Historical demography of the Coeur d' Alene 1900-1930

Christina Joy. Heiner

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A HISTORICAL DEMOGRAPHY OF
THE COEUR D’ALENE 1900-1930

By

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B.A., The University of Montana

Presented in partial fulfillment of the requirements

for the degree of

Master of Arts

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This study investigated population and demographic changes of the Coeur d'Alene tribe from 1900-1930. The Coeur d'Alene population declined in the eighteenth and nineteenth centuries from epidemics such as smallpox, measles, scarlet fever, and malaria. Although the Coeur d'Alene population did increase slightly by 1930, health conditions on the reservation remained poor. Diseases and illnesses such as tuberculosis, pneumonia, influenza, and trachoma were widely spread and prevalent on the reservation, especially among school-age children and infants. Unsanitary and crowded living conditions, lack of access to medical care, and the loss of land from allotment further contributed to poor health conditions that were present on the reservation.
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CHAPTER 1

Introduction

Scholars of Native American demography have typically focused on two dimensions of native population change. First, indigenous population sizes at the time of contact and second the extent that native populations have changed due to European infectious diseases (Shoemaker 1999; Campbell 1987). These studies have elicited sharp controversies concerning aboriginal population sizes, and the demographic impact of diseases on native populations (Dobyns 1966, 1983; Thornton 1987, 1997; Thornton and Marsh-Thornton 1981; Ubelaker 1976, 1992; Snipp 1989). Yet scholars agree the impact of European colonialism has been severe. As Denevan (1976:7) has argued, “the discovery of America was followed by possibly the greatest demographic disaster in the history of the world.”

As native peoples were generally susceptible to European pathogens, infection rates differed among tribes and regions, thus creating disease patterns that affected different populations at different times (Thornton, Miller, and Warren 1991:28; Larsen 1994:109). Most studies have only focused on gross mortality rates and the magnitude of population decline due to the presence of these diseases, ignoring how demographic processes also influenced fertility and migration patterns (Thornton, Miller, and Warren 1991:29; Snipp 1989).
Subsequently, scholars have also largely disregarded how infectious diseases continued to affect native population dynamics during the reservation period. Scholars assume that as tribes were permanently placed on reservations, their populations stabilized and health improved being under the auspices of western medicine. As Campbell (1991) has reminded us, population growth is not an indicator of good health.

The establishment of reservations created a means for the federal government to control all aspects of native life including health (Hyer 2001:68). Providing medical care and promoting “health” on reservations were not altruistic gestures on part of the U.S. government. Instead, Indian agents and physicians aimed to dislodge indigenous traditional medicine and religious practices, not to prevent the spread of diseases (Campbell 1987:10). Furthermore, “Bureau medical personnel set about treating reservation diseases that been created by the social and economic conditions engendered by the bureau’s policies. The role of reservation medicine therefore was never separate from the political policy of assimilation” (Campbell 1989:2).

The purpose of this study is to examine the deterioration of health and the presence of diseases and illnesses among the Coeur d’Alene (also referred to as the Schitsu’umsh) during the years of 1900-1930. Specifically, this study will focus upon the relationship between fertility, mortality, and morbidity during the reservation period and how the establishment of the reservation affected vital rates and population change for the Coeur d’Alene.

Throughout the end of the nineteenth century and well into the twentieth century, members of the Coeur d’Alene were praised for their industry and assimilation into Euro-American lifestyle. John Wright of the 1887 Northwest Indian Commission said the
Coeur d’Alene were “industrious, thrifty, provident and good traders…They are polite, good natured, ambitious to excel, and to do all things as white men do” (U.S. Department of the Interior 1970:50). Wright also believed on the Coeur d’Alene reservation, “the Indian problem would be solved at last” (U.S. Department of the Interior 1970:51).

Indian Agent Hal Cole wrote that the Coeur d’Alene were ahead of the other tribes at the Colville Agency in terms of agriculture and farming pursuits (Annual Reports to the Commissioner of Indian Affairs 1893:321—hereafter cited as Annual Report).

Superintendent Bryon Sharp wrote in 1920, “The Indians on this reservation with few exceptions live in houses and under conditions as favorable as do the whites. A large number living in better homes and under better conditions than do quite a few of the homesteaders” (Bureau of Indian Affairs Annual Narrative and Statistical Reports 1920—hereafter cited as BIA Narrative Report).

