to reproduce and thrive. In the later chapters Hurtado included a few federal Indian agent reports of starvation on the reservation but did not go into great detail about the circumstances. The reports of starvation serve more as a reinforcement to demonstrate that Indian agents at the time saw starvation as a prevalent theme on reservations. Hurtado demonstrated how restrictions and infringement that whites imposed on traditional California Indian food sources transformed California Indians diet and the environment that they inhabited.

One theme that Madley stressed in *An American Genocide* was the intentional destruction of traditional California Indian food sources. Of all the works consulted for this thesis, Madley’s book provided the most evidence of food destruction and documented multiple instances of invaders destroying and stealing traditional California Indian foods. This tactic, utilized by vigilantes, state militiamen, and regular United States Army soldiers, contributed to a staggering number of deaths and aided in the genocide inflicted upon California Indians. As Madley asserted, “The sustained military and civilian policy of demolishing California Indian villages and their food stores while driving Indians into inhospitable desert and mountain regions amounted to ‘deliberately inflicting on the group conditions of life calculated to bring about physical destruction in whole or in part,’” one of the genocidal crimes specified in the 1948

¹⁰⁸ Hurtado, *Indian Survival*, 131.

United Nations Genocide Convention.¹⁰⁹ These genocidal acts not only led to mass death, but also destroyed traditional food stores and ultimately shifted California Indian diets in ways that have created lasting effects and that are still killing twenty-first-century California Indians at alarming rates.

Massacres during the early years of U.S. rule in California (1846-1873) were often accompanied by the deliberate destruction of food sources and food stores. This was one of the primary means genocide perpetrators used to starve and kill California Indians. For example, in December 1849, a group of whites retaliated against the alleged stealing of their stock and the killing of a white miner by local Miwok Indians. In the attack that followed, vigilantes burned down a Miwok rancheria, “destroying all of the dried locusts they had laid up for food and the nuts they had stored away to make bread.”¹¹⁰ Madley explained that the destruction of California Indians’ food stores, “particularly in the winter when it would be difficult to replace,” was a common tactic that attackers increasingly utilized as the massacres of California Indians continued.¹¹¹

In some instances, traditional food destruction took different forms, being eaten by the perpetrators committing deadly acts. In April 1846 after the United States Army captain John C. Frémont and his troops killed an estimated 120 to 1,000 Wintu men, women, and children in the Sacramento River Massacre, the perpetrators camped on the banks of the river and ate all of the Wintus’ salmon.¹¹² Similarly, in 1849, east of what is now Stockton, a dozen Yankee

¹⁰⁹ Madley, *American Genocide*, 352.

¹¹⁰ Connor, “Connor’s Early California” MSS C-D 60, 3-4 in Madley, *American Genocide*, 95.

¹¹¹ Madley, *American Genocide*, 95.

¹¹² *Ibid.*, 47-48.

backwoodsmen tracked California Indians to their “village of about 50, probably Miwok or Northern Valley Yukots” and opened fire on them.¹¹³ “After killing at least nine people, and probably more, the Briton William Shaw and his companions sat ‘down to supper’” and ate their victims’ food: “roots, venison, acorn-bread, boiled horse-chestnuts, and a dish of vermin.”¹¹⁴ It leaves one to wonder: how could sane people sit and eat in the presence of the dead bodies of those that they had just murdered? Their actions speak loudly to the mindset of some men in California during the gold rush era, providing insight into how such genocidal atrocities could be carried out by newcomers.

As the gold rush continued, so did the attacks on California Indians and their food. In 1850, the San Francisco *Daily Alta California* explained that immigrants had “Broken up or occupied” California’s fisheries while driving out and destroying the state’s game, thus, driving California Indians to “The brink of starvation.”¹¹⁵ The following month the *Daily Alta California* added, “if we drive the poor Indian from his hunting grounds, and break up his fisheries, and cut down his acorn orchards, and burn up his grass seeds, and drive him from his old haunts which the god of nature has given him, it is to the mountains and starvation that we drive him.”¹¹⁶ By 1850, at least some journalists were well aware of the destruction of California Indian foods and foodways.

