IMPROVING NORTHWESTERN MAIDU EDUCATION IN NORTHERN CALIFORNIA: A NEED FOR AND CREATION OF PLACE-BASED CULTURALLY RELEVANT CURRICULA

A Project

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by

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Spring 2022

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DEDICATION

This project is dedicated to all the Native students who have experienced and are currently experiencing tremendous inequities and adversity in education.

ACKNOWLEDGMENTS

To our ancestors, for persevering through California's genocide perpetuated against California Indians, surviving assimilation, and still managing to hold onto aspects of their traditional knowledge.

To contemporary Northwestern Maidu elders, who continue to teach traditional ways of knowing and oral history with youth ensuring that the knowledge and experiences of our ancestors persist in the next generation.

To my father for teaching me place-based culturally relevant traditional environmental knowledge.

To my life partner who has unwaveringly supported me throughout graduate school.

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ABSTRACT

IMPROVING NORTHWESTERN MAIDU EDUCATION IN NORTHERN CALIFORNIA: A NEED FOR AND CREATION OF PLACE-BASED CULTURALLY RELEVANT CURRICULA

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This project seeks to improve the educational experience of Native students through the creation of anticolonial, place-based, culturally relevant curriculum. Native Americans have been historically underserved by public education: the education of Native youth is used instead as a tool of assimilation and colonization. Native Americans have the lowest educational attainment rates of any other cultural group in the United States, and they currently experience inequities and discrimination within the public education systems present in Northern California. Previous research has shown place-based culturally relevant curriculum that strengthens indigenous identities to be successful in the education of Native students outside of California. In this project, I created five place-based culturally relevant project deliverables within a Critical Indigenous Research Methodologies framework to meet various needs expressed by the Northwestern Maidu community.

CHAPTER I

INTRODUCTION

Background

The current literature review addresses both the historic and current mistreatment of Native Americans in public education within the United States of America. I first address historic reports and evidence of intentional use of poor-quality education as a tool of assimilation to perpetuate ethnocide. A processive timeline of landmark stages of Native American public education reveals connections between current and historic mistreatment of Native American students in public education and inequities in public education. The contemporary mistreatment of Native American students in public schools within Northern California is given special attention. Through the discussion of current literature and empirically supported teaching methods, I contextualize the development of my own project of pedagogical innovation including the goals of ameliorating inequities experienced by Native Americans in public education and improving academic performance.

Purpose of Project

The purpose of this project is to create place-based culturally relevant educational materials, tools, and curriculum in order to better serve Native American students within Northern California, specifically students within western Butte County, California. The intention of this project is to be used by local schools, organizations, and Tribal governments within the Butte County area in order to better serve the Native American community. There is a dire need for this project. Within the United States, Native Americans have the lowest educational attainment rates of any other cultural/ethnic group (Dalbotten et al. 2014; Martinez, 2014). Furthermore, there have been a plethora of lawsuits against Northern California schools and school districts within recent years for discriminating against Native American students and providing poorer quality education (Arsdale 2013; *Gensaw v. Del Norte County Unified School District,* 2008; Martin 2020; Simon et al. 2020).

Definition of Terms

American Indian, Alaska Native, Native American, Native, Indigenous

Throughout this project, *Native American* people, the aboriginal people of North America, are referred to as *Native*, *Native American*, *American Indian*, *Alaska Native*, and/or *Indigenous*. For the purposes of this project, the Bureau of Indian Affairs definition for American Indian/Alaska Native/Native American will be utilized to encompass and define the previously mentioned terms.

An American Indian or Alaska Native person is someone who has blood degree from and is recognized by a federally recognized tribe or village (as an enrolled tribal member) and/or the United States of America. Of course, blood quantum (the "amount") of American Indian or Alaska Native blood from a federally recognized tribe or village is not the only means by which a person is considered to be an American Indian or Alaska Native (Bureau of Indian Affairs, n.d.).

Boarding Schools

American Indian boarding schools, also known as American Indian residential schools, were established and operated by the U.S. Federal government from the 19th century until the late 20th century with the primary objective to "civilize" American Indians, by utilizing public education as a tool of assimilation and colonization. The United States government utilized boarding schools to intentionally separated Native children from the influence of their families and tribal communities during the child's formative years of development.

The Federal government withheld "rations, annuities, and other goods" (Lajimodiere, 2014, p. 256) from Native families on reservations that refused to send their children to boarding schools after attendance was made compulsory by Congress in 1891. Additionally, boarding schools were used to create a servant class, "educating" American Indian children in domestic work by leasing the child, against the child's will, to white homes during summer to prevent contact between Native children and their tribal communities (Lajimodiere, 2014).

Critical Indigenous Research Methodologies

As defined by Brayboy et al. (2012, p. 423), critical indigenous research methodologies (CIRM) is an anti-colonial, holistic way to view methods and philosophies. Derived from indigenous ways of knowing, valuing indigenous knowledge systems as legitimate forms of knowledge production on par with Western Science, it is distinctly focused on meeting the needs of communities. Critical indigenous research methodologies inherently contain emancipatory agendas that recognize the selfdetermination and inherent sovereignty of indigenous peoples.

Culturally Relevant Pedagogy

As defined by the California Department of Education, culturally relevant pedagogy is a theoretical teaching model that supports students in upholding their cultural identity, focuses on using multiple aspects of student achievement, and supports students in developing critical perspectives/consciousness in recognizing and challenging societal inequalities (California Department of Education, n.d.).

Indian Country

For the purposes of this project, the definition for *Indian Country* provided by United States Environmental Protection Agency as described in 18 U.S.C. § 1151 and 40 C.F.R. § 171.3, will be used. *Indian Country* means,

(a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (Environmental Protection Agency, n.d.)

Native Students

Native Students are Native Americans, as previously defined, who attend schools, centers of education, and institutions of higher education within the United States of America.

Place-based Education

Place-based education (PBE), is an integral part of the traditional teaching

philosophies of Native Americans. It is a situated, context-rich, transdisciplinary teaching

and learning modality distinguished by its unequivocal relationship to place or any

locality that people have imbued with meanings and personal attachments through actual or vicarious experiences (Semken et al. 2017).

Limitations of the Study

Due to the nature of place-based education and culturally relevant pedagogy, as well as the great cultural diversity present within Native American communities, this project is specific to the Northwestern Maidu community of Northern California. This focus is necessary in order for the deliverables of this project to be both culturally relevant while fostering authentic place-based connections. However, the general themes, methodologies, and project design in this project may be easily transferred and applied to other Native American Communities throughout the rest of Northern California on a place-by-place basis.

CHAPTER II

LITERATURE REVIEW

Introduction

Public education of Native Americans in the United States of America has historically been, and I argue still is, motivated by the dominant culture's desire to assimilate American Indians, create a servant class, by utilizing curriculum that is not culturally relevant in order to homogenize the population. Consequently, education is a tool used to oppress Native Americans contributing to deleterious effects experienced in Indian Country, including but not limited to, consistently high rates of Native students dropping-out or failing high school for over two centuries, today in the twelve states with the highest populations of Native students less than 50% of Native students graduate high school, and in higher education today Native student attrition rates range between 75% and 95% (López et al., 2013). Native Americans both historically and to this day have been neglected and oppressed by the education system. This chapter identifies the historical roots of low education attainment rates within Indian Country today by tracing the effects of misguided federal and state policies, demonstrating a clear need for the development and use of culturally and linguistically relevant place-based indigenous curriculum. This project's purpose is to create and provide curriculum that serves to address current disparities and inequities in American Indian education in the context of Northern California.

History of Native American Education in the United States

Before the mid-19th century, most schools developed for the education of American Indians were mission schools operated by religious organizations with the explicit goal of promulgating the Protestant religion (Berkhofer, 1965). Standardization and codification strategies for American Indian assimilation through education at the Federal level began with the creation of the Board of Indian Commissioners by the President in 1869 under congressional authorization. Its stated purpose was to create effective assimilation practices through education of American Indians and to prevent misuse of American Indian education related governmental funds (Dussias, 1997).

The legal status of the uncivilized Indians should be that of wards of the government; the duty of the latter being to protect them, to educate them in industry, the arts of civilization, and the principles of Christianity ... the Indian, as a race, can be induced to work ... the establishment of Christian missions should be encouraged, and their schools fostered ... the religion of our blessed Savior is believed to be the most effective agent for the civilization of any people – U.S. Board of Indian Commissioners Annual Report 1869. (Dussias, 1997, p. 773)

The Protestant-dominant Board of Indian Commissioners would go on to supervise procurement of supplies intended for the betterment of American Indians, function as a liaison between the Bureau of Indian Affairs (BIA) and Christian organizations, and most importantly report progress to the U.S. Federal government on the success of "civilizing the Indians" (Dussias, 1997). These reports, published by the Board of Indian Commissioners included the percentage of American Indians attending boarding schools, the number of American Indians who "learned to labor," number of American Indians who learned to wear "citizens' dress," and how many American Indians were successfully converted to Christianity (Dussias, 1997). Soon after the establishment of the Board of Indian Commissioners, Captain Richard H. Pratt developed the first boarding school, and claimed the purpose was to "kill the Indian and save the man" and to "[bring] the Indian to civilization and [keep] him there" (Dawson, 2012). This motto and the accompanying model that utilized strict military tactics to force assimilation would be copied by subsequent Indian boarding schools in the United States.

Off-reservation federally operated Indian boarding schools became the model in the latter quarter of the 19th century and first half of the 20th century (Gregg, 2018). These off-reservation boarding schools were placed as far away from Native American communities as possible, to limit contact of Native American students with their families therefore increasing the effectiveness of assimilation (Dawson, 2012; Lajimodiere, 2014). The Federal government withheld "rations, annuities, and other goods", (Lajimodiere, 2014, p. 256), from Native families on reservations that refused to send their children to boarding schools after attendance was made compulsory by Congress in 1891. Native American children who did not voluntarily enroll in boarding schools were forcibly removed from their families and placed into off-reservation schools (Gregg, 2018).

In one such case, *In re Can-ah-couqua*, an Alaskan Native child who wished to escape from a boarding school was forcibly held against their will (Dussias, 1997). In the case of *In re Can-ah-couqua*, the Federal government gave a mission boarding school custody of an Alaskan Native child by the Alaska federal district court after the child's mother protested her child's kidnapping (Dussias, 1997). The Alaskan federal court in their ruling stated that the government's duty was to rescue Indian children, "from lives of barbarism and savagery," which was the phrase the court used to describe indigenous culture and ways of living (Dussias, 1997).

There were more than 100,000 Native children attending off-reservation Indian boarding schools between the last quarter of the 19th century and the first quarter of the 20th century (Dawson, 2012). Indian boarding school students spent an average of three to five years away from their families without contact due to the prohibitive cost of transportation (Gregg, 2018). Students in these Indian boarding schools were abused, received subpar education that focused on assimilating students into the dominant culture, teaching scientific racism-the pseudoscientific eugenics-based belief that people of color are empirically inferior to white people-converting students to Christianity, and teaching basic industrial and farming skills to create a servant class (Dawson, 2012; Dussias, 1997). To create a servant class, American Indian children were "educated" in domestic work through Outing programs in which the government leased Native children, against the child's will, to homes of Euro-American families during the Summer months when school was not in session (Lajimodiere, 2014). It would not be until the Meriam *Report* of 1928, that these sorts of transgressions would begin to be rectified (Dawson, 2012).

The Meriam Report: The Problem of Indian Administration is a survey of conditions in Indian Country published in 1928 by the Institute of Government Research also known as the Brookings Institute (Meriam, 1928). This survey was conducted under request by former Secretary of Interior Hubert Work, for use by the Department of Interior to better understand current conditions in Indian Country with the goal of more effective management of American Indians (Meriam, 1928). The *Meriam Report* found that students in boarding schools suffered from abuse, overcrowding, poor nutrition, incompetent teachers, and ineffective curriculum (Dawson, 2012; Meriam, 1928). The *Meriam Report* also stated that, "continued policy of removing Indian children from the home and placing them for years in boarding school largely disintegrates the family" (Meriam, 1928). The US Department of the Interior's response to the report led to the termination of many Indian boarding schools in the 1930's (Gregg, 2018). One of the more impactful policy reforms came in the form of limiting the ability of BIA officials to forcibly separate native children from their families after 1942 (Dawson, 2012). The suggested reforms in the *Meriam report* also led to a substantial reduction of Native American students under BIA authority in boarding schools (Dawson, 2012).

However, subpar education and treatment in Indian boarding schools continued throughout the mid-19th century in the schools that continued to be operated by the BIA. The continued mistreatment of Native Americans present within boarding schools culminated in a report, *Indian Education: A National Tragedy*, published in 1969 and spear-headed by congressperson Ted Kennedy, who sat on both the congressional Committee on Labor and Public Welfare and the congressional Subcommittee of Indian Education (U.S. Senate Committee on Labor and Public Welfare, 1969). The purpose of the report, *Indian Education: A National Tragedy*, was to measure the effectiveness of reforms made because of the *Meriam Report* and to survey the state of wellness in Indian Country. The report found that boarding schools, operated by the BIA, were responsible for elevated levels of violence, suicide, incarceration, alcoholism, and ineffective education amongst American Indians (Dawson 2012; U.S. Senate Committee on Labor and Public Welfare 1969). Ted Kennedy used the findings of the report to call for reform and take the administration of boarding schools away from the BIA. Twenty years after the publication of Indian *Education: A National Tragedy* the remaining boarding schools were controlled by Native American run organizations (Dawson, 2012). The findings of both the *Meriam Report* and *Indian Education: A National Tragedy* report culminated in the dissolution of Captain Richard H. Pratt's Indian boarding school model.

My mother spoke English, but she only went to third grade. My grandmother and my father didn't know much. My grandfather knew none . . . my first teacher, Miss Ann, she was the one that kept whipping me. She had a ruler. We called it the 13-inch ruler. It was only 12, but we called it 13, because it always seemed that it reached beyond 12. And it was always the Native kids. . . . We pointed that out one time, and she'd hit us again: "How come you don't hit the white kids?" Boom! She said she was teaching us. We didn't learn — Ron Alec, Cold Springs Rancheria of Mono Indians. (Williams & Tracz, 2016, p. 88)

Today, approximately 42,000 Native American students are educated by the Bureau of Indian Education, with 125 tribally operated Indian education centers (Gollnick & Chinn 2017). Contemporary programs exist today to renew Native American culture through public education. The U.S. Department of Interior today provides funding to support tribally operated Native American public schools, totaling 125 schools in total (Gollnick & Chinn, 2017). Further funding of Native American language and culture has come in the form of the Esther Martinez Native American Languages Preservation Act of 2006, which is the reason for the creation of the grant program known as the Esther Martinez Initiative (EMI), and the Native American Languages Act of 1990/1992 (NALA) (Beaulieu, 2008; Warhol, 2012). For example, in the year 2011, eight EMI grants were funded for \$2.05 million & sixteen NALA grants were funded for \$3.44 million (Warhol, 2012). Warhol (2012) notes that the level of funding of EMI and NALA are not adequate to fulfill the needs of Indian Country, and states that the No Child Left Behind (NCLB) Act of 2001 mandate of English only testing contradicts the purpose of EMI and NALA to provide culturally and linguistically relevant education. Even with this shift in the education of Native American students, contemporary issues in public education of American Indians persists.