Despite adopting the accoutrements of Anglo civilization, Coeur d’Alene health conditions deteriorated as they became more “assimilated” into white culture with their placement on the reservation. The Coeur d’Alene continued to suffer from acute epidemics and infectious diseases such as smallpox, influenza, measles, malaria, whooping cough, pneumonia, cholera, and scarlet fever well into the 1930’s. In fact, as little as four years after the establishment of the Coeur d’Alene reservation, physician C. K. Smith wrote, “the plague of the reservation was tuberculosis” causing several deaths. Sadly, tuberculosis was highly prevalent among children resulting in high infant mortality (Annual Report 1893:325). Diseases and illnesses remained a critical factor in stunting population growth for the next forty years.
American Indian Populations and Problems Concerning Demographic Data

To analyze population change and vital rates, a data set was constructed using seven Coeur d’Alene censuses. The first two censuses, 1900 and 1905, were recorded with other tribes located at the Colville Agency. The last five censuses 1910, 1915, 1920, 1925, and 1930 were taken on the Coeur d’Alene reservation. Data from Bureau of Indian Affairs census rolls include roll number, Indian name, English name, relationship to the head of family, age, and sex. Later censuses included information concerning the tribe of the individual, degree of blood, marital status, and place of residence.

In addition, the data set also included the 1900 and 1910 United States federal censuses. U.S. censuses provided more in-depth demographic information concerning fertility, intermarriage, as well as population mobility (Campbell 1991). Native Americans were asked to give information relating to the birth places, tribal membership of themselves as well as their parents, marital status, the number of years married, blood quantum, the number of children born, and how many of these children were living. This information was used to analyze children-ever-born to Coeur d’Alene mothers, and the percentage of childless couples.

Records kept by the Bureau of Indian Affairs and U.S. Federal Government were subject to misreporting errors by census takers and from culturally biased questions. The most common errors were underenumeration of individuals (especially of women and children) and age heaping. Age heaping refers to the tendency for enumerators to round up numbers to end in either a zero or a five. Demographic studies reveal errors from age heaping usually occur within four years of the actual age (Campbell 1991; Shryock,
Siegel, and Associates 1971). In addition, Ewbank (1981) found enumerators often report children’s ages more accurately than adult’s ages. Enumerators also frequently misreport the ages of women between 15 and 29 based on physical maturity, marital status, and parity (Hobbs 2004:142).

Vital records kept on native peoples were subject to inaccuracies specifically unique to native populations. Indian agents often overreported population numbers and exaggerated conditions because resource allocations were tied to population numbers (Shoemaker 1999:16). In other words, reservations received resources, such as money or medical supplies, according to population growth or the appearance of population growth.

The Bureau of Indian Affairs also did not stipulate tribal membership requirements until the 1930’s (Shoemaker 1999:16). Individuals from other tribes and even non-Indians were often enumerated in censuses. For example, the treaty of 1889 stipulated that Lower Spokane tribal members give up their ancestral lands and reside on the Coeur d’Alene reservation. Unfortunately, Indian agents and census takers did not distinguish between the two tribes in early records. For example, the 1910 Indian census summary indicates there were nearly 100 members of the Lower Spokane tribe enumerated with the Coeur d’Alene tribe. However, censes takers did not distinguish between members of the two tribes until after 1915. In addition, four white families were adopted into the Coeur d’Alene tribe. These families’ demographic information are also recorded in the data as members of the Coeur d’Alene tribe.

Records were also subject to errors based on cultural biases. Population counts were usually completed during the summer months when families were absent
completing seasonal migrations. Although many Coeur d’Alene had moved into permanent residences by the end of the nineteenth century, there were families who still completed traditional migration routes (Woodworth-Ney 2002). Leaving in the springtime and returning in fall would mean these families were missed in censuses along with their demographic data.

Biases also existed within the question themselves. The United States census asked how many children a woman had and how many were still alive. Not only do women have a tendency to forget deceased children, but also many tribes believed it was bad luck to discuss the dead (Shoemaker 1999). Johansson and Preston’s (1978) study of Hopi and Navajo demography using the 1900 census, found women often under-reported the total number of children-ever-born. Fear of attracting ghosts or bad luck outweighed any consequence for misreporting the number of children.