¹¹³ Madley, *American Genocide*, 93.

¹¹⁴ Shaw, *Golden Dreams*, 109-11 in Madley, *American Genocide*, 93.

¹¹⁵ *Daily Alta California*, December 15, 1850, 2 in Madley, *American Genocide*, 184.

¹¹⁶ *Daily Alta California*, January 21, 1851, 2, in Madley, *American Genocide*, 184.

Meanwhile, the publication and disbursement of the genocidal methods aimed at killing and removing California Indians from their homelands normalized the deadly treatment of California Indians in some newcomers' minds and created an environment that helped such actions to spread. Madley explained that even when Indian-hunting expeditions did not result in mass killings, vigilantes still targeted food sources in order to make survival more difficult for surviving California Indian people.¹¹⁷ For example, one 1852 account reported that after a group of about sixty vigilantes failed to find a group of California Indians whom they blamed for the murder of a white man, they "burnt two of the Indian ranches, with all their food &c."¹¹⁸ The targeting of food stores created an environment that was increasingly inhospitable for California Indians. When massacres did not kill entire groups, the destruction of food presumably resulted in starvation or acute malnutrition for the remainder. Yet, when California Indians turned to one of the only available food resources, white owned livestock, it almost always ended in their murder.¹¹⁹ This situation left California Indians in a cycle of death that seemed inescapable. They would starve if they did not hunt white livestock but if they hunted white livestock they faced murderous, disproportionate massacres by vigilantes, California state militiamen, and regular United States Army soldiers.

Meanwhile, some colonists failed to adequately feed the California Indians whom they held as *de facto* slaves and used food to manipulate them. In the Clear Lake region of Northern California, Charles Stone and Andrew Kelsey were two of the first U.S.-born colonists in the

¹¹⁷ Madley, *American Genocide*, 210.

¹¹⁸ *Echo*, July 21, 1852, in *Daily Alta California*, July 28, 1852, 2, in Madley, *American Genocide*, 210.

¹¹⁹ Madley, *American Genocide*, see 242-250 for more examples.

region. They took over the Big Valley Ranch and the Pomo and Wappo Indian serfs who had been associated with the ranch under the Vallejo family.¹²⁰ Stone and Kelsey treated these Pomo and Wappo people as slaves and separated them from their hunting weapons out of fear of being killed.¹²¹ This act forced these Pomo and Wappo people to rely on Stone and Kelsey and work for meager rations. The Pomo Chief William Ralganal Benson later explained that the conditions imposed by Stone and Kelsey forced Pomo and Wappo people into starvation. Benson reported that, “about 20 people died one year because of starvation.”¹²² Similarly, during the gold rush, California Indians took up mining due, as Madley argued, to “the pressing need to buy food to compensate for declining hunting and gathering yields.”¹²³ Yet again the destruction of traditional food sources had far reaching effects, placing California Indians in deadly situations.

The establishment of federal Indian reservations was the next step taken by the United States to further manipulate and control California Indians. On reservations, the control of food became a tool for manipulation, sometimes killing California reservation Indians through starvation. One March 1851 account demonstrated how the destruction of food was used to force California Indians into signing treaties and to relocate them to reservations. In the Yosemite Valley, the Mariposa Battalion systematically torched “villages and food stores” making survival difficult for the “retreating Ahwahanee survivors.”¹²⁴ This led to the Ahwahanee signing a treaty

¹²⁰ Madley, *American Genocide*, 107.

¹²¹ *Ibid.*, 110.

¹²² William Ralganal Benson, “The Stone and Kelsey ‘Massacre’ on the shores of Clear Lake in 1849: The Indian Viewpoint.” (*California Historical Society Quarterly* 11 no. 3, September 1932), 269 in Madley, *American Genocide*, 110.