Federal Contemporary Inequities in American Indian Education

Native Americans have the lowest educational attainment rates, defined as the highest level of education that an individual has completed, of any other cultural/ethnic group in the United States (Dalbotten et al. 2014; Martinez, 2014). This disparity in education is true in K-12 education as well as higher education (Martinez, 2014; Gollnick & Chinn, 2017). Nationally, approximately 46% of Native American youth graduate high school, while the national average is about 90% (Martinez, 2014). American Indians and Alaskan Natives, as an ethnic group, also have the lowest completion rates of core academic courses and advanced coursework, including lowest completion rates of high school AP courses and exams, lowest high school graduation rates, and lowest completion rate of college degrees (DeVoe & Darling-Churchill, 2008). Only 17% of Native Americans enroll in college, compared to the national average of 62% (Martinez, 2014). However, of that 17% who do enroll into college, only 4% continue to attend college after their first year (Martinez, 2014). A large factor contributing to this pattern is that Native American students do not perceive that their instruction is relevant to them culturally (Martinez, 2014).

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The dominant culture of European Americans is best represented in the current curriculum of most schools even though students of color account for a slight majority in K-12 schools within the United States of America (Gollnick & Chinn, 2017). Native Americans are seldom appropriately represented in the school curriculum and are often depicted as being aggressive (Tatum, 1997). The dominant culture resists anything that may disrupt the dominance and homogeneity of the dominant culture. An example of such resistance can be witnessed by the Congressional decision in the early 1990s that nearly unanimously voted to reject national history standards that included multicultural curriculum (Gollnick & Chinn, 2017). The ostensible reason for this lack of inclusion stemmed in fear that the dominant culture would be negatively affected and displayed in a negative light (Gollnick & Chinn, 2017).

Native Americans in the United States are currently forced to assimilate to an education system that does not benefit them (Cajete & Pueblo, 2010). Cajete and Pueblo (2010) argue that Indigenous educational philosophy is starkly different than that of Western Europeans and that the systemic structure of the educational system in the U.S. does not allow for Indigenous knowledge and identities to be expressed. Furthermore, the dominant culture implicitly or explicitly tends to claim that Western European norms and knowledge are superior to those of people of color (Gollnick & Chinn, 2017). Reyhner (2017) argues that not only have recent educational policies at the Federal level failed Native Americans, but they are having deleterious impacts in Indian Country by attacking the cultural identities of American Indian students and contributing to cultural disintegration. To mitigate these issues, Simon et al. 2020, recommend the creation of

curriculum that is culturally relevant in partnership with local Native American communities.

To compound the lack of cultural connection that students feel, Native American students experience extreme racism. As a result of students of color in the United States educational system not being represented positively, depicted as underachieving degenerates and as more aggressive than white students (Gollnick & Chin, 2017; Tatum, 1997), Native American students are disproportionately targeted for discipline (Brown & Tillio, 2013). The rate of suspension for Native students is much higher than the national average for white students, 10% for males and 4% for females (Brown & Tillio, 2013).

Recent Federal public education reforms aimed at closing the academic achievement gap between American Indians and mainstream Americans, such as the NCLB, have not been successful (Brayboy & Castagno, 2009; Reyhner, 2017; Warhol, 2012). Reyhner (2017) argues that recent attempts of addressing the disparities in public education were unsuccessful because they focused too much on evidence-based curriculum and instruction, while "largely ignoring the negative effects American popular culture and assimilationist, English-only educational efforts on Indigenous children" (p. 1). Warhol (2012), states that a myriad of research into the impact of NCLB on Indian Country has shown it to be largely negative specifically harming language and culture programs. Brayboy and Castagno (2009) further state that during the years of 2003 and 2007, when standardization of curriculum at the Federal level increased greatly, academic scores of American Indians stagnated. In the opinion of Cleary (2008, p. 68), "Attention only to basic skills and teaching to the test is precisely the kind of curriculum that will leave Native students behind."

California Contemporary Inequities in American Indian Education

These national trends are clearly visible in California, especially Northern California, which has the largest population of American Indians within the United States (Proudfit & Juan, 2012). For the California State average, Proudfit and Juan (2012) found that only 68% of Native American youth receive a high school diploma, which is significantly lower than the state average. Proudfit and Juan (2012) also found that the K-12 dropout rate amongst California Indians was substantially higher than the California State average. According to California Department of Education, in the year 2019, 15.6% of American Indian students dropped out of school, which is the highest of any other identified cultural/ethnic group (California Department of Education, 2020). For comparison, in the year 2019, the California Department of Education reported that 3.0% of Asian students, 6.7% of White students, 9.8% of Pacific Islander students, 10.2% of Latino/Hispanic students, and 14.2% of African American students dropped out of school (California Department of Education, 2020). More recently, Proudfit and Gregor (2016) reported that from the year 2010 to 2015 there was a 14.36% decrease in total number of American Indian and Alaskan Native high school graduates in the State of California. These disparities are more pronounced in Northern California as the next section demonstrates.

Humboldt County, CA has nearly twenty times more Native American students in K-12 education than the national average (Simon et al., 2020). Education achievement and success in K-12 public education in Humboldt County for Native American students is far worse than any other racial/ethnic demographic in the county (Simon et al., 2020). According to the California Department of Education, only 20% of Native American students in Humboldt County met English Language Arts standards (Simon et al., 2020). In the 2018-2019 academic year only 14% of Native American youth met grade-level math standards (Simon et al., 2020). However, for the same academic years in Humboldt County, 44% of non-indigenous students met English Language Arts standards, which is more than double the rate for indigenous students (Simon et al., 2020). In the 2017-2018 school year, only 1% of Native American high school graduates met eligibility requirements to attend a California State University or a University of California public institution of higher education (Simon et al., 2020). It is specifically indigenous students in Humboldt County who are being underserved, with over 90% of indigenous students failing "college and career" State and National readiness metrics, and a graduation rate that is significantly lower than their non-native peers (Simon et al., 2020).

Simon et al. (2020) attribute these statistics in Humboldt County to school climates that do not allow indigenous students to thrive: Humboldt County's curriculum is a tool of colonization that alienates and excludes indigenous students. Simon et al. lists several systemic barriers inherent within school districts of Northern California including lack of culturally relevant curriculum, inaccuracies in U.S. and California history, invisibility of indigenous contributions to society, overuse of disciplinary practices, failure to provide school-based supports, and racially hostile school environments. Such barriers are encapsulated by the experiences cited by indigenous students: I've gone to a school where most of the people thought Native Americans were a myth, made racial slurs, made [a] mockery of my culture, and had plenty of different stereotypes of what they thought were accurate representations of Native people — Humboldt County Indigenous Student. (Simon et al., 2020, p. 13)

Humboldt County, CA ranks amongst the top five counties for disciplinary actions against indigenous students (Simon et al., 2020). Native American youth in Humboldt County experience suspension rates that are more than four times the state average for all students and five times higher than white students (Simon et al., 2020). In the academic year of 2018-2019, while the state average of suspension rates for indigenous students was 7.5%, the rate in Humboldt County was 14.6% (Simon et al., 2020). The highest offenders of disproportionately high suspension rates of indigenous students in 2019-2020 within the county were Klamath-Trinity Joint Unified School District suspending 17.8% of indigenous students, Fortuna Union High School District at 28.2%, and Loleta Union School District suspending 30.8% of their Native American students (Simon et al., 2020). Simon et al. claims that systemic racism prevalent in the school climate of Humboldt County along with high rates of discipline contribute to a feeling of being unwelcomed and contribute to chronic absenteeism. Within Humboldt County, the rate of chronic absenteeism is more than double that of the average for the state of California (Simon et al., 2020).

Discriminatory behavior against indigenous students practiced by K-12 schools in Northern California has resulted in several recent lawsuits and legal actions. *Gensaw v. Del Norte County Unified School District* (2008) charged Del Norte County of discriminatory policy against the Native American students that it served. Specifically, it stated that Del Norte County's termination of grades 6-8 of an elementary school on the Yurok Reservation represented racial discrimination. As a result of the lawsuit, Del Norte County reached a settlement that not only restored the terminated grades on the Yurok Reservation, but also included the creation of an afterschool program that teaches Yurok language and culture which Del Norte County will fund. As a result of the settlement, Del Norte County also agreed to take steps to mitigate the elevated levels of disciplinary actions targeting Native American students in the county. However, as of 2013 the rate of suspension for these students was still significantly higher than their white peers at a rate of 18.7% (Arsdale, 2013).

More recently, in Butte County, CA, the U.S. Department of Justice determined in 2020 that Oroville City Elementary School District and the Oroville Union High School District had discriminated against Native American students, Black students, and students with disabilities (Martin, 2020). The U.S. Department of Justice investigation found that the Oroville, CA school districts demonstrated systemic overreliance on punitive exclusionary discipline actions against Native American, Black, and disabled students that was significantly higher than that of white students (Martin, 2020). Not only this but the Department of Justice investigation found that the Oroville school districts, "failed to adequately respond to complaints of discrimination and harassment, including — in some Oroville schools — the use of racial slurs against students of color." (Martin, 2020). As a result, the Oroville school districts must enact a five-year plan to address the inequalities by revising policies and practices (Martin, 2020). Additionally, school administrators in Oroville will need to receive training from experts regarding systemic racism, bias in discipline, and will receive trainings concerning reducing disproportionate discipline for Black, Native American, and students with disabilities (Martin, 2020).

Simon et al. (2020) recommend that school districts in Northern California should actively consult with Indigenous youth, families, tribal nations, and other Native American affiliates organizations to develop and enact policies and practices to address discrimination and education inequity. Specifically, the authors recommend that schools should collaborate with local tribal governments and the local Native American community to establish data-sharing and consultation practices to better meet the needs of Native students (Simon et al., 2020). An essential part of this process, according to Simon et al. (2020), is to develop culturally and linguistically relevant curriculum while also engaging members of the school community in the development process.

Critical Race Theory and Multicultural Curriculum

Kohli (2008) argues that the implementation of Critical Race Theory (CRT) is a valuable tool to combat discrimination and racism that students of color experience in the classroom. CRT was originally developed to acknowledge race and intersectionality of racism and power as an initial step to combating racial injustice (Kohli, 2008; Writer, 2008). In the field of education, Kohli (2008) argues that CRT can be modified to address racism and educational inequity.

In one case study, Wernick et al. (2021) utilized CRT in education in conjunction with multicultural curriculum and intersectional theory to change discriminatory attitudes of high school aged students and increase the level of student intervention when discrimination against LGBTQ+ students was witnessed. Wernick et al. (2021, p. 5) note that,

Increased inclusion of communities of color in curriculum was significantly associated with higher rates of self-reported likelihood to intervene with respect to incidents of both sexual orientation (b = 0.24, SE = 0.07, p = .001) and gender identity (b = 0.23, SE = 0.07, p = .001) harassment.

The results of Wernick et al. (2021) show that it's possible to utilize CRT and multicultural intersectional curriculum to address discrimination and harassment experienced by marginalized students in the classroom.

Price et al. (2019), note that adolescents of color experience higher rates of discrimination in school than white students. The authors state that for students of color experiencing high levels of discrimination, positive teacher-student relationships are not enough to address the needs of students of color even though this practice is effective with LGBTQ+ students (Price et al., 2019). To further meet the needs of marginalized students of color experiencing discrimination, Price et al. (2019) suggest the utilization of inclusive multicultural curriculum. The authors argue that inclusive curriculum should explicitly incorporate discussions on prejudice since previous research has shown that merely highlighting marginalized groups in a positive manner is not enough to combat bias (Price et al. 2019). Furthermore, Price et al. (2019), recommends that school harassment policy should be developed and/or improved to explicitly include race, gender identity, and sexual orientation.

Brayboy (2005), argues that Critical Race Theory in education cannot sufficiently address the specific needs of Indigenous students due to CRT not recognizing Native Americans as "both legal/political and racialized beings or the experience of colonization." What Brayboy (2005) instead argues for is the utilization of Tribal Critical Race Theory (TribalCrit) in education to meet the educational needs of Native Americans (Brayboy, 2005). While a central tenet of CRT is that racism is endemic to society, the central tenet of TribalCrit is that colonization is endemic to society while also acknowledging racism (Brayboy, 2005).

Brayboy (2005) believes that due to the special political/legal status of Tribal

Nations as sovereign governments CRT needs to be adapted when collaborating with

Native Americans to recognize the government-to-government relationship between

Tribal Nations and the Federal and State governments while also incorporating the

intersectionality of colonization perpetuated by the United States of America (Brayboy,

2005). Brayboy (2005, p. 430), argues that TribalCrit also allows a more appropriate

approach to address specific issues in Indian Country such as:

language shift and language loss, natural resources management, the lack of students graduating from colleges and universities, the overrepresentation of American Indians in special education, and power struggles between federal, state, and tribal government.

Brayboy (2005, p. 429) lists nine tenets of TribalCrit:

- 1. Colonization is endemic to society.
- 2. U.S. policies toward Indigenous peoples are rooted in imperialism, White supremacy, and a desire for material gain.
- 3. Indigenous peoples occupy a liminal space that accounts for both the political and racialized natures of our identities.
- 4. Indigenous peoples have a desire to obtain and forge tribal sovereignty, tribal autonomy, self-determination, and self-identification.
- 5. The concepts of culture, knowledge, and power take on new meaning when examined through an Indigenous lens.
- 6. Governmental policies and educational policies toward Indigenous peoples are intimately linked around the problematic goal of assimilation.
- 7. Tribal philosophies, beliefs, customs, traditions, and visions for the future are central to understanding the lived realities of Indigenous peoples, but they also illustrate the differences and adaptability among individuals and groups.
- 8. Stories are not separate from theory; they make up theory and are, therefore, real and legitimate sources of data and ways of being

9. Theory and practice are connected in deep and explicit ways such that scholars must work towards social change.

Writer (2008), who also argues in favor of TribalCrit, states that it is not helpful to Native Americans to be viewed in a collective minority manner. Instead, Writer (2008) like Brayboy (2005) argues that TribalCrit should be implemented to explicitly recognize Native Americans as members of culturally sovereign entities and politically sovereign nations. Furthermore Writer (2008), states that to meet the needs of Native students TribalCrit should be used alongside multicultural education, with an emphasis on social justice, to counter colonization. The author, however, warns against using forms of multicultural education that do not specially address social justice issues (Writer 2008). In the opinion of Writer (2008, p. 1), "food, fun, festivals, and foolishness" multicultural curriculum not centered around social justice maintains colonial systems and promulgates colonization.

Williams and Tracz (2016) conducted a study of California Indian students' school experiences with various California Indians indigenous to Central California. Williams and Tracz (2016) found that early immersion of California Indian students in their traditional language and culture correlated with stronger levels of resiliency amongst California Indians. Resiliency has been shown to increase the social and emotional well-being of students who experience adversity (Gillham et al., 2013). Williams and Tracz (2016) state that their findings support the earlier findings of Brayboy and Castagno (2009), who argue that community, culturally responsive education, sense of place, and Indigenous knowledge can better meet the educational

needs of Indigenous children. An important component of Indigenous education is to include real-life experiences of Indigenous people (Brayboy & Castagno, 2009).