Although records kept on native peoples are usually “lacking” and “of poor quality” they still useful to detect significant demographic trends (Meyer 1982:29; Campbell 1991). However, one must rely on ethnohistorical resources from accounts of early observers such as missionaries or anthropologists to compensate for poor or little data (Meyer 1982:30). As one scholar has noted, “One either uses such data as may be available and learns something, however inadequate, or abjures such data and learns nothing” (Dobyns 1976:7).

**Theoretical Perspective**

There are many theories and analytic frameworks to explain demographic changes throughout time in populations. One classic theory is the demographic transition. The demographic transition theory describes the stages at which a population’s fertility begins
to decline through modernization, such as the implementation of birth control, and improved living conditions, thereby ultimately reaching zero population growth in the last stage (McFalls 2003:34). However, the demographic transition theory, as well as other theories, tends to ignore larger historical and social behaviors that underlie demographic processes. To adequately describe and incorporate the social, cultural, economic, and political implications in relation to demographic processes, a political economy approach was adopted for this study.

A political economy approach is “a critical endeavor to health which attempts to understand health-related issues within the context of the class and imperialist relations inherent in the capitalist world-system” (Baer 1982:1). In addition, political economy analyzes:

- how historically-specific and geographically defined groups adjust to and at the same time change their physical environments; how they expand or restrict their numbers in doing so; how they relate to each other in the phases of appropriation and transformation; how they partition the product and the surplus, according to historically derived standards; and how the product is finally utilized, which in turn calls forth further production, distribution, exchange and consumption. (Wessman 1988:177)

Political economists analyze health from a historical perspective, focusing on disease causation and health services within a stratified social, political, and economic relationship (Morgan 1987:132). Environments are seen as socially constructed, inseparably connected to the parts and the wholes. Individuals are not passive in adjusting to changing environments, “but act together in social relationships to transform their environment. Yet people’s actions are bound by physical, sociocultural, and political-economic structures that constrain their behavior” (Leatherman 1996:478).
Political economists argue the “economic forces of capitalism” affect health not only on global levels, but also in local settings, ensuing in an unequal distribution of diseases in a society (Hahn 1995:72; Leatherman 1998:1034). Populations from social or disadvantaged economic backgrounds often do not have direct access to health care, which results in poorer health than those from privileged groups (Lupton 2003:9). For example, Leatherman’s (1996, 1998) study of Andean households found that individuals from poor families had higher rates of malnutrition and illnesses than families with moderate incomes. In addition, Leatherman discovered poor health and malnutrition not only mirrored the social and economic history of Andean households, but also illustrated that illness was a vehicle for poverty and change (Leatherman 1996:477).

Within the political economy theory, illness and disease are viewed as ultimately originating from political and socioeconomic conditions, rather than from strictly biological or environmental circumstances (Campbell 1987:27; Singer 1986:129). Diseases are “not the straightforward outcome of an infectious agent or pathophysiologic disturbance. Instead, a variety of problems-including malnutrition, economic insecurity, occupational risks, bad housing, and lack of political power-create an underlying predisposition to disease and death” (Waitzkin 1981:98). According to Singer (2005:13), this does not deny the biological reality of pathogenic agents, but rather views disease as a cultural process.

The Study Population

Similar to other Plateau tribes, there are few historical or ethnographic references to the Coeur d’Alene. Besides missionary or government letters, most historical or ethnographic resources regarding the Coeur d’Alene were not written until after 1900.
However, there have been many scholars since 1900 that have provided numerous resources regarding the social, political, economic, and spiritual aspects of the Coeur d’Alene tribe.

James Teit (1927) wrote one of the first ethnographic works on the Coeur d’Alene providing valuable information on the material culture, food and cooking techniques, social organization, and religious beliefs. Teit reported traditional village and winter camp locations and populations, but did not examine population numbers before contact or any disease history of the tribe.

Verne Ray, with the help of informant Morris Antelope, published ethnographic information pertaining to the location and names of 36 village and winter campsites (Ray 1936). Ray has also testified on the behalf of the Coeur d’Alene before the Indian Claims Commission (Palmer 1998:324).