¹²³ Madley, *American Genocide*, 71.

¹²⁴ *Ibid.*, 194.

that placed them on a reservation. Starvation was a major killer on California Indian reservations. As Madley explained, “The Ahwahanee would face death and starvation at the Fresno reservation, the treaty signed was never ratified by the United States Senate.”¹²⁵ A similar scenario played out for many California Indian communities, as colonists and government forces placed them on reservations where they offered them inadequate rations.

Madley stated: “between march 19, 1851 and January 7, 1852, Redick McKee, George W. Barbour, and Oliver M. Wozencraft signed eighteen treaties with no fewer than 119 California tribes, in which Indian leaders agreed to surrender almost all of their land in return for the promise of protection, clothing, blankets, tools, education, and nineteen federal reservations.”¹²⁶ However, “on July 8, 1852, U.S. senators, meeting in a secret session, unanimously repudiated all eighteen treaties.”¹²⁷ Instead, Congress allowed for the creation of five temporary reservations. Conditions on these reservations were never good. And, on August 30, 1852 reservation conditions declined further after Congress slashed the Senate’s appropriations for California Indians by 17 percent.¹²⁸ Some congressmen knew that such legislation would be fatal and some spoke to that truth. California Senator William M. Gwin warned Congress, “we have taken their acorns, grass-hoppers, fisheries, and hunting grounds from them. Thus, The Indian must perish from cold and hunger, if this Government does not

¹²⁵ Madley, *American Genocide*, 194.

¹²⁶ *Ibid.*, 165.

¹²⁷ *Ibid.*, 168.

¹²⁸ *Ibid.*, 212.

interpose to save him.”¹²⁹ Gwin’s statement clearly demonstrated that many congressmen were aware of the dire situation in California but failed to act in order to change federal Indian policies there.

As Madley explained, “Once they arrived at reservations, California Indians often encountered institutionalized malnutrition and lethal starvation.”¹³⁰ Several accounts attest to this statement. On the Mendocino Reservation, at least ten California Indians starved to death in the spring of 1857, according to the historian Frank Baumgardner.¹³¹ Conditions were worse on some other California reservations. When the Con-cow people were forcibly removed to Mendocino Reservation in 1858, their leader Tome-ya-nem stated: “The times became very hard, for often we were very hungry, and did not know where to get enough to eat and the Con-cows began to die very fast.”¹³² Then, “In about 1860, Tome-ya-nem and his Con-cow people relocated from the Mendocino Reservation south to the Round Valley Reservation where, according to Tome-ya-new, ‘there was even less to eat’.”¹³³ In December of 1862 the rations on the Round Valley reservation amounted to a measly 160 to 390 calories per person per day.¹³⁴ Lack of food did not only result in starvation. It was also accompanied by other major

¹²⁹ William M.Gwin in *Congressional Globe*, August 28, 1852, 2438 in Madley, *American Genocide*, 212.

¹³⁰ Madley, *American Genocide*, 258.

¹³¹ Frank Baumgardner, *Yanks in the Redwoods: Carving Out a Life in Northern California* (New York: Algora, 2010), 101 in Madley, *American Genocide*, 258.

¹³² Augustus G. Tassin, “The Con-cow Indians” *Overland Monthly*, July 1884, 10 in Madley, *American Genocide*, 259.

¹³³ *Ibid.*, 259.