Indigenous communities regularly express their desire for culturally relevant

curriculum that meets the needs of their tribal communities. A desire for such a

connection, bridging indigenous ways of knowing and public education, are demonstrated

in the following quotes:

I don't believe that our ways are gone. I believe there are ways waiting for us to wake up, to reach out and bring it back, and every time we bring a circle together, that's what we're doing ... Run the sweats. Teach the sweats. Try to reach some of our children that are sick. Try to give them a tool so they have a chance — Ron Alec, Cold Springs Rancheria of Mono Indians. (Williams & Tracz, 2016, p. 92)

During my time as a young man, and growing up, [school] was a really hard thing for me because I wasn't really into education or anything. I couldn't talk the language ... Up to sixth grade I was [in speech therapy]. The reason I [couldn't talk English] was that my grandma didn't talk very much English either. I was raised the Tachi way, and all the language talk was Tachi, so it was the everyday language for me ... They had a lunch program [at school]. Sometimes it was my only meal. And I says, "Well, this is all right. It's a survival way, I guess." I stayed in school up till the 8th grade ... And then I got outta there. I went to high school, for, oh, maybe two months, I guess. Then I dropped out. Just wasn't interesting to me. Just didn't relate to me — Clarence Atwell Jr., Tachi-Yokut of Santa Rosa Rancheria. (Williams & Tracz, 2016, p. 90)

When you're looking at the cultural stories, you're looking at our old way of life. But when I went to tell my stories, my stories were always called fairy tales and myths, legends. And that made me feel real bad, because all of a sudden, these aren't real stories. And so I quit telling stories because [the teacher and classmates] didn't understand them — Ron Goode, North Fork Rancheria of Mono Indians. (Williams & Tracz, 2016, p. 90)

> Culturally Relevant Pedagogy and Place-Based Education

As the previous literature has revealed, there is a clear and present need for

culturally relevant education, which incorporates Indigenous knowledge and Native

communities, to address the educational needs of Native American students. Reyhner

(2017) argues that due to the history of education of indigenous peoples in the United States that the education system should not only recognize but actively affirm the identity of indigenous students. Furthermore, Reyhner states that intentional indigenous language and culture revitalization in the classroom, which curates a strong cultural identity, is needed to not only improve the academic success of indigenous youth but address other issues of interests, such as decreasing youth at-risk behavior, such as suicide and gang activity, which negatively impact a student's ability to achieve academically and contribute to deleterious harm experienced by Native American youth.

J. T. Johnson (2012), further argues that not only is deliberate inclusion of culture and language important for the education of Indigenous peoples, but so is the development of place-based curriculum that acknowledges and supports the place-based connection and knowledge Indigenous peoples have tied to their traditional territory. This deep connection between place and indigenous identity is well phrased by Ortiz (2007, p. 135): "Being and place are conceptually linked. This is an Indigenous principle and, therefore, is maintained as such within Indigenous cultural philosophy and expressed in the most common or ordinary way." J. T. Johnson (2012) makes the case that teaching practices need to be conscious of indigenous epistemologies, integrate place-based pedagogies, engage in indigenous knowledge systems which are inherently place-based, and writes that place-based indigenous education has the power to heal the harm that colonialist-minded education has done to strip away the connection people have to their localities that make-up their cultural landscape.

In this process of placed engagement, there is the promise of healing the placelessness within our academic epistemologies and methodologies. This healing will hopefully serve to expand our abilities to critically engage as geographers and educators. Healing placelessness also holds out the hope of developing an autochthonous identity, an identity which springs from a reciprocal relationship with our place in the world. (J. T. Johnson, 2012, p. 835)

Recent case studies that incorporate place-based curriculum and culturally & linguistically relevant education practices in Indian Country have had success in educating Native American youth. Semken (2005), in their literature review of the success of various place-based education programs/curriculum targeted towards improving life science education in Indian Country, found that most previous place-based geoscience education in Indian Country has been successful. However, Semken (2005) reveals that the programs that were most successful were ones that were not only placebased but also integrated culturally & linguistically relevant content with the objective of strengthening indigenous identities. Semken (2005, p. 135) makes five main suggestions regarding content for future place-based life science curriculum to be more effective in Indian Country:

- 1. Explicitly focus on the specific natural attributes of a defined cultural landscape,
- 2. Integrate the diverse indigenous ways of knowing within a defined cultural landscape,
- 3. Teach using authentic experiences,
- 4. Promote and support both ecological and cultural sustainable ways of living that are relevant to the specific cultural landscape, and
- 5. Enrich a sense of place for both the students and instructor.

A. N. Johnson et al. (2014) specifically sought to combine place-based and

culturally and linguistically relevant education in the development of geoscience curriculum on the Flathead Indian Reservation in Northern Montana. Collaborating with the local tribal government, local native operated schools, local cultural experts, and the local native community at large, they developed geoscience curriculum that weaved traditional ecological knowledge, Western geoscience principles, and traditional indigenous oral narratives to create holistically compatible geoscience curriculum. This model of place-based culturally and linguistically relevant curriculum was particularly effective at educating the local American Indian population on the Flathead Indian Reservation in geoscience (A. N. Johnson et al., 2014). Furthermore, A. N. Johnson et al. suggested others should create similar place-based culturally & linguistically relevant K-12 life science curriculum in other indigenous communities in North America to improve science education throughout Indian Country.

Dalbotten et al. (2014), developed geoscience curriculum, with a culturally aligned and indigenous community driven citizen science research focus, in collaboration with local Tribal partners in Minnesota. The authors note that there is tremendous underrepresentation of American Indians in STEM fields and state that past research has shown that there is an immediate need for culturally & linguistically relevant place-based science curriculum in K-12 education to address disparities in American Indian STEM participation (Dalbotten et al., 2014). The authors argue that cultivating more Native American scientists through usage of culturally & linguistically relevant place-based education will not only improve Western scientific literacy in Indian Country but also strengthen Native communities (Dalbotten et al. 2014). The authors found that American Indian students taught using their indigenous inclusive place-based culturally & linguistically relevant curriculum had a high school graduation rate of 100%, which is significantly higher than the Minnesota American Indian state average of 45.5% (Dalbotten et al., 2014). Furthermore, 100% of Native students in Minnesota who participated in the education program had confirmed acceptance or pending acceptance

into institutions of higher education after high school (Dalbotten et al., 2014). This percentage is much higher than the Minnesota State average, 35%, for American Indian high school students (Dalbotten et al., 2014).

It is clear through recent case studies have culturally & linguistically relevant place-based learning has had positive outcomes when it comes to the education of K-12 Native American youth. However, Adock (2014) argues that such papers and programs, seeking to better Native American science education are not addressing a critical component digital technology inequity. Adock (2014) argues that much of the current research marginalizes Native students by having an erroneous narrow view of Native cultures and technology.

Part of the issue is that the dominant culture has cast and recast the Indian as "technologically incompetent" and unable to adapt to modernity (P. Deloria, 2004). In his book, Native Moderns: American Indian Painting 1940-1960, Bill Anthes (2006) argues that the term "Native/traditional has been valorized over the modern as the repository and expression of cultural values that have become lost in technological societies" (p. xiii). In this way Native and modern are often seen as two mutually exclusive terms. (Adock, 2014, p. 105)

Adock (2014) argues that Native American cultures are rich in technologies that have been developed and utilized repeatedly to adapt to a multitude of environmental issues over millennia. Furthermore, the perception of Native Americans being incapable of technological advancement is causing harm to K-12 Native students as the usage of modern technologies are underutilized with American Indian youth leading to digital inequities, which the author argues is holding back economic development in Indian Country (Adock, 2014). The author advises that digital technologies should be deliberately integrated in K-12 Native education to aid the story telling of indigenous narratives, aid in the revitalization of language and culture, and should be utilized within an indigenous framework to dispel myths that American Indians are not a technological people which is directly negatively contributing to a severe lack of Native Americans in STEM fields (Adock, 2014).

The previous case studies have focused primarily on K-12 education: however, Fish and Syed (2018) argue that decolonizing science curriculum in higher education is just as important. Fish and Syed state that indigenous aligned culturally relevant place-based life science curriculum taught with the intention of improving Native American education outcomes must integrate and emphasize, "how historical and cultural factors interact with the multiple layers of context that define Native American students' ecology", and must address, "colonial dynamics that were characteristic of boarding schools". The authors argue that institutions of higher education are in a unique position to address disparities, currently in existence due to colonization and the use of public education as a tool of assimilation, experienced by Native Americans in higher education (Fish & Syed, 2018). The authors also argue that, "colleges and universities are structured to encourage Euro American values while simultaneously placing a deemphasis on the cultural values, beliefs, and traditions of Native American students" (Fish & Syed, 2018). Fish and Syed conclude that higher education, must transform the ways in which they teach curriculum, to shift colonial dynamics present within higher education for true learning of Native American students in the realm of science to be actualized.

The literature review has shown a clear need for place-based culturally relevant curriculum for Native American students, specifically in Northern California. The United States has a long history of utilizing education of Native Americans as a tool to assimilate students into the dominant culture, promulgate family disintegration, make a servant class, and perpetuate ethnocide amongst the aboriginal peoples of the North American continent (Berkhofer, 1965; Dawson, 2012; Dussias, 1997; Gollnick & Chinn, 2017; Gregg, 2018). During the 20th century, attempts were made to address issues in Native American education, such as students receiving substandard education from incompetent educators and experiencing physical, sexual, and psychological abuse in boarding schools (Meriam, 1928; U.S. Senate Committee on Labor and Public Welfare, 1969).

However, today Native American students are still forced to participate in an education system that does not benefit them: Native American students experience the lowest education attainment rates of any ethnic/cultural group because the public education system continues to serve as a debilitating tool of assimilation, especially through recent standardization of curriculum at the federal level. Native students also still experience discrimination from the public education system (Brown & Tillio, 2013; Cajete & Pueblo, 2010; Dalbotten et al. 2014; DeVoe & Darling-Churchill, 2008; Gollnick & Chinn, 2017; Martinez, 2014; Reyhner, 2017; Tatum, 1997). These national contemporary trends in the education of Native Americans are mirrored in California, with severe inequities in education and discrimination witnessed in Northern California during the 21st century (Arsdale, 2013; *Gensaw v. Del Norte County Unified School District*, 2008; Martin, 2020; Proudfit & Juan, 2012; Proudfit & Gregor, 2016; Simon et al., 2020).

Contemporary research has shown that Critical Race Theory and multicultural curriculum which explicitly address prejudice and the intersectionality of racism can be a useful tool to combat discrimination of marginalized groups in the classroom (Kohli, 2008; Price et al., 2009; Wernick et al., 2021). Contemporary researchers further argue that Tribal Critical Race Theory, which prioritizes confronting colonial systems and colonization while recognizing the sovereignty of Tribal Nations, must be utilized in the education of Native people (Brayboy, 2005; Writer, 2008). Recent research has argued for and shown that place-based culturally relevant curriculum to be highly effective at meeting the needs of Native American students in the realm of life science education (Adock, 2014; Dalbotten et al., 2014; Fish & Syed, 2018; J. T. Johnson, 2012; A. N. Johnson et al. 2014; Ortiz, 2007; Reyhner, 2017; Semken, 2005). This project seeks to address the contemporary inequities in Native American education, specifically in Northern California, by creating place-based culturally relevant materials, tools, and curriculum that incorporate digital technologies that strengthen the cultural identities of students while addressing colonization and social-ecological justice issues.

CHAPTER III

PROJECT OVERVIEW AND DESIGN

Project Overview

This project utilized a variety of methodological approaches in the creation of multiple deliverables: Eco-Cultural Workshop (ECW), CSU Chico Eco-Cultural Tour (CCECT), Static Name Map of Northwestern Maidu Rivers & Creeks (SNM), Digital Gathering Map & Citizen Science Data of Valley Oaks along Big Chico Creek (DGMVO), and Digital Gathering Map of Culturally Important Plants Along Big Chico Creek (DGMCP).

The purpose of the ECW is to educate K-12 Native youth and the wider community in the greater Chico, CA area about the history and culture of Northwestern Maidu in the Butte County, CA public education system. The content of ECW focuses on the culture and history of the Mechoopda Indian Tribe of Chico Rancheria, as well as specific recorded acts of genocide, including slave raids and for-profit government funded murders, which occurred near Chico, CA. To best meet the immediate needs of the local Northwestern Maidu community during the Covid-19 pandemic, ECW was created employing multimedia with virtual learning in mind. Moving forward after the Covid-19 pandemic this virtual multimedia curriculum may also be beneficial in teaching Native youth due to the inclusion and purposeful utilization of multimedia digital technologies.

CCET is an in-person outdoor adaption of ECW. As an adaption of ECW, the purpose of CCET is to also educate Native youth and the wider community in the greater Chico, CA area, about the history and culture of Northwestern Maidu not taught in the Butte County, CA public education system. As an in-person outdoor education curriculum, CCET has a heavier focus on fostering authentic place-based experiences along the exact section of Big Chico Creek where the Mechoopda Tribe of Chico Rancheria experienced colonization and used to reside before their original rancheria was wrongfully terminated by the federal government.

The purpose of SNM is to assist the Northwestern Maidu community to teach their youth the local geography of Butte County, CA through the intentional incorporation and usage of the indigenous language of the Northwestern Maidu people. The content includes a historical map of the greater Chico, CA area, published in 1895 before extensive disruption in local ecosystem due to colonization. Northwestern Maidu names for the local creeks and rivers in Bute County, CA are included with the goal of connecting place, cultural activities, and language.

The purpose of DGMVO and DGMCP are to fulfill the unmet needs expressed by Northwestern Maidu elders in regard to recording locations of gathering spots and citizen science data associated with the comparative quality of harvestable materials from each gathering site by employing the use of digital georeferenced interactive maps that allow for data collection by site location and date. The content of DGMVO includes the locations of many *ló:wi* (valley oak) acorn gathering sites in Butte County, CA. The content of DGMCP addresses the locations of many other non-oak gathering sites in Butte County, CA. As a Northwestern Maidu person enrolled in the Mechoopda Indian Tribe of Chico Rancheria, I utilized my cultural background and knowledge of community needs in the creation of targeted deliverables for each these maps.

Methodological frameworks employed in the development of deliverables include Tribal Critical Race Theory (Brayboy, 2005; Writer, 2008), Critical Indigenous Research Methodologies (Brayboy et al. 2012), place-based education methodologies (Dalbotten et al., 2014; Fish & Syed, 2018; A. N. Johnson et al., 2014; Semken, 2005), and culturally relevant pedagogies (Brayboy, 2005; Brayboy & Castagno, 2009; J. T. Johnson, 2012; Reyhner, 2017; Ortiz, 2007; Writer, 2008). The purpose of such varied deliverables is to create a variety of anticolonial place-based culturally relevant curricula and digital educational tools with the intention of strengthening Native student indigenous identities, ameliorating current inequities in Native education, and improving environmental science academic success of Native students in Northern California.

In line with Critical Indigenous Research Methodologies (CIRM), Brayboy et al. (2012), the oral histories and indigenous traditional ecological knowledge of the Northwestern Maidu people are presented in this project as valid forms of knowledge on par with Western Science and informed all deliverables. Northwestern Maidu traditional knowledge systems employed in this project were accumulated by utilizing my own knowledge passed on to me by my family and through informal discussions over many years with local Northwestern Maidu elders while engaging in cultural events and activities, such as acorn gathering events, with the larger Northwestern Maidu community. Cultural events in which cultural activities are performed are communal events in which elders share their knowledge with youth and amongst one another for the benefit of the community at large. Following the pillars of CIRM, the deliverables are

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inherently anticolonial and are distinctly focused on meeting the needs of Northwestern Maidu communities in Butte County, CA (Brayboy et al., 2012). Critical indigenous research methodologies also inherently contain emancipatory agendas that recognize the self-determination and inherent sovereignty of indigenous peoples (Brayboy et al., 2012).

As a Northwestern Maidu person, I argue that in recognition of the inherent sovereignty of indigenous peoples and need to protect cultural sites, not all project deliverables for this project can be made available to the public (Brayboy et al. 2021). Some of the deliverables must remain within the Northwestern Maidu community (Brayboy et al. 2012). Native Americans have a right to confidentiality to protect sacred sites and areas of high cultural importance such as gathering sites, as well as intellectual property associated with gathering areas (K. Kelley & Francis, 1993; Plaut, 2009; Shabalala, 2017).