Rodney Frey (2001) in collaboration with several members of the Coeur d’Alene tribe reexamined social customs, historical events, and the nature of the Coeur d’Alene religion. Particularly Frey’s ethnographic work focuses on the relationship between the Coeur d’Alene and the landscape and how it changed by European contact. Through oral history, Frey was able to discover references to epidemics, especially smallpox epidemics, which occurred before the twentieth century that historical records had not previously recorded (Frey 2001:57-59).

Other ethnographic resources include Gary Palmer (1981, 1998, 2001) who discusses several topics relating to Coeur d’Alene culture, religion, mythology, political and social organization, and changes which occurred economically because of missionary contact. Deward Walker (1978) compared and contrasted the social and political
behavior of several Idaho native tribes and included a few chapters regarding Coeur d’Alene social and political life before European contact.


Laura Woodworth-Ney’s (2002, 2004) work has focused on the historical development and events surrounding the creation of the Coeur d’Alene reservation. Similar to Frey, Woodworth-Ney investigated how Coeur d’Alene identity is connected to the landscape and how this changed through European contact and more importantly through the establishment of the reservation.

Robert Boyd (1994, 1996, 1998, 1999) has done extensive research on disease and demographic patterns within the Pacific Northwest and Plateau regions. However, Boyd’s research only slightly mentions any demographic or disease patterns of the Coeur d’Alene or neighboring tribes. To date, little or no research has been completed regarding the demographics of the Coeur d’Alene during the reservation period of 1900-1930.

**Summary**

The following chapters describe the historical and demographic changes that occurred during the reservation period 1900-1930 for the Coeur d’Alene. Demographic
changes reflect the relationship between political economy and economic underdevelopment (Campbell 1987:28). A detailed study of demographic changes can also illustrate the overall health of the community.

Native Americans continue to suffer from poor health. They are more likely to die from alcoholism, tuberculosis, diabetes, and accidents than any other population within the United States (Droste 2005:29). However to understand fully why poor health conditions still persist, it is important to trace the historical development of ill-health and the relationship between demographic changes and European contact (Campbell 1987:29; Young 1994:25).
CHAPTER 2

Historical Background of the Coeur d'Alene to 1900

Traditionally, the Coeur d’Alene tribe occupied five million acres near the Spokane River drainage and headwaters (Palmer 1998:313; Figure 1). The center of the tribe’s homeland consisted of “Coeur d’Alene, Heyburn, and Liberty Lakes, the mouth of the Spokane River, and the Coeur d’Alene and St. Joe Rivers basins” (Frey 2001:7). Contained within this landscape was an abundance of berries, camas, deer, elk, and fish. The wealth of game and plants not only provided the Coeur d’Alene with physical nourishment, but spiritual teachings as well. This chapter describes briefly the ethnohistory and historical encounters of the Coeur d’Alene tribe until the beginning of the twentieth century.

Social and Political Organization

Coeur d’Alene social and political life evolved around permanent and semi-permanent villages located along the Coeur d’Alene, St. Joe, and Spokane Rivers, as well as the Coeur d’Alene and Hayden Lakes (Ray 1936:116). Blood relations and marriages linked villages together through primarily three bands; The Spokane River/the Coeur d’Alene Lake Band, the Coeur d’Alene River Band, and the St. Joe River Band. It is
Figure 1. Map of Plateau Tribes (Walker 1998:ix)
possible that a fourth band existed at Chatcolet on the southwest corner of Lake Coeur d’Alene (Palmer 1998:313).

Village sizes fluctuated as band populations remained loose and fluid. However, the larger villages usually had permanent populations of at least 100 individuals and were the homes of the principal chiefs (Ray 1936:130-132). Villages used only for winter camps often had populations of 300 or more individuals, but dispersed in the springtime.

As blood relations and marriages linked villages through families, tribal councils and principal chiefs linked villages together politically. Village councils chose principal chiefs (or headmen) based on characteristics of generosity, wisdom, high moral values, and honesty (Teit 1930:152). Deficient and irresponsible headmen were promptly removed and replaced. Every man was eligible to become a headman regardless of wealth, family relations, or status within the band although leadership did tend to stay within certain families (Walker 1978:122).

Politically, principle headmen had limited power within the band (Walker 1978:123). The most authority a principal headman possessed was to exile unrepentant offenders from the band. For serious crimes, principal headmen relied on the wisdom of the village council to determine fair punishment.