¹³⁴ Madley, *American Genocide*, 306.

repercussions that led to death. As Madley mentioned, “Malnutrition weakened the immune systems...making them more susceptible to disease.”¹³⁵ As for expecting California Indian mothers, “starvation and malnutrition predictably decreased fecundity while increasing miscarriages and stillbirths.”¹³⁶ While on the outside the California reservations seemed to be a system instituted to help California Indians survive colonization, it was actually just another solution to the so-called “Indian problem,” providing an easy means of killing surviving California Indians. Madley noted that the conditions inflicted on California Indians fit within the United Nations Genocide Convention’s definition by “Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part.”¹³⁷ In total, Madley estimated that in the first twenty-seven years of early U.S. rule the California Indian population reduced by at least 80 percent, dropping from perhaps 150,000 to some 30,000.¹³⁸

Despite the relentless attack on California Indians, their foods, and their foodways, all three survived the genocidal onslaught of 1846-1873. California Indian people fought to preserve themselves, their cultures, and their foodways. Today there are 109 federally recognized tribes in California and 78 who are petitioning for recognition.¹³⁹ Within these communities there is an immense amount of knowledge that survived the genocidal attacks and more and more elders,

¹³⁵ Madley, *American Genocide*, 259.

¹³⁶ *Ibid.*, 260.

¹³⁷ *Ibid.*, 352.

¹³⁸ *Ibid.*, 346.

¹³⁹ *Ibid.*, 348.

youth, and community members are sharing, learning, and seeking this knowledge in order to continue passing it down to future generations.

CONCLUSION

This thesis has begun to shed focused light on the devastating impact and death toll that the destruction of traditional foods had on California Indians between 1769 and 1873. Many scholars have already found examples of the destruction of California Indian food stores and food sources that transpired during these years. Still, there needs to be further work done to assess the extent of food destruction in all eras of colonization, including from 1873 to the present, and how it continues to impact California Indians today. Further analysis of primary sources and archival records is necessary to provide a more complete and in-depth understanding of the role that the destruction of California food, food sources, and foodways played in the long colonization of California. More health statistics on California Indians are also needed in order to better address the impact that the loss of traditional foods, and their replacement by a modern, European-style diet has on California Indian people and their health outcomes. Ultimately, a better understanding of the radical transformation of California Indian foodways since 1769 could help to prompt changes that may lead to healthier, more productive, and longer California Indian lives.

As importantly, we need to study the history of how California Indian people have maintained their traditional foodways against nearly impossible odds as well as the grassroots efforts being made today by California Indians and California Indian communities to preserve, revive, and transform traditional California Indian foods. Having access to the resources and knowledge necessary to learn how to hunt, fish, catch, tend, gather, and process traditional California Indian foods is crucial for future generations. It is important that they continue these

practices and continue utilizing traditional California Indian foods. In Southern California, the Chia Café Collective is working hard to make traditional California Indian food knowledge more accessible through their extensive website and published cookbook, *Cooking the Native Way*.¹⁴⁰ The Malki Museum in Southern California is likewise continuing to pass on traditional harvesting and cooking knowledge through their annual agave harvest and roast. They keep all of their dates and times easily accessible through their website as well.¹⁴¹ They are just two examples of how California Indians are taking the right steps towards a healthier future.

Finally, this paper also demonstrates the need for educational reform in California. There is a severely incomplete history of California being taught in the state's public schools today. Many fourth graders continue to build models of California's missions, often out of sugar cubes, while the history of the genocide of 1846-1873 remains unaddressed in most public schools. These histories should be required. Telling the truth is necessary in order for California Indians to heal from past events. Moreover, honestly telling such histories would help tremendously in revitalizing traditional California Indian foods and foodways throughout the state. Traditional foods are what kept us strong, fit, and healthy for thousands of years and they can help us to heal as we move forward. This is just the beginning. I look forward to what the future holds and to seeing our traditional foods being reincorporated into our diets and the positive effects that they will have on our people.

¹⁴⁰ Barbra Drake, Lorene Sisquoc, Craig Torres, Abe Sanchez, Daniel McCarthy, Leslie Mouriquand, Deborah Small, *Cooking The Native Way: Chia Café Collective* (Berkeley CA: Heyday books, January 2018.)

¹⁴¹ <http://malkimuseum.org/agave-harvest-and-roast/>.

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