Design of Deliverables

The Eco-Cultural Workshop (ECW) is a multimedia place-based, culturally relevant, holistic, socio-ecological justice, educational virtual workshop (see Appendix A) created within a critical indigenous research methodologies' framework. The conceptual content of ECW includes information about current and recent past wrongs perpetuated by the Federal government against the Maidu people, information about the diversity in culture and language within the Maidu community, an emphasis on specific acts of genocide perpetuated against the Native Americans in Northern California, and traditional ecological knowledge. ECW is anti-colonial, challenging the narrative perpetuated by the dominant culture. ECW was curated with the intention of being able to be completed virtually, to meet the needs of the Northwestern Maidu community during the era of Covid-19 lockdowns that necessitated virtual distance learning. The intended target audience for the workshop is the K-12 youth serviced by the Mechoopda Indian Tribe of Chico Rancheria youth programs and Four Winds of Indian Education, Inc. Furthermore, ECW is of interest and benefit to non-native Butte County, CA organizations to increase the cultural competency and awareness of employees such as local public K-12 schools, local non-profit conservation organizations, and CSU Chico.

ECW consists of six educational videos, approximately ninety minutes in length, and a lecture portion of approximately 200 minutes in length. ECW has been and is currently administered with culturally appropriate modifications dependent upon which audience is targeted: the Mechoopda Indian Tribe of Chico Rancheria, Four Winds of Indian Education Inc., K-12 public school teachers and administrators within Butte County, CA, the Big Chico Creek Ecological Reserve, and CSU Chico Office of Tribal Relations. In accordance with the tenants of CIRM, Brayboy et al. (2012) and my personal beliefs as a Northwestern Maidu person, I have purposefully omitted some information regarding the Northwestern Maidu culture from Appendix A although such information is shared with the Mechoopda Indian Tribe's youth and greater Northwestern Maidu community.

Creation of ECW began with a review of published literature on the Northwestern Maidu, Northern California historical newspapers, and American Indian law published from historical times to the present (Ahrens, 2011; Bidwell 1980; Bates & Bernstein, 1982; Coronado, 2016; Currie, 1957; Dasmann, 1999; Dixon, 1905; Dixon & Kroeber, 1907; "Fight with the Indians," 1862; Golla, 2011; *Gensaw v. Del Norte County*

Unified School District, 2008; "Heavy on Bidwell," 1867; Heizer, 1972; Hill, 1978; "Indians," 1865; "Indians Killed," 1863; "Indian Matters," 1863; Jacobs, 1997; Jewel, 1987; Johnston-Dodds, 2002; Kroeber, 1920; Madley, 2016; Morgan, 1881; "New Helvetica," 1847; Preston, 1996; Reséndez, 2016; Schlosser, 2019; Scotts Valley Band of Pomo Indians of the Sugar Bowl Rancheria v. United States of America, 1992; "Tehama Matters," 1859; Tsi Akim Maidu of Taylorsville Rancheria v. United States Department of Interior, 2019; UCLA, n.d.; William, 2013). After a thorough review of this available literature was complete, I augmented the historical and cultural knowledge by surveying published literature concerning California Indian land management and stewardship practices, California biodiversity, as well as fire science (Anderson, 1999; Anderson, 2005; Bowman et al., 2016; Charley et al., 2007; Hallock & Fry, 1967; I. Kelly & Brotons, 2017; Sugihara et al., 2006). Following this review of Western science knowledge systems, I focused on information from my people's oral history and indigenous knowledge systems for accuracy, to fill cultural gaps, and provide needed, expert Native accounts and interpretation. The Mechoopda Indian Tribe of Chico Rancheria was consulted with during the creation of the ECW.

After completing a thorough review of the previously mentioned literature published on the Northwestern Maidu, Northern California historical newspapers, and American Indian law I drew on published literature concerning California Indian land management and stewardship practices, California biodiversity, as well as fire science was completed (Anderson, 1999; Anderson, 2005; Bowman et al., 2016; Charley et al., 2007; Hallock & Fry, 1967; I. Kelley & Brotons, 2017; Sugihara et al., 2006) in order to create place-based environmental science curriculum. Following review of knowledge systems of Western science, I as a member of the Northwestern Maidu people then added my own traditional ecological knowledge specific to the organisms and ecosystems within Butte County, CA, which I have developed over 20 years of cultural practice, working with, and listening to elders. The Mechoopda Indian Tribe of Chico Rancheria was consulted with during development of ECW curriculum. Local Northwestern Maidu elders were also consulted with through informal discussions that occurred while engaging in cultural activities, such as gathering acorns, during the creation of ECW and during past cultural events over the last 20 years.

The CSU, Chico Eco-Cultural Tour (CCECT) deliverable was created as an interactive in-person abbreviated version of the Eco-Cultural Workshop, with a total running time of approximately 130 minutes (see Appendix B). CCET is hyper-focused on providing authentic place-based culturally relevant education about the land now known as CSU Chico campus, located in Chico, CA, and the relationship that the Mechoopda Indian Tribe of Chico Rancheria has with that specific locality. The purpose of such is to foster authentic place-based experiences with participants. CCET begins on the CSU Chico campus near Holt Hall at the intersection of Arcadian Avenue and Sol-Wil-Le-No Avenue. From there the tour follows the downstream riparian corridor of Big Chico Creek along the northwestern bank, crossing Warner Street and ending at the intersection of Rio Chico Way and Cherry Street behind Langdon Hall. As an abbreviated version on the Eco-Cultural Workshop, similar information is provided, however the modality of information delivery is different. Information is presented verbally in-person without the aids of multimedia, with an emphasis on curating authentic place-based experiences, through tactile experiential learning, with culturally important plants on the CSU Chico

campus. Deliberate attention is given to experiential learning. CCET participants are encouraged to touch, smell, taste, and see in-person culturally important plants along Big Chico Creek which the Mechoopda people have gathered and stewarded since time immemorial. For example, at one stop along the tour participants are asked to first smell *sójbam* (California bay laurel) and describe the smell. Participants then usually describe the smell as "good," "pleasant," "clean," or "incense like." I then inform them that the plant is a culturally important plant utilized as "good medicine," and that the fragrant aromatic compounds they just experienced serve a utilitarian purpose as a natural insect repellent utilized in acorn granaries.

The Static Name Map of Butte County Rivers & Creeks (SNM) deliverables comprise of three large hard copies of to be used by the Northwestern Maidu community and one PDF map to be used by the community at large, visualizing traditional names for many of the rivers and creeks in western Butte County near Chico, CA (see Appendix C). The purpose of printing large maps, as well as the creation of a PDF map, is to facilitate the act of teaching the Mechoopda Northwestern Maidu names to the Northwestern Maidu community by providing both a virtual and in-person option. The maps are important to the Northwestern Maidu community, and the Mechoopda Indian Tribe of Chico Rancheria in particular because the maps visualize creeks and rivers, some of which no longer exist due to colonization, that the Northwestern Maidu people hold deep cultural connections to.

The traditional Mechoopda names used were recorded by Mechoopda tribal elder and master basket weaver, Amanda Wilson, my great-great-great grandmother. The names were originally recorded sometime between the years of 1903 and 1923 in an English-based orthography developed by C. Hart Merriam that indicated syllable breaks with hyphens. According to Golla (2011, p. 283), even though C. Hart Merriam was consistent in the application of his self-made orthography, the Merriam orthography itself does not "map neatly onto scientific phonetic or phonemic transcriptions."

For the revised map, I transcribed the names written in Merriam's orthography into the Northwestern Maidu orthography, which is currently used by the Mechoopda Indian Tribe of Chico Rancheria. The Northwestern Maidu orthography itself is an adaptation of a phonetic orthography developed by linguist Russell Ultan (Ultan, 1964; Ultan 1967). This adaptation can phonetically represent Northwestern Maidu sounds not found in the English language, but it is the same as the Ultan writing system with minor changes that bring it more in line with some feature of the International Phonetic Alphabet. For example, whereas Ultan's orthography employs a raised dot above a vowel to represent a long vowel, the Northwestern Maidu orthography uses a colon after the vowel to denote a long vowel. Unfortunately, not all the names recorded by Amanda Wilson could be deciphered from Merriam's orthography. Unknown names and individual words within a given name that were unclear were left in the original Merriam hyphenated orthography.

On account of extensive changes in the local landscapes from agriculture and mining activities, some historic creeks in Butte County such as Sap'-sim Séwi (Little Butte Creek) no longer exist or have been heavily modified from their original flow pattern. Sap'-sim Séwi used to flow a few miles Southeast of Chico, CA, and the Mechoopda ancestral village of Mikćapdo was located along this creek. For this reason, a historic pre-20th century map had to be used to in the creation of SNM to properly show the locations of historic waterways in Butte County, CA before the ecological destruction brought upon by colonization. A map of western Butte County originally published by the United States Geological Service (USGS) in 1895 was freely sourced from the USGS Historic Topographic Map Collection.

In order to create useful and accessible maps, for the purposes of teaching natural science while strengthening cultural identity of Native students through the purposeful inclusion and utilization of the Northwestern Maidu language, I first uploaded a digital high-definition scan of the original USGS 1895 map into Microsoft PowerPoint and employed Word Art to insert the Mechoopda names, as recorded by Amanda Wilson, following the contours of the rivers and creeks. I then created large hard copy printed maps, which are more easily read when compared to the size of most computer screens. To create the hard copies within Microsoft PowerPoint I scaled the SNM slide to fortyeight inches tall and thirty-six inches wide before being sending it to CSU Chico professor and GIS specialists Dr. Peter Hansen, to be printed through the CSU Chico GeoPlace. I utilized Microsoft PowerPoint to create the SNM printed hard copies because Microsoft PowerPoint files are an easy file type to work with for the purposes of printing large poster sized maps.

The Digital Map & Citizen Science Data of Valley Oaks along Big Chico Creek (DGMVO) and the Digital Map of Culturally Important Plants along Big Chico Creek (DGMCP) deliverables (see Appendix D) are two separate digital interactive geospatial PDF maps with layered features, customized within Avenza Maps[™] made with geospatial PDFs originally created with CalTopo. The target and sole audience for DGMVO and DGMCP is the Northwestern Maidu community. DGMVO and DGMCP are not accessible to the public outside the Northwestern Maidu community. The sole purpose of these digital georeferenced maps are to fulfill the unmet needs expressed by Northwestern Maidu elders in regard to the need of recording locations of gathering spots, for preservation purposes, and recording citizen science data associated with the comparative quality of harvestable materials from each gathering site to facilitate teaching traditional ecological knowledge with Northwestern Maidu youth.

DGMVO illustrates the localities of many mature valley oaks found along the riparian corridor of Big Chico Creek, and within the Avenza Maps[™] user -interface there is a template for users to record and share citizen science data concerning the quality of acorn harvests by individual tree per year. The data recoded per tree per year are; Overall Acorn Harvest Quality: (Superb, Very Good, Good, Okay, Poor, Very Poor, Abysmal, None), Acorn Size, Girth: (Fat, Average, Skinny), Acorns Size, Length: (Long, Average, Skinny), Drop Date: (Month/Day/Year). This data collection is intended to be repeated on an annual basis to not only make comparisons amongst individual trees, but also to visualize general trends over many years. DGMCP, also made with Avenza Maps[™], shows the localities of several easily accessible gathering spots of many non-oak culturally important flora along Big Chico Creek. I completed the initial data for the acorn gathering years Fall 2020 and Fall 2021 with the assistance of local Northwestern Maidu elder, Shane Noel.

In accordance with the pillars of CIRM, Brayboy et al. (2012), the project deliverables DGMVO and DGMCP are not being made available to the public, but instead will be held on an iPad housed in the CSU Chico Office of Tribal Relations for the explicit benefit of the local Northwestern Maidu. The inspiration for the creation of these digital interactive geospatial maps was from local Maidu elders voicing that there was a need for such tools to facilitate the education of traditional environmental knowledge with youth, record gathering site locations, and collect data about the quality of gathering spots. The CSU Chico Office of Tribal Relations will be responsible for vetting access to DGMVO and DGMCP. The choice in filtering who has access to DGMVO and DGMCP is to protect the integrity of gathering sites, areas of high cultural importance, and protect the intellectual property of local cultural practitioners (K. Kelley & Francis, 1993; Plaut, 2009; Shabalala, 2017).

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Project Conclusion

This project has illustrated a dire and urgent need for place-based culturally relevant Native education in Northern California in order to better serve the native community and address both educational inequities and discrimination. Historical inequities in education and the use of education as a tool of assimilation has not only harmed Native Americans but has contributed to current disparities witnessed in education. Previous research has advocated and shown place-based culturally relevant education to be highly effective at meeting the educational needs of Native youth while strengthening the cultural identity of Native students. Research has also advocated for the purposeful implementation of digital technologies in Native education, Tribal Critical Race Theory, and Critical Indigenous Research Methodologies with Native communities to best meet their needs. In line with the suggestions of previous research, I created multiple deliverables to address current inequities in Native American education present within Northern California. I accomplished this by creating place-based culturally relevant materials, tools, and curriculum that incorporate digital technologies to strengthen the cultural identities of students while addressing colonization and socialecological justice issues in the areas of: social studies, environmental science, and traditional indigenous culture education.

ECW, a socio-ecological justice place-based curriculum, created within a Critical Indigenous Research Methodologies framework, educates participants about the genocide of the Northwestern Maidu in Butte County, CA and informs participants about traditional environmental knowledge practices of the Northwestern Maidu. CCECT, as a place-based culturally relevant plant walk with an emphasis on experiential learning, provides an authentic place-based experience to educate Northwestern Maidu youth and members of the public about the history the Mechoopda and the land now known as CSU Chico campus. SNM, a map of the waterways in western Butte County, CA with the indigenous Mechoopda names included, serves to strengthen the cultural identity of Northwestern Maidu students through the inclusion of native language in the instruction of geography and confronting the destructive impacts of colonialism on local landscapes. DGMVO and DGMCP, meets the needs of recording gathering sites and citizen science data, while fostering authentic place-based experiences and place-based culturally relevant learning through citizen science data collection and interpretation.

The project deliverables created have already been utilized by and for the benefit of numerous people as well as both governmental and non-governmental organizations within Butte County, CA. ECW has been utilized as a cultural competency and awareness training by the Big Chico Creek Ecological Reserve (BCCER), with over two hundred BCCER-affiliates completing the ECW. ECW has also been employed with dozens of K-12 schoolteachers and administrators as a cultural competency and awareness training. Furthermore, ECW has been used to instruct over fifty local Native students in Butte County, CA through the Mechoopda Indian Tribe of Chico Rancheria's youth programs and Four Winds of Indian Education, Inc. youth programs. CCECT has already been utilized by dozens of K-12 school children from public schools in Chico, CA, dozens of local Native youth from Four Winds of Indian Education and the

Mechoopda Indian Tribe of Chico Rancheria, and more than three hundred other people affiliated with the CSU, Chico campus community.

The response from all these varied groups has been overwhelmingly positive. The primary focus of the current project addresses inequities in education experienced by Native students in Northern California; however, the place-based culturally relevant curriculum developed in this project is of interest to other organizations such as K-12 public schools in Chico, CA, CSU Chico, and the Big Chico Creek Ecological Reserve. Assessment among these different groups is an important goal for the future, as well as quantifying the success of the project deliverables in improving the education and strengthening the cultural identity of Native youth.