Subsistence

One of the most important responsibilities of principal headmen was to regulate root and berry harvests and distribute game and fish equally between their bands (Palmer 1998:315). Under the leadership of principal chiefs, individuals actively fished, hunted, and gathered roots and berries. Frey (2001) notes that meat, fish, berries, and vegetables
contributed an equal part to a Coeur d’Alene diet. However, to obtain sufficient food quantities, families were required to make seasonal migrations or rounds. Seasonal rounds were 300 miles in length and took nine months to complete (Frey 2001). Locations, seasons, and gender divisions along the migration route dictated what food was to be gathered and stored.

Beginning in spring and throughout the summer, women gathered, “berries, nuts, seeds, tree sap, and tree cambium” (Palmer 1998:316). Meadows near modern towns of DeSmet, Clarkia, and Moscow provided camas and wild onions (Chaufant 1974:149; Walker 1978:65). While women focused on gathering berries and roots, men fished in local streams or traveled to outlying areas, placing fish traps on the Spokane River, the St. Joe River, and on Hangman Creek (Woodworth-Ney 2004:10; Palmer 1998:316).

In fall, women worked to preserve food gathered during the spring and summer seasons. Roots, fish, and meat were placed in sacks and hung to dry. Women also baked camas into cakes that later were used in soups (Palmer 1998:316). Food was then stored in circular pits for consumption during winter months.

To further supplement nutritional needs during winter, Coeur d’Alene men hunted deer, elk, and other small game. Hunting areas were located near permanent villages, along the St. Joe River, Spokane River, and around Hayden and Coeur d’Alene Lake (Chalfant 1974:147). To optimize hunting efforts, men used various techniques to successfully kill animals. Hunters employed the use of “nets, corrals, pitfalls, and nooses” (Palmer 1998:316). To hunt deer and elk more easily, men would burn areas of the forest where lichen grew. The lack of lichen would force animals to lower elevations to be easily trapped and hunted.
Life Cycle

Marriage

According to Walker (1978), the life cycle of the Coeur d’Alene resembled other Plateau tribes. With the exception of marriage between blood relatives, there were few restrictions concerning marriage. Couples were called “dogs” if descent could be traced on either maternal or paternal sides (Frey 2001:43). Polygamous marriages occurred but discontinued after the coming of the Jesuits. Families usually initiated marriage alliances, but couples could also initiate marriage negotiations (Teit 1927:134). After both families accepted the marriage proposal, a marriage date was set. Families also exchanged gifts; the groom’s family often provided the bride with a new set of clothing (Walker 1978:126).

A man could propose several ways to a woman. According to Teit (1930), one way a man proposed to a woman, was to light hay on fire near the woman’s bed in her lodge. After the woman had stamped out the fire, the man squeezed her foot and trampled on her toes. If the woman asked the man why he tramped on her foot, it meant the marriage proposal was accepted. He would visit her again a few days later to ensure she had not changed her mind and then negotiations began between the two families. If the woman did nothing, it meant that she did not accept the proposal and the man left without any public humiliation. Another way that a man proposed to a woman was to place a stick on her shoulder during the marrying dance (Teit 1927:155). If the woman allowed the stick to remain on her shoulder for the entire dance the man knew he was accepted. To reject the proposal the woman only had to push the stick off her shoulder. Chiefs would announce any accepted proposal at the end of the dance.
Although the Coeur d’Alene practiced a bilateral kinship, newly married couples moved in with the husband’s family. Grooms were restricted from speaking to their mother-in-law and brides were likewise, restricted from speaking to their father-in-law (Teit 1930:172). Marriages were not viewed as “final” until the birth of the first child which was celebrated by a feast and gifts distributed by the two families (Walker 1978:126).

Marriages were dissolved easily, but not without severing ties to both families. In the case of death, it was the responsibility of the husband’s brother to care for his brother’s widow and any children (Frey 2001:43). If the woman refused the brother as a new husband, she was free to leave and marry whomever she chose, relinquishing her children to her husband’s family (Teit 1930:172).

Birth

In order to ensure a healthy baby, expecting mothers observed several restrictions and taboos. For example, pregnant women avoided standing in doorways, tying knots, or looking at anything “ugly” (Walker 1978:124). In addition, women were to avoid eating certain types of animals because the spirits of those animals might become angered and punish the family (Peltier 1982:68). Pregnant women also exercised to keep their muscles toned for a short and easy labor.