Recommendations

To foster authentic place-based learning and create curriculum that is culturally relevant, this project specifically serves communities within the Butte County, CA area. However, this project recommends that similar curriculum be developed to serve the needs of other California Indians outside the Northwestern Maidu cultural area, who have their own unique oral histories and indigenous knowledge systems. Further, the author recommends future quantitative research on the effectiveness of this curriculum in improving academic success of Native students, strengthening the cultural identity of Native students, and decreasing the amount of reported discrimination experienced by Native students. REFERENCES

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APPENDIX A

ECO-CULTURAL WORKSHOP

Eco-Cultural Workshop By: He-Lo Ramirez Purpose: Non-profit & educational use Pre-requisites: Videos to Watch before Workshop <u>Video 1: Introduction to Traditional Ecological Knowledge (TEK)</u> (click hyperlink) Video 2: Cultural Fire Use by California Native Americans (click hyperlink) Video 3: Fire Dependent Vegetation in California (click hyperlink) Video 4: Cultural Burning in a grassland savanna ecosystem (Australia) (click hyperlink) <u>Video 5: Mechoopda Video Part 1</u> (click hyperlink)

<u>Video 6: Mechoopda Video Part 2</u> (click hyperlink)

Part A: Maidu Tribes Located within Butte County, CA Tri-County Area

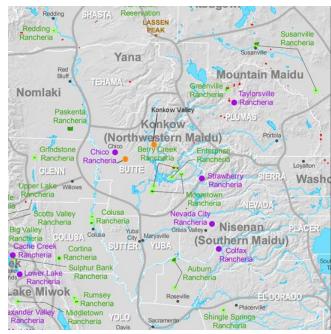
By: He-Lo Ramirez

Maidu: Mountain Maidu, "Konkow"/Northwestern Maidu, Nisenan

"Maidu" is a linguistic clade, of several closely related languages comprising of dozens of tribes, based on the early work of Kroeber and Dixon and reinforced by work of future anthropologists.

Linguistic nomenclature used by anthropologist at times may be at odds with traditional cultural identities

For example, "Konkow" is used by anthropologist to reference a large geographic area of many different distinct tribes with a similar language located in the Butte County, California area. However, there is also a specific tribe called Konkow located in Concow, Butte County, California.



Key:

Purple: Former Federally Recognized Tribes Terminated during Era of Termination (Some, but not all, have successfully sued Fed. Gov. for wrongful termination. For example, Mechoopda "Chico Rancheria" terminated 1967 but tribe rerecognized in 1992 after winning 1986 lawsuit)

Green: Current (as of 2015) Federally Recognized Tribal Trust Land (Reservations)

Orange: Map does not show Tribes who've never received Federal recognition. Konkow Tribe manually added due to lack of ever being Federally Recognized. Mechoopda Indian Tribe of Chico Rancheria Reservation, few miles southeast of Chico transferred into trust in 2018 as "restored lands", manually added.

Photo: CA Dept. Fish & Wildlife (n.d.) (altered)

- Federally Recognized Tribes are tribes that have successfully gone through the Federal Acknowledgment Application Process (FAP) process, of which only 3% have (Coronado, 2016) or received federal recognition through prior treaty or act of Congress
- Many tribes in California, and several tribes in the Butte County area, are not Federally Recognized but at one point some used to be but were terminated in the 1950's & 1960's during <u>Era of Termination (UCLA, n.d.)</u>
- Example: Tsi Akim Maidu of Taylorsville Rancheria (Plumas County) terminated in 1966. Taylorsville Rancheria is currently still seeking re-recognition. United States will not restore Federal recognition, as stated in a 2019 decision, due to 100% of their former Rancheria/Reservation being seized by Federal Government & sold to Plumas County in 1966 (<u>Schlosser, 2019</u>; Tsi Akim Maidu Of Taylorsville Rancheria v. United States Department of Interior, 2019)
- Mechoopda was terminated as well in 1960's, however was re-recognized following the lawsuit Scotts Valley Band of Pomo Indians of the Sugar Bowl Rancheria v. U.S. (1992).
- Konkow Valley Tribe (Concow, Butte County, CA) was never recognized and is currently seeking Federal Recognition
- Read <u>William (2013)</u> to learn more

FAP Criterion:

- Requires proof of tribal existence on continual basis since 1900
- Requires proof the tribe existed as a distinct community from historical times until the present
- Requires maintenance of political influence or authority over its members as an autonomous group from historical times until the present
- Requires establishment of membership rolls
- Requires members are descendants from a historical tribe
- Requires members are not already enrolled in another Federally recognized Tribe
- Requires the tribe was not terminated by previous act of Congress

(Coronado, 2016)

1 2 3 4 5	Maidu "Base 20" Northwestern ¹⁸ — Konkau No wikte pene sapu tsõye ma-tsani ¹⁴ 5 = "See a Hand"	Maidu "Base 10" prthwestern ¹⁸ — Mooretown wikte pene sapwi tsöye ma-wika ¹⁸ = "One Hand"	Maidu "Base 10" Northeastern — Genesee Souther suti pene sapu tsöye ma-wika = "One Hand"	Maidu "Base 10" rn ¹⁸ — Spanish Flat ¹³ wite pen sapwi tsöye ma-wik = "One Hand"
6 7 8	sai-tsoko 6 = "3 Double" aka "3 x 2 = 6" matsan-pene 7 = "5 + 2" tsöye-tsoko 8 = "4 Double" aka "4 x 2 = 8" tsöye-ni-masoko ¹⁰ 9 = "4 to 10 (base 5)"	sai-tsoko topwi pen-tcoi peliom	sai-tsoko topwi pen-tcõi peliom	tombo topwi pen-tcöi pen-lio
9 10 11 12 13 14 15 16 17 18	tsoye-ni-masoko ²⁶ 9 = 4 to 10 (base 5) ma-tsoko 10 = "5 Double" aka "5 x 2 = 10" wikem-noko ¹¹ 12 peni-wikem-noko sapwi-ni-hiwali hiwali wök-ni-maiduk-wökö ¹⁰ peni-maiduk-wökö sapwi-ni-maiduk-wökö	ma-tsoko wikte-ni wikem-noko ¹¹ wökem-noko sapwim botam tsöyem botam matsokom mawikom matsokom saitsokom etc.	ma-tsoko masok-na sutim ¹⁶ wökem-noko ¹¹ masok-na sapwi ¹⁰ masok-na tsöyem masok-na mawikem	ma-tsani ¹⁴ hi-woto pen-woto sapwi-ni-al tsõi-ni-al hiwal oiseto penem maiduk sapwi-nim maiduk
19 20 21	maidu-k-wökö 20 = "1 Human"	penim nokom	penem masoko	kom maiduk ¹⁷
30 40 50 60	matsok-ni pene-ma 30 = "10 to 40" peni-ma matsok-ni sapwi-ma 50 = "10 to 60" sapwi-ma	sapwim matsoko 30 = "3 x 10" etc., regularly	sapwim masoko 30 = "3 x 10" etc., regularly	sapwim matsan tsöim matsan
70 80 90	matsok-ni tsöye-ma 70 = "10 to 80" tsöye-ma matsok-ni matseni-ma 90 = "10 to 100" matseni-ma	Counting in different Maidu dialects highlighting differences in dialects (Dixon & Kroeber, 1907)		



(12) The Northwestern Maidu near Chico counted from 1 to 20 like the Konkau, with the exception of:

11 wik-ni hiwali, 1-with 15. 12 pe-ni hiwali, 2-with 15.	13 sapwi-ni hiwali, 3-with 15. 14 tsöye-ni hiwali, 4-with 15.		
11 wik-ni hiwali = "1 towards 15 (from 10	11 wik-ni hiwali = "1 towards 15 (from 10)" aka 10 plus 1 = 11 12 pe-ni hiwali = "2 towards 15 (from 10)" aka 10 plus 2 = 12		
12 pe-ni hiwali = "2 towards 15 (from 10			
13 sapwi-ni hiwali = "3 towards 15 (from	13 sapwi-ni hiwali = "3 towards 15 (from 10)" aka 10 plus 3 = 13		
14 tsoye-ni hiwali = "4 towards 15 (from	10)" aka 10 plus 4 = 14 (Dixon & Kroeber, 1907)		

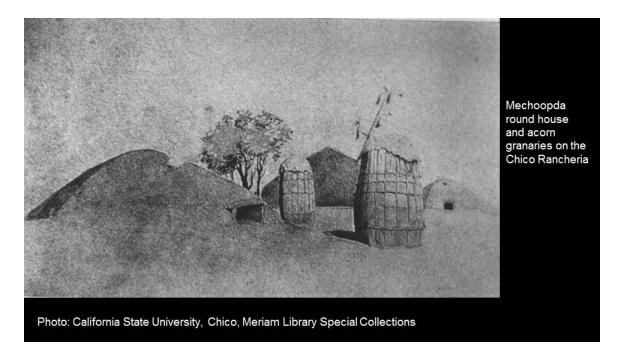
Want to learn how to count and speak Northwest Maidu with a fun and engaging App?

Northwestern Maidu App (link to Northwestern Maidu Language App)



California Indian Village in the Sacramento Valley

(Morgan, 1881)



ROLLEY A. M. N. H. VOL. XVII, PLANE XLIII.

(Dixon, 1905)

THE KUM, OR EARTH-LODGE DANCE-HOUSE AT CHICO, CAL.

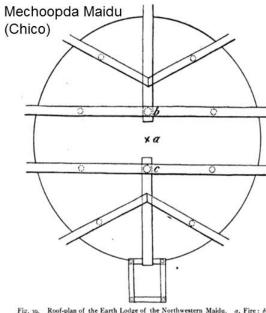


Fig. 39. Roof-plan of the Earth Lodge of the Northwestern Maidu. a, Fire; é, Main post; c, Front post.

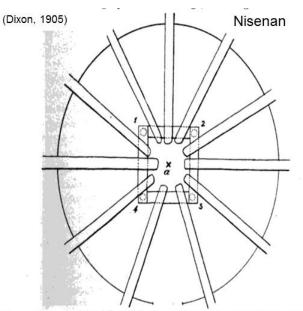


Fig. 41. Roof-plan of Houses of Southern Maidu. a, Fire; 1, 2, 3, 4. The four posts upholding the roof-frame.



Photo: California State University, Chico, Meriam Library Special Collection



Maidu woman at Bidwell's Bar (bottom of Lake Oroville) cooking acom mush for feast honoring visiting Mechoopda

Photo: California State University, Chico, Meriam Library Special Collection

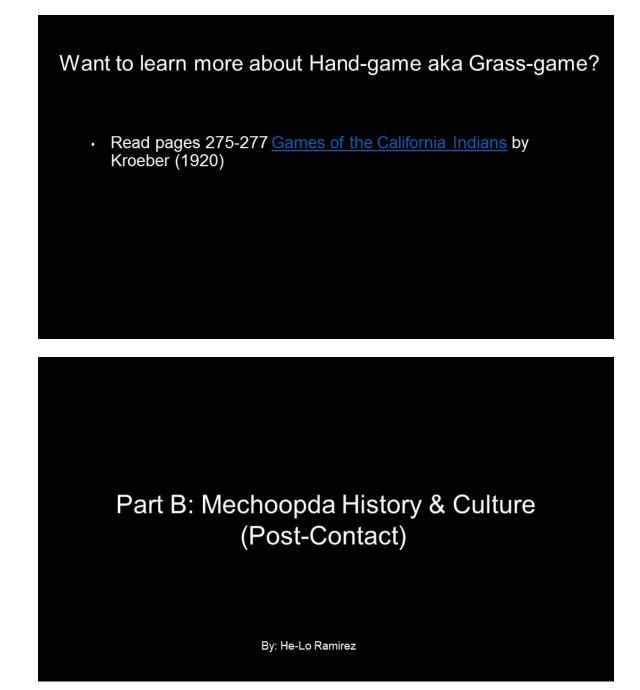


Account of Mechoopda Playing "Hand-game/Grass-game" on Bidwell's Ranch

"July 17, 1855 - ... We crossed Butte Creek and Little Butte Creek, and camped on Chico Creek ... Near camp was a rancheria of Digger Indians. Their huts were partially excavated in the ground, and roofed over with sticks plastered with mud. When we visited them, about sunset, the women were sitting on the tops of their houses, engaged in shelling out grain, which they had gleaned from the neighboring fields. The men, nearly naked, were congregated in a large hut, gambling. A few burning sticks in the center of the group threw a flickering light over the scene. The game was played by four men, who were seated in pairs, on opposite sides of the fire, while the background was filled with eager spectators. Before each party was a pile of straw. One couple continually twisted, and threw into the air, wisps of this straw, managing at the same time to conceal in it two pieces of white wood or bone. The other couple anxiously awaited their movements, keeping up the monotonous guttural cry. Whenever they thought they had detected the locality of the sticks, they clapped their hands violently, and their rivals immediately shook pen the suspected wisp. If the sticks were there, the successful guessers received them, and began in their turn to throw them up; if not, the couple continued. The excitement occasioned by the simple game was intense. The perspiration poured in streams down the naked bodies of the players, and their eyes glared in the dim firelight like those of demons. Their voices were so hoarse as to be barely articulate, and yet they kept on without a moment's cessation. They might well be excited, for I have been informed"

A contemporaneous picture of life in an Indian village is given by Henry S. Abbott, who was a member of a government party exploring routes into California in 1855. Under date of July 77, 1855. Mr. Abbott wroot the following account of a visit to an Indian rancheria at the Rancho Chico, which was later printed in the Datte Record of June 18, 1881. We quote:

Photo: (Mansfield, 1918)



The Mechoopda Tribe

- The BCCER, BCEP, and Chico State University rest upon traditional Mechoopda Territory
- Mechoopda tribe has resided within the Big Chico Creek Watershed and the Butte Creek Watershed since time immemorial



Photo Left: Cora Azbill in a baby cradle basket on the Chico Rancheria

Photo Right: Mechoopda Roundhouse on the Chico Rancheria with Church in background

Photos: California State University, Chico, Meriam Library Special Collections



Fur Rush: Contact with the Hudson Bay Company

- 1828 to 1836, members of the Hudson Bay Company trapped animals for their pelts in "Maidu" territory, and may have made 1st contact with Mechoopda (Dasmann, 1999)
- Hudson Bay Company, and other fur trappers, depleted large amounts of game animals from "Maidu" territory including; pronghorn antelope, elk, grizzly bear, rivers otters, beavers, and deer (Dasmann, 1999)

Mechoopda History: Contact with white people

- In 1833, a disease brought by people of European decent entered Sac Valley •
- Up to 75% of California Indians in the Central Valley died as a result of the epidemic
- "After crossing the Feather River those villages along the Sacramento, which in the winter previous were each inhabited by hundreds of Indians were desolate and abodes of ruin ... we found the Northern part of the [Sacramento] valley strewed with the skeletons and fragments of skeletons of Indians ... from the head of the valley (Redding) to the American river (Sacramento) but one living Indian was seen, and he was the the most perfect personification of solitude" - J.J. Warner, Fur Trapper, 1833

(Preston, 1996) (Ahrens, 2011)

California Star, 24 July 1847 (San Francisco, CA)

"New Helvetia, July 10, 1847. "Much excitement now prevails among the Indian tribes in the upper part of this valley in consequence of outrages having been lately committed ... The said party started from Sonoma or vicinity, and proceeded up this valley about sixty miles above this place, to a tribe of friendly Indians. On going into the village, these Indians manifested the most friendly feelings, offering acorn bread, and other food. The Spaniards, after having partaken of their hospitality, commenced making prisoners of men, women and children, and in securing them, some ten or twelve were killed-shot by the Spaniards in attempting to escape. Thirty were secured, principally women and children, tied together and driven to the settlements. Young children who were unable to proceed, were murdered on the road. In one instance an infant was taken from its mother, and killed in her presence, and that too in the most brutal manner."

NEW HELVETIA, July 10, 1847.

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outrages having been lately committed by a party of Span-iards joined by some rascally foreigners. The facts, as well as I can learn, are these. The said party started from Sonoma or vicinity, and proceeded up this valley about sixty miles above this place, to a tr.be of friendly Indians. On going into the village, these Indians manifested the most Iriendly feel-ings, offering acorn bread, and other for d. The Spannards, after having particles of their fospitality, commenced weaking weaking our power and children, and in seafter having partaken of their hospitality, commenced making prisoners of men, women and chuldren, and in so-caring them, some ten or twelve were kulled-shot by the Spanards in attempting to escape. Thirty were secured principally women and chuldren, tied together and driven to the settlements. Young chuldren who were unable to proceed, were murdered on the road. In one instance an, infant was taken from its mother, and killed in her pres-ence, and that too in the most brutal manner."

Photo: California Star, 24 July, 1847

According to Madley (2016, pp. 102-103), this occurred near Chico, CA

Act for the Government and Protection of Indians

- "...especially children, were kidnapped and sold into slavery ... many of them were worked to death. Another clause in the Act forbade cultural burning of grasslands. A vagrancy clause made it illegal simply to be a Native Californian in public unless said Native could prove he or she was employed by a white person. Another provided that no white man could be convicted based on testimony of a California Indian." (https://www.kcet.org/shows/tending-the-wild/untold-history-the-survival-of-californias-Indians)
- "The Act for the Government and Protection of Indians of 1850 was passed in the first session of the California State legislature ... securing Indian children for indenture or outright sale was common in California ... the letters and newspaper accounts presented here ... attest to existence in California of what can only be classified as a particular and local form of slavery." (Heizer, 1974)
- "The Act for the Government and Protection of Indians was not repealed in its entirety until 1937" (Johnston-Dodds, 2002)

Mechoopda History: Gold Rush Tensions with Whites

INDIANS.—It will be seen by extracts from a letter written by Mr. Nance, of this place, that the Indians are still committing their depredations about Humbold. Nothing but extermination will prevent them from committing their depredations. It is a fulse notion of humanity to saye the lives of these red devils. There should be no prisoners taken, but a general sacrifice made of the whole race. They are of no benefit to themselves or mankind, but like the rattlesmake live only to slay. Like the wild beast of prey slay are necessarily exterminated by the march of civilization. The tribes of Indians upon this Coast can no more be slivilized than the jaugar. If necessary let there ba a crusade, and every man that can carry and shoot a gun turn out and funct the red devils to their holes and there bury them, leaving not a root or branch of them remaining, then we shall record no more massareres.

Photo: Chico Weekly Courant 18 November, 1865

 Gold Rush, <u>Marysville and other cities</u>, offered a bounty of ~\$5 for every dead California Indian. Government spent <u>\$1.7 million</u> reimbursing City governments and funding "expeditions" to murder Native Americans in California

Chico Weekly Courant (Nov 18, 1865) (Chico,CA): "Nothing but extermination will prevent them from committing their depredations. It is a false notion of humanity to save the lives of these red devils. There should be no prisoners taken, but a general sacrifice made of the whole race. They are of no benefit to themselves or mankind... let there be a crusade, and every man that can carry and shoot a gun turn out and hunt the Red Devils to their holes and there bury them, leaving not a root or branch of them remaining."

Sacramento Daily Union, March 16th 1863

"Indians Killed – The Oroville Union of March 14th says:

We learn from a gentleman who came down from Chico on Thursday that a party of whites, a few days ago, residing some seven or eight miles above that place, killed three Indians who were employed on a ranch in the vicinity, on the suspicion that they were in league with the mountain Indians who committed the late outrages." INDIANS KILLED,-The Oroville Union of March 14th says :

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Photo: Sacramento Daily Union, 16 March, 1863

Daily Alta California, 11 August 1862

"Fight with the Indians – From private information, we learn that <u>Capt. Good</u>'s company of volunteers overtook a party of Indians near the site of the late massacre in Butte County, near Chico, and gave them battle. Seventeen of the Indians were killed and scalped by the volunteers, who being from the immediate vicinity of the former massacre, are highly exasperated at the red-skins. None were killed on the side of the whites. They are determined to drive off or exterminate the Indians, it is said. – Marysville Appeal"

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Photo: Daily Alta California, 11 August 1862

Sacramento Daily Union, 9 April 1859

"Tehama Matters – We notice in the Red Bluff *Beacon*, of April 6th, the subjoined local intelligence ... A new plan has been adopted by our neighbors opposite this place to chastise the Indians for their many depredations during the past Winter. Some men are hired to hunt them, who are recompensed by receiving so much for each scalp, or some other satisfactory evidence that they have been killed. The money has been made up by subscription."

TEHAMA MATTERS.—We notice in the Red Bluff Beacon, of April 6th, the subjoined local intelligence :

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Photos: Sacramento Daily Union, 9 April 1859

Trinity Journal (19 December 1863) (Weaverville, CA)

"Indian Matters. — We hear that a movement has been projected ... the speedy and certain extermination of the hostile Indians in this and Humboldt counties. No one probably feels a greater interest in seeing these savage pests exterminated than we, yet we believe the manner proposed not an advisable one at present. It is this: Citizens propose to raise or pledge themselves for a certain amount of money—say \$2,000 or \$3,000. Then an independent company is to be raised, its members to fight Indians in their own way, wherever they find them, they are to receive a certain bounty for each scalp taken ... It is too early in the season to fight Indians successfully. When the winter snows have driven them from their mountain strongholds they will be at our mercy ...

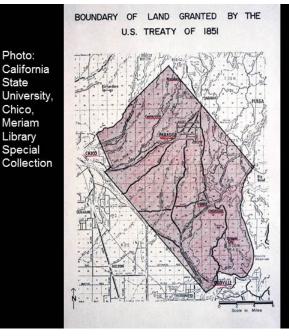
Photo: Trinity Journal 19 December 1863

INDIAN MATTERS .- We hear that a movemen has been projected by citizens of the western and southern border of this county, having for its end the speedy and certain extermination of the hostile Indians in this and Humboldt counties. No one probably feels a greater interest in seeing these savage pests exterminated than we, yet we believe the manner proposed not an advisable one at present. It is this : Citizens propose to raise or pledge themselves for a certain amount of money-say \$2,000 or \$3,000. Then an independent company is to be raised, its members to fight Indians in their own way. wherever they find them, they to receive a certain bounty for each scalp taken. This is the mode proposed, as we understand it. If such be the real intention of citizens of this or Humboldt county, we hope they will take no further steps in the matter at present, for the following reason; We have been in a measure made acquainted with the plans of Col. Whipple for the prosecu-tion of the present campaign, and we believe they will prove successful, when everything is in readiness. But the time is not yet. It is too early in the season to fight Indians successfully. When the winter snows have driven them from their mountain strongholds they will be at our mercy. Recruiting for the Battalion is going on briskly, and when the time comes to go at the work in earnest all hands will be called into re-quisition, even if Forts and Posts have to be deprived of their garrisons. We believe the present Indian campaign will be successfully ended before the first of next July. We hope the boder settlers will be patient yet a little longer. tain bounty for each scalp taken. This is the longer.

History of Butte County, California (1882): Crimes Against the Indians

It does not appear that the Indians were always the aggressors, or that their attacks on the whites were wholly prompted by "pure cussedness," which many would fain believe. Though the whites have suffered greatly by them, it is also true that on many occasions here in Butte county great wrongs have been done the simple natives, in more ways than merely taking from them the hills and valleys of their forefathers. Crimes against the Indians were very frequent, and fully account for some of the bloody reprisals made a few years later. At Frenchtown, Oregon township, a meeting was held February 14, 1854, and resolutions were passed in regard to the men who were in the habit of committing outrages on Indian women, stating if the law did not punish the offenders, they would mete out to them the punishment they deserved. Those who were actual settlers had their lives and property endangered by these overt acts of lawlessness. The immediate effect of this action was a better treatment of the savages, and a consequent period of immunity from their raids. For a number of years no trouble of importance occurred. A meeting was held at the Forks of Butte, in Kimshew township, on the eighteenth of June, 1862, for the purpose of making an organized resistance to the encroachments and outrages of the Indians.

Photo: Wells & Chambers, (1882)



Treaty "G" of 1851

- Headman for Mechoopda, and headmen of eight other tribes, in Butte County sign the treaty of 1851 at John Bidwell's ranch
- Treaty promised goods, free adult higher education, & more!
- Treaty Promised a large Reservation in Butte County to Mechoopda
- U.S. Senate secretly rejected the treaty on July 8, 1852, due to **gold** and **agriculture** potential of lands

(Hill, 1978)

The Other Treaties of 1851

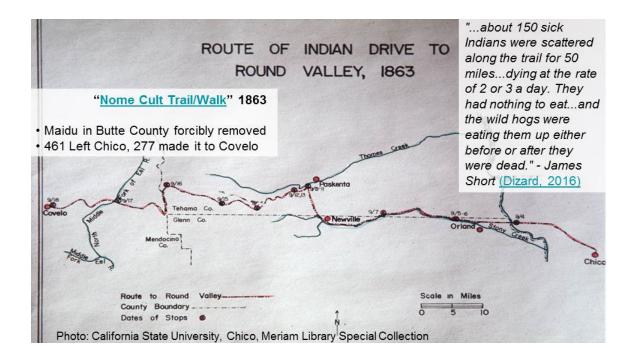
- "Eighteen treaties were made but the Senate on July 8, 1852 refused to ratify them in executive session and ordered them filed under an injunction of secrecy which was not removed until January 18, 1905" (Heizer, 1972)
- Visit, (Heizer, 1972, p. 7), to view a static map of the unratified treaty reservations
- Treaty "G" is the "Treaty of 1851" previously discussed signed on John Bidwell's Ranch (Today, Chico State University)

Emma Cooper (Mechoopda) 2nd hand account of Events

"Emma Cooper tells the story as it came down to her. True in the main, it has the exaggeration of panic:

Soldiers started to kill every Indian. Raphael [Bidwell's interpreter] told the Bidwell Indians to run to the river. All ran. A boat came along and threw them some food. The Indians stayed quite a while. Raphael would go down at night and say, "Don't come out. They are killing every Indian – Mechoopda, Hooker Oak, Nimshew." After a while Raphael told them , "Now you can come out. John Bidwell has letter from the Government that there is to be no more killing of Indians." Lots of those who came for the treaty were killed. Others who ran to the river were saved."

(Currie, 1957; Hill, 1978)



Account of events from "Old Pete" who survived the Nome Cult Trail

"One of the survivors was remembered by my Indian friends only by the name Old Pete. Nearly blind, with half of his face shot away, he used to tell of that walk. Most of the people who died on that walk were, of course, the elderly, sick, and those too young to keep pace but too old to be carried for long by their mothers. Pete offered to carry the baby of one mother who was staggering from fatigue. For this act of kindness a soldier shot Pete in the face, and left him for dead. When he regained consciousness, the sorrowful parade having long passed, Pete saw with his remaining eye the dead body of the baby he'd offered to carry, its skull crushed. Pete returned to his homeland in the mountains." (Jewel, 1987)

John Bidwell and the Mechoopda

- · John Bidwell arrived in Butte County in the mid 1800's in search of Gold and Ranching
 - 1848 John Bidwell discovers gold on the Feather River
 - John Bidwell compensated Mechoopda & other Maidu, with goods (e.g., pants/beads) to gold mine the Feather River averaging \$1,500/day at one point (<u>Bidwell Mansion State Historic Park, n.d.</u>)
 - Bidwell's Native laborers extracted more than \$100,000 worth of gold between 1848-1849 (Mechoopda Indian Tribe of Chico Rancheria, n.d.)

The discovery of gold on Feather river, in March, 1848, by John Bidwell, but two months after the discovery by Marshall at Coloma, was the beginning of a new era for this region. Photo: Wells & Chambers. (1882)

 John Bidwell provided protection to Mechoopda. In the year 1863 after a series of violent incidents in Butte County, Bidwell found it necessary to bring a company of soldiers to protect Mechoopda from threats of extermination by local militias. The soldiers stayed for over a year. (Hill, 1978)

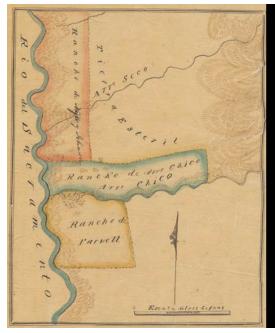


"Mapa del Valle del Sacramento"

 Map of land grants within the Sacramento Valley, created by John Bidwell circa 1851

Want to learn more about Grants of Land in California made by Spanish or Mexican Authorities?

- Visit the <u>California State Lands Commission</u> <u>Website</u>
- Read: https://slcprdwordpressstorage.blob.core.windows.n et/wordpressdata/2019/09/1982-GrantsSpanishMexican.pdf

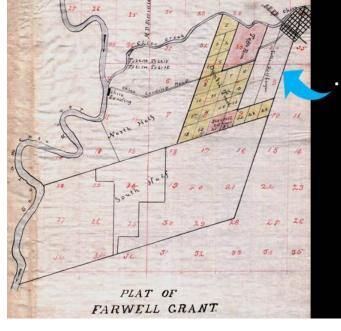


"Diseño del Rancho de Farwell y del Rancho Arroyo Chico"

Map of land grants near Chico, CA, created by John Bidwell circa 1840-1850

John Bidwell acquired Rancho del Arroyo Chico in 1849
 which William Dickey obtained in 1844

"Hastening on up the valley we struck the trail of the Oregon company on what is now known as Chico Creek, Rancho Chico, and to me one of the loveliest of places. The plains were covered with scattered groves of spreading oaks; there were wild grasses and clover, two, three and four feet high, and most luxuriant. The fertility of the soil was beyond question, and the waters of Chico Creek were clear, cold, and sparkling; the mountains were lovely and flower covered, a beautiful scene." – John Bidwell 1843



"Plat of Farwell Grant" map created 1865

John Bidwell acquired John Potter's portion of the Farwell Grant and used it to layout what is now downtown Chico (<u>City of Chico</u>, <u>2021</u>)

John Bidwell & Mechoopda Relationship

"Bidwell paid his workers with food and clothing, but to his credit he did not use debt or coercion to get his way ... [Bidwell] offered the ranch as a refuge where they could hunt, fish, gather acorns, conduct communal grasshopper drives, and generally maintain their way of life and culture ... An article that appeared in the *Yreka Semi-Weekly Union* [September, 1864] accused Bidwell of Keeping "a slave pen" at Rancho Chico and alluded to an incident in which a [Mechoopda] man had been beaten with a club while his hands and feet were tied together over a barrel. The article urged Bidwell to stop the hypocrisy of supporting the abolition of black slavery while at the same time enslaving Indians" (Reséndez, 2016)

How Peers Viewed John Bidwell & Mechoopda Relationship

"Heavy on Bidwell – We see that Senator Wilson, of Massachusetts, has introduced a bill to banish and prohibit peonage in New Mexico and other parts of the United States. This is a heavy blow on John Bidwell. His fortune has been made through peon labor. His Indian slaves have cultivated his fields, his vineyards and his orchards in defiance of the protests of the people of that vicinage. They must now be emancipated. All men, including negroes and Diggers, and we shall therefore, expect ere long to see one of Bidwell's squaws transferred from the kitchen to the parlor of his splendid mansion at Chico. The World Moves – S.F. Examiner"

Photo: Butte Record (April 27th, 1867) (Oroville, CA)

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The Examiner would do well not to indulge in such romance as the above, when it is remembered that a dear friend and old partner of its editor. Vince Geiger, was in the habit of transferring his squaws to his dormitory.—Sacramento Uaion.

The Carson (Nevada) Appeal, speaking of Gen. Bidwell, as a Gubernatorial candidate, says:

"For many years, the bulk of the labor done on his radch, was performed by Digger Indians, who keep a Rancheria on his grounds. His neighbors, who have uniformly dishaed him, insinuate some queer things concerning the paternity of certain saddle colored papooses that run about there."