At the onset of labor, women went to a special teepee a short distance from the village. Midwives were usually the female relatives of the pregnant woman. Midwives gave women herbs to help soothe labor pains and to help simulate the production of milk. Shamans were called for difficult labors, but fathers were never involved in children’s births (Walker 1978:124).
After birth, babies were bathed and placed in a “bark carrier.” The Jesuit priest, John Brown, described the carrier as “padded about with powdered wood rot, which was soft and could be renewed as often as might require. A piece of fur was wrapped about [the baby’s] head, shoulders, and back with a hood to protect [the baby] from wind and weather” (Peltier 1973:69). After the baby had grown out of the bark carrier, they were placed in a cradleboard. When the child was two years old, they were taken out of the cradleboard and encouraged to walk (Walker 1978:124).

Puberty

Puberty marked the transition from childhood to adulthood. At the onset of puberty, adolescents were separated from their villages to receive instructions to become “strong, industrious, and capable” members of society (Teit 1927:132). Girls were secluded in special tents and taught by their mother, grandmothers, and aunts knowledge relating to self-discipline, cooking, as well as “certain customs to insure for themselves good luck” (Teit 1927:132). “Competent young women,” as described by Brown, were proficient in cooking and “learned all the various methods of preparing fish and meat, as well as where to find and preserve the twelve common edible roots, the sixteen vegetables, and twenty two different kinds of berries” (Peltier 1982:70). After a period of several months, girls selected a new hairstyle symbolizing transition into womanhood (Walker 1978:125).

Although girls were encouraged to “vision quest,” it was the rite of passage for boys to adulthood. In order to acquire a vision, or as the Coeur d’Alene call it suumesgh, boys would go to sacred hilltops between Cataldo and St. Joe praying and fasting for several days until the guardian spirit came (Frey 2001:32). Negative emotions and sexual
desires were to be suppressed (Teit 1927:133). Guardian spirits included animals such as
the wolf, bear, deer, and eagle as well as plant, mountain, or stone entities (Palmer

According to Frey, "the character of the guardian spirit" helped in "specific
endeavors [such as] hunting, gathering, or healing," and in general, guided "the life of the
young man or woman." Recipients also received a dream name, "reflective of a
characteristic or actual name of his or her associated animal spirit" (Frey 2001:33).

Teit reported the guardian spirits gave individuals gifts, such as prophecy, the
ability to read minds, and knowing when someone was talking bad about you, (Teit
1927:133). Some individuals, by gifts from guardian spirits, became medicine men and
medicine women. Medicine men and women had heavy responsibilities besides
providing for the health and spiritual needs of the tribe. It was the medicine men’s
responsibility to repel any ghosts that brought illness or bad luck at burials. Visits from
spirits also brought illness which could only be "repelled through the prayers and songs
of a shaman" (Frey 2001:48).

Death

Unlike other tribes, Coeur d’Alene deceased individuals remained in their own
lodge for two days to be prepared for burial by relatives and friends (Walker 1978:127).
When an individual died, a messenger announced the death throughout the community.
Mourners cut their hair and were not to speak the dead person’s name.

The Coeur d’Alene buried their dead in several places. Warriors often were
buried under the campfires of their lodge to hide the sign of the burial from other tribes or
wild animals (Teit 1927:136). However, most individuals were buried in rocksides or in
Graves were circular in shape, three feet deep, with two or three peeled painted red poles, placed over the grave in a tent like formation" (Teit 1927:137).

Bodies were “tied up with cords, knees to chin, and wrapped in a robe” before being placed within their grave (Teit 1927:137). Sometimes faces were painted red as well as other parts of the body. Individuals were placed into graves in a sitting position face west. West symbolized not only “the end of the day but also the end of life” (Frey 2001:48).

Belongings were buried with individuals. Men’s belongings included pipes, medicine bundles, war bonnets, and gun, while women’s belongings included beads, thimbles, baskets, kettles, and bone needles (Peltier 1973:72). It was believed in “order to satisfy” the spirit of a deceased woman, families needed to furnish her grave with small quantities of roots and berries (Teit 1927:137). Neglecting this ritual, would cause spirits to visit root and berry patches, thus ruining crops and interfering with harvesting.