John Bidwell & Nopanny: Marriage & Children

- John Bidwell in a traditional Mechoopda ceremony married Nopanny, daughter of the Mechoopda headman Luckyann, around 1851
- John Bidwell and Nopanny had a daughter named Amanda Wilson and a son named George Clements
- Annie Bidwell knew of this marriage and John Bidwell's Mechoopda children
- The community at large, during the 1800's also knew as documented in the Oroville Butte Record in 1867

"Heavy on Bidwell – ... His neighbors, who have uniformly disliked him, insinuate some queer things concerning the paternity of certain saddle colored [light brown] papooses [Indian children] that run about there." Photo: Butte Record (April 27th, 1867) (Oroville, CA)

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Annie Bidwell & Mechoopda

- "When I first knew them, death was terrible. Day and night for several days the wailing resembled the distant sound of the lowing of a great band of cattle and criers of drivers, mingled, in wild confusion and could be heard for over a mile"- Annie Bidwell 1905 (Bidwell, 1980)
- Predictably, another major point of contention between Mrs. Bidwell and the Indians at Bahapki developed over the Indians' dances. As with Indian burial practices, Mrs. Bidwell opposed the Indian dances for two reasons: they did not conform to Christian religion, and they did not fit with the Indians' new lifestyle as wage laborers on her husband's property. According to her, "The argument I presented against the Indian dance was, that when they had a creek to spring into after the dance, it was a benefit to them, purifying their bodies; but now that they had to sit in the cold wind, it gave them colds and pneumonia. Also that they danced to excess and over-tired their bodies so that the next day they were not in condition of good work." (Jacobs, 1997)

"Apparently one or more deaths and the accompanying wailing occurred shortly after Mrs. Bidwell's arrival in 1868. She mentioned her concern that others were disturbed during the night and day by the noise of the wailing which occurred at the village a short distance away. The master bedroom, for instance, had windows that opened to the southwest, and the maids' rooms practically overlooked the village.

In March 1869 the Indian village was relocated approximately one mile from the Bidwells' residence on Sacramento Avenue, where the Chico Rancheria was established and where it has remained since (Map 6, page 53). The reason for this move was stated by Mrs. Bidwell as the necessity for the Indians to have more ground. However, the noise of the ceremonial wailing which reportedly disturbed the Bidwell household was probably another reason ... The choice of the new village site was probably disliked by the Indians, for it was not beside a stream as their villages had traditionally been situated, but was a five-minute walk from Chico Creek" (Hill, 1978)



Photo: California State University, Chico, Meriam Library Special Collection

Annie Bidwell & Mechoopda Education/Assimilation

 Annie Bidwell operated a private school on the Bidwell Ranch teaching Mechoopda (mainly women and Mechoopda youth) and used school as a tool for assimilation

 Afterwards Mechoopda youth were sent to a government Indian boarding school located in Lake County where they stayed until that school too was terminated for lack of funds (Hill, 1978)

• Annie Bidwell, with support from the Occidental Board of the Women's Foreign Missionary Society of San Francisco, hired a teacher to teach Mechoopda for 3 years until funding ran out (Hill, 1978)

• "The Occidental Board of the Women's Foreign Missionary Society of San Francisco generously took charge of the school on learning I had to discontinue it, and supplied a teacher for three years, until forbidden by the authorities in the East to continue it. Not feeling able to resume on our own, we succeeded in getting the children into the public school of Chico, the prejudices against the Indians having been in a measure removed by their brass band ... even now, our law forbids public-school privileges to any who are not 'wards' of white persons. Every year we have to claim guardianship in order to have the children enrolled." - Annie Bidwell 1892 (Bidwell, 1980)

Annie Bidwell Advocacy: Term "Digger"

"Friends – My appeal to you today is on behalf of the Indians of California, who, trustful and gentle, have been downtrodden, neglected and robbed; robbed even of their name, by friend and foe, and had forced upon them one they rightfully resent as humiliating and unjust – that of "Diggers", which has even been incorporated into our language. The Century Dictionary says, "Digger: a degraded class of Indians in California ... so called because they live chiefly upon roots dug from the ground" ... My husband (John Bidwell) says that when he came to California in 1841 – the term "digger" was unknown; nor did he hear it among the trappers whom he met on Green River, nor until some years later when a class of low white men who were in the habit of shooting Indians for any trifling cause began to use it contemptuously for California and all Indians. His inquiries at the time convinced him that it was a term of reproach ... C.C. Royce, ethnologist who has written extensively of the Indian languages also assures me that the term is on of opprobrium , inappropriate, and should never be used – Annie Bidwell, date unknown, speech titled Indians of California" (Bidwell, 1980)

List of Rules imposed on Bidwell's Ranch

Note Rules 5th & 6th under section 4th

Attendance of Christian Church (and subsequently converting to Christianity) was required

Annie Bidwell ran a school on the ranch for Mechoopda. Annie Bidwell used the school to assimilate Mechoopda youth. Within a single generation Annie Bidwell assimilated the vast majority of Mechoopda with the next generation only speaking English, converted to Christianity, etc... (Hill, 1978)

First That they obey these Rules Second That they drink no which y orother Third That they obey Lofonso as chief and pattern ofter Billy Breacher and be good like him that all must be temperate, molus-Photo: trious and good. California the That all Indians - men women and State children must (unless in case of University, sichness) attend church ever y San-Chico, doy when there is church ith That parents must send their Meriam Library children to school when old enough Special Reep them clean, and teach them to Collection be polite. eventh . That these things are wrong and therefore for bidden, namely to swear to quarrel; to steal; to fight, to hand or Sunday; and to play ball or other sporting games on Sunday.

81

Resistance to Assimilation: Mechoopda

- · Mechoopda Women resisted assimilation to Western gender norms:
 - "... unlike white women in the Presbyterian Church who sat passively through the sermon of a male minister, Amanda Wilson felt no inhibition about standing up in church and delivering her own sermon while her second husband, Santa Wilson, led the services" (Jacobs, 1997, pp. 242-243)
 - Continued contact with Mechoopda culture, in which women hold leadership roles, led Annie Bidwell to question patriarchal norms and the place of women in American society (Jacobs, 1997).
- · Mechoopda made attempts to practice traditional ceremony in secret:
 - "Mrs. Bidwell had provided caskets for all the funerals of Indians since 1876, it is not apparent that the [Mechoopda] really used them. Upon the death of Mrs. Nunco ... According to Mrs. Bidwell, "The Indians feared I would take cold so insisted on my not remaining but having services before burial, promising to say the Lord's prayer at grace." Before leaving, Mrs. Bidwell noted that Mrs. Nunco was dressed Indian style for her burial. Although we cannot be sure, it appears that the Indians might have hustled Mrs. Bidwell out of [the village] so that they could perform the burial in their own manner" (Jacobs, 1997, p. 244)
 - "Other researchers have found evidence that Amanda Wilson ... still practiced her native religion. Thus though ... Amanda Wilson may have accepted some of her [Annie Bidwell's] teachings and assistance, this did not mean that [Amanda Wilson] agreed to all of the conditions [of] Mrs. Bidwell" (Jacobs, 1997, p. 243)

Hear from the Elders who lived on the reservation and whose parents worked for John Bidwell

- Mechoopda Video Part 1 (Click Link)
- Mechoopda Video Part 2 (Click Link)

Left to Right: Johnny Azbill Brady, Edward Wilson, and Ned Foreman





Mechoopda gathering and processing acorns on the Chico Rancheria

Photo: California State University, Chico, Meriam Library Special Collection

> Mechoopda Women & Children

Photo: California State University, Chico, Meriam Library Special Collection



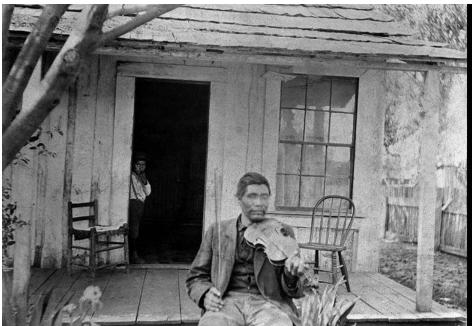


University,

Amanda Wilson and six grandchildren playing on the Mechoopda Rancheria

Photo: California State University, Chico, Meriam Library Special Collection





Austin McLain playing a violin on the Mechoopda Rancheria

Photo: California State University, Chico, Meriam Library Special Collection



Mechoopda on the Chico Rancheria

(Left to right)

Dewey Conway, Dewey Gilbert, Ike Conway, Jodie Conway, Henry Azbill, Myrile Nuckolls.

(Back Row)

Sarah Brown

Photo: California State University, Chico, Meriam Library Special Collection



Anita Sylvers and "Blind Sue" on the Mechoopda Rancheria

California State University, Chico, Meriam Library Special Collection



Mechoopda Musical Band on the Chico Rancheria

Standing: (left to right)

Potts, Delbert Sparks, Jodie Conway, Ernie Young, Rufus Pulissa, Pablo Sylvers.

Sitting:

Homer Sylvers, Dewey Conway, William J. Conway, Isiah "Ike" Conway, Potts

Photo: California State University, Chico, Meriam Library Special Collection



Left Photo:

Edward and Eva Wilson on the Chico Rancheria

Right Photo:

Emma Cooper on the Chico Rancheria

Photos: California State University, Chico, Meriam Library Special Collection



As you may remember from the Mechoopda Videos ... and other points

- What now comprises parts of South Campus of Chico State and adjacent area used to be Mechoopda's Reservation known as "Chico Rancheria"
- Federal Government wrongfully seized Chico Rancheria in 1960s and sold approximately half to CSU, Chico and half to the City of Chico
- Mechoopda successfully sued the Feds in the 1980's for wrongful termination and illegal land seizure
- Even though the lawsuit restored the Mechoopda Tribe's Federal Recognition, the Tribe was not awarded their original Reservation land back to Mechoopda



Mechoopda Cemetery: Then & Now



Photo: California State University, Chico, Meriam Library Special Collection



Photo: Google Maps (attered, fair use in accordance with Google Policy)

Want more info about culture and history of the Mechoopda? Visit their official website!

https://www.mechoopda-nsn.gov/

Part C: TEK and Indigenous Fire

By: He-Lo Ramirez

Watch: https://www.youtube.com/watch?v=Z-EXQ9be8mE&feature=youtu.be&ab_channel=KCETOnline

Questions:

What is Cultural Burning?

Why is cultural burning important for Native Communities?

What are the effects of cultural burning on vegetation? What are the effects of fire and springs/creeks?

Wàji: Edible Geophytes

- · "Indian Potato/Indian Onion" are edible geophytes that grow in California
- · "Indian Potatoes/Onions" grow from bulbs, tubers, corms which are reservoirs of nutrients
 - Corms have "cormlets" which are genetic clones and are purposefully separated and replanted to
 ensure sustainable harvesting
 - · The act of digging out geophytes, as a form of tilling, disturbs the soil benefiting geophytes
- Each bulb/corm is insulated, found underground about 6 inches below the surface, are protected by fire, and are summer deciduous (a drought adaptation)
- Fire recycles nutrients into the soil by burning dead plant material and killing plants with shallow roots but not "Indian potatoes" with bulbs deep in the soil
- Most geophytes use either the heat of a fire or chemical signals in the smoke of a fire as a signal to grow

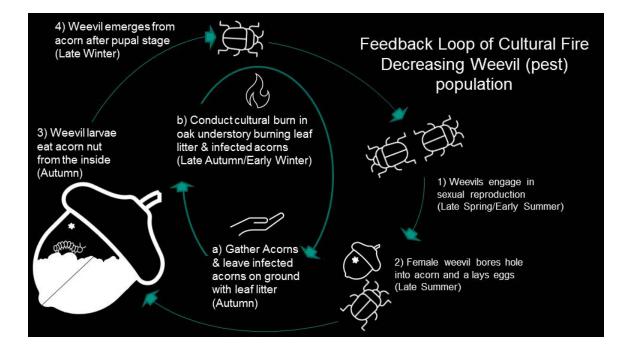
Watch: https://www.youtube.com/watch?v=bn0iDXBp-E0

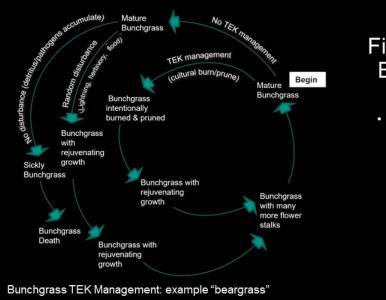
Questions:

What are fire-followers?

How long has it been since these landscapes have had large broadcast burns?

What issue did this video bring up in regards upon fire dependent native plants and fire suppression?

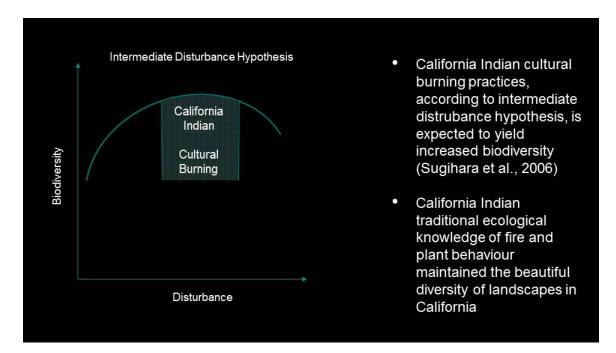




Fire for Baskets: Bunchgrasses

Intentional California Indian TEK management mimics random "natural disturbances" which improves health, extends the life of the bunchgrass, and promotes desirable growth for basket weaving (Anderson, 2005)





Pyrodiversity begets Biodiversity

- Fire was and still is used extensively to promote biodiverse habitats that benefit humans (Charnley et al., 2007)
- Mixed-severity fire applied at varying spatial scales at different times of year used to maintain heterogeneous habitat mosaics with diverse flora that support diverse fauna (Bowman et al., 2016; Kelly & Brotons, 2017)
- Pyrodiversity in both spatial and temporal variation increase biodiversity (Kelly & Brotons, 2017)

Examples:

- •
- .
- maintenance of subalpine **meadows**: prevent conifer encroachment maintenance of **grasslands**: prevent chaparral encroachment maintenance of **oak woodlands**: prevent conifer & chaparral encroachment **promote geophyte & perennial grass abundance**

Cultural Burning Impact	Human Benefit(s)	Habitat benefit(s)
Dý: (chaparral)/öčýmmöto (grassland): kó:do čájčàjno (habitat mosaic)	Facilitate human transportation through chaparral thickets	Facilitate transportation through chaparral thickets for other wildlife
Shrubs (basket): induce juvenile characteristics	Longer straighter shoots for crafting baskets	Pathogen free shrub with more open canopies facilitating greater access to fruit and perching habitat for wildlife (Anderson, 1999)
Kójo: (meadow): encourage growth of geophytes, grasses, and forbs	More edible wàji (geophytes non-allium), čáni (geophytes allium) ja:wi (miner's lettuce), tý: (grass seed flour)	Increased biodiversity (Charnley et al., 2007)
Fuel consumption: reduce fuel loading (amount of flammable material)	reduced megafires, easier gathering/hunting, nutrient recycling, bring rain, restore small seeps/springs that dried up	Reduced megafires, bring rain, restore small seeps/springs that dried up
Jà:lulu (elderberry): clapper sticks	Elderberry with longer straighter shoots with higher internodal spacing and wider piths	More open canopies facilitating greater access to fruit and perching habitat for wildlife

Cultural Burning Benefits: Humans and Habitat

Indigenous Burning in a Grassland Savanna in Australia: Analogous to California's Grasslands

Watch: https://www.youtube.com/watch?v=UJKdZpRbzMk&feature=youtu.be&ab_channel=CoolAustralia

Questions:

How was the fire behavior described and shown in this cultural burn in this savanna grassland in Australia?

Why did I watch this video?

Part D: A Brief Summary of Culturally Significant Species to the Mechoopda Maidu People and their Cultural Uses

Northwestern Maidu App (link to Northwest Maidu Language App published on Mechoopda Indian Tribe of Chico Rancheria's website)

By: He-Lo Ramirez

Oaks (Quercus spps.)

- · Acorns are a staple food source (one of the most important) to Maidu
- Thousands of pounds of acorns would be dried, stored, ground into powder, and then leached of their tannins, before being cooked for consumption
- · Straight Oak tree trunks are utilized in the construction of dwellings
- Straight shoots (most often seen post fire treatment) were used in the construction of cradleboard baby carriers
- · Oaks are often keystone species within the ecosystems they reside in

Hámsy Black Oak





Photos: He-Lo Ramirez

Čàkawì Blue oaks





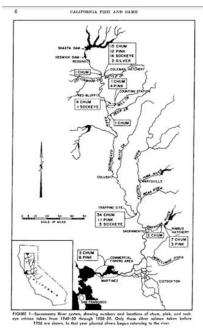
Photos: He-Lo Ramirez

Ló:wi Valley Oaks



Máji Chinook Salmon

- Keystone species of incredibly high importance equal to the oak
- Salmon were smoked and dried. All parts of the salmon including the bones (pounded into a flour) were consumed



California Dept. Fish & Game (Hallock & Fry, 1967) 308 REPRINT FROM Calif. Fish and Game, 53 (1): 5-22. 1967.

FIVE SPECIES OF SALMON, ONCORHYNCHUS, IN THE SACRAMENTO RIVER, CALIFORNIA¹

RICHARD J. HALLOCK and DONALD H. FRY, JR. Marine Resources Branch California Department of Fish and Game

King salmon (O. tshawytscha) are abundant in the Sacramento-San Joaquin river system of California, but other species of salmon are uncommon or rare. To determine the occurrence and abundance of the less common species, all such fish encountered during routine king salmon studies and hatchery operations were examined and recorded. From 1949 through 1958, a total of 130 chum, pink, sockeye, and silver salmon (O. keta, O. gorbuscha, O. nerka, and O. kisutch) was identified. All were from the Sacramento, its tributaries, or the Sacramento-San Joaquin Delta. No salmon other than kings were found in the southern tributaries of the Delta. These 130 fish do not include planted silver salmon, which began entering the rivers in 1956. After this planting was discontinued, silver salmon rapidly declined and have almost vanished from the Sacramento. Highly tentative estimates were made of the numbers of chum, pink, and sockeye salmon occurring in the Sacramento River system. It was concluded that these three species are present as very small spawning runs, but that silver salmon were so scarce that they should be regarded as strays.



Boys Fishing at Chico Creek (West 1st Street)

Photo: California State University, Chico, Meriam Library Special Collection

Wàji: Edible Geophytes aka "Indian potato"



Photos: He-Lo Ramirez

Example of Wàji gathered in Chico, CA



Photos: He-Lo Ramirez

Múnmuni California Mugwort

- Highly Valued Medicinal Plant
- Treat respiratory illnesses such as bronchitis and asthma, alleviate headaches, and stomach issues
- Used as natural insect repellent in acorn granaries



Photo: He-Lo Ramirez

Sójbam California Bay

- Medicinal plant of high cultural importance
- Primary component of acorn granaries
 - Aromatic compounds are natural insect repellants



Photo: He-Lo Ramirez

Čúpi Willow

- · Extremely important culturally significant plant
- · Many uses include construction of baskets, homes, boats, fish traps, and more
- Medicinally used bark to brew tea to treat fever and pain (aspirin)
- Willow was traditionally burned and cut to promote growth of straight shoots

Lýli Western Redbud

- Used in basket making, bark utilized for creating basket designs
- Fire is applied to promote long straight shoots



Photo: He-Lo Ramirez

Pý:stoni sáwi = Santa Barbara Sedge

- Extremely important culturally significant plant
- Rhizomes gathered and utilized as waterproof weaving material to create watertight baskets
- Water-proof baskets utilized in creating cooking baskets, drinking vessels, etc.



Photo: He-Lo Ramirez

Jà:lulu Elderberry

- Highly valuable cultural plant
- Wood used for making percussion musical instrument "clapper stick"
- Fire utilized to promote straight shoots with high internode spacing
- · Berries consumed



Ákčolmà Western Pond Turtle

- Culturally important species regarding Mechoopda cosmology
- Species is currently threatened/endangered throughout its natural range



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2022-038

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Material Requested

23 images

Description of Materials to be Used

I, He-Lo Ramirez (Chico State graduate student & Mechoopda Tribal Member), am requesting to use dozens of historical photos to create non-profit free educational curriculum to educate Mechoopda youth (primary target audience), the wider Northwestern Maidu community (secondary audience), and the greater Chico community at large (tertiary audience) on Mechoopda history. I wish to be granted written permission to use many photos from the Meriam special collection in my Project/Thesis deliverables, education curriculum, which will be posted on the World Wide Web as the thesis/project will be published on the World Wide Web. Here is a list below of materials to be used:

sc30087 (Cora Azbill); sc31540 (Chico Rancheria Round House); sc31371 (Maidu woman cooking); sc31370 (Woman (Maidu) and baskets); sc36309 (Map of Treaty 1851); sc35055 (Route Indian Drive); sc36756 (Village scene), sc31507 (Boys on Mechoopda Rancheria), sc31676 (Amanda Wilson & Grandchildren); sc31502 (Austin McClain playing violin on Chico Rancheria); sc31493 (Group Portrait Mechoopda on Chico Rancheria); sc35143 (Anita Sylvers & Blind Sue); sc35003 (Mechoopda Musical Band); sc31679 (Eva & Edward Wilson); sc31571 (Emma Cooper Portrait); sc35129 (map of 3 village locations of Chico Rancheria Indians); sc35603 (John Bidwell Proclamation); sc31548 (Mechoopda Cemetery); sc31527 (Mechoopda gathering & harvesting acorns); sc35046 (Holi LaFonso & Pablo Sylvers seated); sc31506 (Mechoopda Women & Children); sc35018 (Chico Rancheria Round House and acorn granaries); sc50119 (Boys Fishing on Chico Creek) **SC Number** See "Description of Materials to be Used"

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Delia Tejeda Torrecilla 04/08/2022

We acknowledge and are mindful that Chico State stands on lands that were originally occupied by the first people of this area, the <u>Mechoopda (https://www.csuchico.edu/tribalrelations/land-acknowledgement.shtml</u>), and we recognize their distinctive spiritual relationship with this land, the flora, the fauna, and the waters that run through campus.

We are humbled that our campus resides upon sacred lands that since time immemorial have sustained the Mechoopda people and continue to do so today.

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APPENDIX B

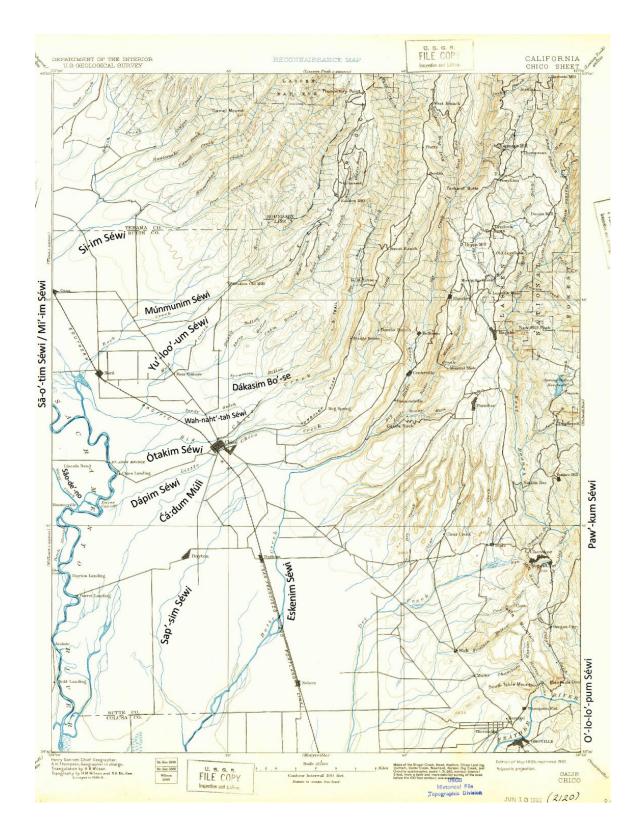
ECO-CULTURAL TOUR OUTLINE

- Stop 1: Origin
 - Approximate location: Latitude 39.7316183°, Longitude -121.8444446°
 Recommend entering coordinates into Google Maps
 - o Tour guide and participants meet at on CSU, Chico campus at the intersection of Arcadian Ave and Sol-Wil-Le-No Avenue behind the Bidwell Mansion
 - o Tour guide conducts interactive discussion of, "Part B: Mechoopda History & Culture" of the Eco-Cultural Workshop (see Appendix A)
 - o Afterwards Tour guide leads group downstream of the northwest bank of Big Chico Creek to discuss organisms of cultural importance to the Mechoopda Tribe of Chico Rancheria
- Stop 2: Pímmili (California wild grape)
 - o Approximate location: Latitude 39.7309805°, Longitude -121.8442615°
 - Tour guide states the Northwestern Maidu name for California wild grape,
 pímmili, shows pímmili on site, and then discusses the indigenous uses of
 California wild grape which includes edible fruit and using the vines for cordage.
 Tour guide plucks a grape and eats it, demonstrating the fruit is safe to eat.
- Stop 3: Lilicicim (California wild rose)
 - o Approximate location: Latitude 39.7305463°, Longitude -121.844596°
 - Tour guide states the Northwestern Maidu name for California wild rose, liliciciim, shows liliciciim on site, and then discusses the indigenous use of California wild rose which include consuming the rose hips to supplement one's diet with important nutrients such as a vitamin C.
- Stop 4: Lýli (Western redbud)
 - o Tour guide states the Northwestern Maidu name for western redbud, lýli, shows lýli on site, and then discusses the indigenous use of lýli for basket weaving.
- Stop 5a: Ló:wi (Valley oak)
 - o Approximate location: Latitude 39.7303961°, Longitude -121.8458317°
 - Tour guide states the Northwestern Maidu name for valley oak, ló:wi, shows ló:wi on site, and then discusses the indigenous use of ló:wi which include, consuming the acorns, using ló:wi saplings for baby cradle boards, and using the trunks of mature ló:wi in the construction of traditional Mechoopda ?úji (subterranean house).
 - o Tour guide states the names of other oak species native to Butte County, CA, including the tanoak which technically is not a species of oak (*Quercus*)
 - Čakawi (blue oak)
 - Hámsy (black oak)
 - Háha: (tanoak)
 - o Tour guide describes traditional oak management and how to process ?ú:ti (acorns)
 - During Autumn ?ú:ti are collected
 - ?ú:ti infected by weevils, as made evident by burrowing hole in the ?ú:ti, are discarded onto ground

- After all healthy ?ú:ti are gathered, a cultural burn is conducted at a landscape scale
 - Cultural burn incinerates infected ?ú:ti decreasing weevil pest population in subsequent year
 - Cultural burn consumes deciduous leaf matter and organic detritions recycling nutrients
 - Cultural burn consumes pathogens that infect the bark of ló:wi, improving ló:wi health
 - Cultural burn improves growing conditions for other native species
- After being gathered ?ú:ti are placed in a granary constructed of mánim (incense cedar), sójbam (California bay laurel), and múnmuni (California mugwort)
 - Mánim, sójbam, and múnmuni have aromatic compounds, which make the plants so fragrant, which are natural insect repellants and aid in protecting the ?ú:ti from being consumed by insects
- ?ú:ti after being dried for approximately one year are pounded using an ?á: (acorn mortar) to create bát'i (acorn flour)
- Bát'i is processed, through a process known as leaching, to remove the tannic acid
 - Tannic acid it toxic to humans and bitter
 - Tannic acid is hydrolysable, so it can be removed from bát'i with water
 - The bát'i is safe to cook into soup and consume once the bát'i no longer tastes bitter
- Stop 5b: Wàji (Indian potato)
 - o Approximate location: Latitude 39.7303961°, Longitude -121.8458317°
 - o Tour guide states the Northwestern Maidu name for native edible geophytes, wàji, and then discusses traditional land management practices associated with wàji (see Appendix A)
- Stop 5c: Máji (Chinook salmon)
 - o Approximate location: Latitude 39.7303961°, Longitude -121.8458317°
 - o Tour guide states the Northwestern Maidu name for chinook salmon, máji, and then discusses the uses of máji and information relevant to salmon conservation within the Sacramento River watershed (see Appendix A)
- Stop 6: Sójbam (California bay laurel)
 - o Approximate location: Latitude 39.73042175°, Longitude -121.8464145°
 - o Tour guide states the Northwestern Maidu name for California bay laurel, sójbam, and then state that sójbam is a traditional medicinal plant of high cultural importance and that it is used as a natural insect repellent
 - o Tour guide encourages participants to touch and smell the leaves of the plant
 - o Tour guide askes participants to describe the smell in their own words
- Stop 7: Pý:stoni sáwi (Basket Sedge aka Santa Barbara Sedge)
 - o Approximate location: Latitude 39.7304331°, Longitude -121.8464291°

- o Tour guide states the Northwestern Maidu name for basket sedge aka Santa Barbara sedge, pý:stoni sáwi, and then states that pý:stoni sáwi is a traditional basket weaving plant of high cultural importance (see Appendix A)
- o Tour guide encourages participants to touch the plant and states that an easy way to identity pý:stoni sáwi is by gently running one's hand up and down the sedge blades
 - When one runs their hand up a sedge blade there is mild discomfort as the triangular blade cuts into the hand
 - When one runs their hand down the sedge blade, there is moderate discomfort as the sedge cuts into one's hand
- Stop 9: Jà:lulu (Elderberry)
 - o Approximate location: Latitude 39.7282508°, Longitude -121.8482552°
 - o Tour guide states the Northwestern Maidu name for elderberry, jà:lulu, then states that jà:lulu is a plant of high cultural importance, and describes its uses (see Appendix A)
- Stop 10: Múnmuni (California mugwort)
 - o Approximate location: Latitude 39.7276962°, Longitude -121.8483044°
 - o Tour guide states the Northwestern Maidu name for California mugwort, múnmuni, states that múnmuni is a medicinal plant of high cultural importance, and describes its use as a natural insect repellent (see Appendix A)
 - o Tour guide encourages participants to touch and smell the leaves of the plant
 - o Tour guide askes participants to describe the smell in their own words
 - o Tour guide asks if there are any final questions, if not the tour guide ends the tour

APPENDIX C



STATIC NAME MAP OF BUTTE COUNTY RIVERS & CREEKS

APPENDIX D

DGMVO & DGMCP AGREEMENT



Tribal Relations 400 West First Street Chico, California 95929-0150 tribalrelations@csuchico.edu

April 1, 2022

Digital Access and Housing Agreement

Director of the California State University, Chico Office of Tribal Relations (Chico State, OTR), Rachel McBride-Praetorius, agrees to host the "Digital Gathering Map & Citizen Science Data of Valley Oaks along Big Chico Creek (DGMVO)" and the "Digital Gathering Map of Culturally Important Plants Along Big Chico Creek (DGMCP)", created by He-Lo Ramirez for the benefit of the Northwest Maidu community, on an iPad to be held within the Chico State, OTR.

If Rachel McBride-Praetorius is no longer the Director of the Office of Tribal Relations and/or if the Chico State, OTR were no longer to exist, He-Lo Ramirez will be notified and the file copies hosted at CSU, Chico will no longer be permitted and digital files will be destroyed.

Rachel McBride-Prastorius

Rachel McBride-Praetorius, Director of Chico State, OTR

April 1, 2022 Date

He-Lo Ramirez

He-Lo Ramirez, Creator

April 1, 2022 Date