Agents of Change

The arrival of Europeans brought drastic changes to the culture, traditional subsistence patterns, and health of the Coeur d’Alene tribe. However, some aspects of tribal culture changed even before the physical presence of Europeans. One change, which brought greater mobility to the Coeur d’Alene, was the introduction of the horse.

Teit argues the introduction of the horse changed the material culture of the Coeur d’Alene more than any other tribe. (Whether Teit is referring to all Plateau tribes or to native people in general, he did not specify). It is unclear where and when the Coeur
d’Alene first obtained horses. One story states while digging camas northwest of DeSmet, a man approached on horseback.

The rider was a Kalispell Indian, who remained several days with the Coeur d’Alene. The people examined the horse closely, and wondered much at the strange animal. As the horse was gentle, many people tried to ride him; but when he trotted, they fell off, excepting one man. (Teit 1927:73)

While it is possible that the Coeur d’Alene had horses as early as 1730, the Coeur d’Alene definitely had horses by the nineteenth century (Kowrach and Connolly 1990).

The horse quickly altered subsistence and hunting patterns. Travel by waterways to fishing and root-digging grounds were eventually abandoned for the ease of open grassy stretches of land more suitable for horses. Horses also allowed Coeur d’Alene families to meet up with members of the Spokane, Nez Perce, Kootenai, and Kalispell tribes for annual buffalo hunts. Tribal members would often leave in August after harvesting principal root and berry crops, and “after the salmon had been put up,” traveling over the Bitterroots, by the Old Mission, and returning by April (Teit 1930:97). Annual buffalo hunts continued until the late 1870’s until buffalo herds had decreased almost to extinction, due to professional hunters and the presence of the railroad (Woodworth-Ney 2004:14).

Extensive travel to the Plains by horseback increased trade opportunities and contact with outsiders. The Coeur d’Alene traded camas cakes, bows and arrows, pemmican, and salmon oil with Plains tribes for items such as buffalo meat, hides, and feathers (Woodworth Ney 2004:14). Scholars speculate that contact with Plains tribes may also have lead to a smallpox epidemic in the Coeur d’Alene in the 1780’s, drastically reducing the population before contact with Lewis and Clark (Boyd 1998:472).
European Contact

In 1803, as the United States Government purchased Louisiana Territory from France, interest grew concerning the area beyond Louisiana. President Thomas Jefferson commissioned Meriweather Lewis and William Clark to lead the Corps of Discovery to find a “Northwest Passage,” connecting the Missouri River to the Columbia River (Woodworth-Ney 2004:8). While traveling back to Washington, Lewis and Clark encountered several tribes including the Coeur d’Alene. In May of 1806, Clark recorded in his journal meeting the Coeur d’Alene:

at the falls of a large river discharging itself into the Columbia and its East side to the North of the entrance of Clark [Fork] River, this river they informed us headed in a large lake in the mountains and that this falls below which they reside was at no great distance from the lake. These people are the same in their dress and appearance with the chopunnish [Nez Perce], tho’ their language is entirely different, a circumstance which I did not learn until we were about to set out and it was then too late to take a vocabulary. (Thwaites 1904:363)

Lewis and Clark never found a Northwest Passage, however, Clark’s journal and geographic maps of the Columbian Basin landscape brought increased European contact with the Coeur d’Alene through the fur trade.

Although the fur trade flourished in other parts of the United States, it only lasted a short period in the Pacific Northwest. In 1809, David Thompson built the first trading post in the Pacific Northwest called the Kullyspell House in Hope, Idaho. By 1826 the regional trading post had moved to Kettle Falls and by the 1840’s the fur trade had ended throughout the region. The extensive distance to Kettle Falls inhibited the Coeur d’Alene from any further involvement in the fur trade (Frey 2001:60).
Through the fur trade, the Coeur d’Alene gained access to many western commodities such as cooking implements, knives, and tea. It also brought a new name and hence a new identity for the Coeur d’Alene. One story states that a French fur trader became so frustrated with “the chief’s inflexible and stingy bargaining habits,” he accused the chief of having “a heart like an awl’s point” (Woodworth-Ney 2004:18). This over time was translated as Coeur d’Alene and the name was adopted throughout the fur trading community and among other Plateau tribes. One tribal member has argued that Coeur d’Alene “should be translated ‘Pointed Hearts’ to represent a forceful, strong, perceptive people” (Tolan 1980:45).

Besides a new name, the fur trade brought other implications to Coeur d’Alene society. The introduction of alcohol produced serious repercussions within some family structures. Access to guns and ammunition changed hunting techniques, and gave the Coeur d’Alene a competitive edge in conflicts with other tribes. Animals, which previously had only been used for subsidence, were now viewed only in relation to the animal’s market value, losing spiritual and social significance (Frey 2001:61). Most importantly, the presence of the fur trade inadvertently introduced European infectious diseases such as smallpox, measles, scarlet fever, whooping cough, and dysentery. By the 1830’s, the tribe’s population had been cut by more than half.

While the fur trade had given the Coeur d’Alene a reputation of being harsh and stingy, Father DeSmet described the Coeur d’Alene as “mild, affable, [and] polite in disposition” (Clark 1971:20). Exchanges between the Jesuits and the Coeur d’Alene eventually influenced the social and political structure of the Coeur d’Alene tribe. According to one scholar, “the arrival of Jesuit missionaries would ultimately mean a
conversion to the farming life, a religious divide between those who practiced traditional
spiritually and those who chose to become full adherents in the Catholic mission”
(Woodworth-Ney 2004:21). The Jesuits also introduced a form of patriarchy, which
meant that certain individuals (especially women) lost status and authority within the
tribe.

Father Pierre Jean DeSmet first encountered the Coeur d’Alene in the early
summer of 1842 while passing through the Spokane Valley to Fort Colville. Three scouts
brought him to chief Twisted Earth’s lodge, an elderly man of 104 years (Woodworth-
Ney 2004:27). Twisted Earth told DeSmet it had been almost 100 years since his father
had prophesied the coming of the Black Robe and the Coeur d’Alene would be anxious to
hear his religion (Kowrach and Connolly 1990). DeSmet spent the next three days with
the Coeur d’Alene preaching Christian beliefs and instructing the people how to pray in a
Christian manner. He baptized all the children as well as sick and older individuals
(Clark 1971:20). Before DeSmet left, he promised to send missionaries to preach to the
Coeur d’Alene and to establish a mission among them (Kowrach and Connolly 1990).

Under the direction of Father Nicolas Point, the Jesuits built the Mission of the
Sacred Heart of Jesus near the St. Joe River within a year of Father DeSmet’s first visit.
According to Seltice family history, by 1844 at least 100 families were living near the
mission (Kowrach and Connolly 1990). Unfortunately, this site proved to be
uninhabitable due to the flooding that occurred each year. Father Joseph Joset, who
replaced Father Nicolas Point as Head Father, constructed a new mission near the Coeur
d’Alene River in 1853. The mission, (better known as the Old Mission at Cataldo) was
built near a traditional village and burial site “without the use of a single nail” (Frey
2001:65). At the new mission, priests continued teaching the Coeur d’Alene Christian doctrines, as well as agricultural and animal husbandry (Frey 2001:65).

In 1876, Father Joset again desired to move the mission to a new location called Hangman’s Creek. Father Joset was concerned about the number of whites who began to trespass on Coeur d’Alene territory upon the completion of the Mullan Road. It is estimated that as many as 20,000 emigrants traveled on the Mullan Road and through Walla Walla, Washington in 1862 alone (Winther 1945). Many of these emigrants tended to stay on the land and without a reservation the Coeur d’Alene were powerless. In addition, the priests desired a location with large tracts of land if more families were to build permanent residences at the mission (Frey 2001:66).

Many Coeur d’Alene tribal members resisted moving the mission to Hangman’s Creek. Most Coeur d’Alene still lived in villages and continued a traditional mode of subsistence (Frey 2001:66). Father Diomedi, in trying to persuade the Coeur d’Alene declared:

Do you wish to die? Then remain here; live by hunting and fishing, spend your time, the Church will be in mourning. She will mourn for her children and have no comfort because they are gone. Do you wish to be a great people? Go to the beautiful land; break the sod and grow grain, plants, vegetables, and your children will live, your wives will be saved and well dressed and you will have plenty. (Frey 2001:67)

One tribal member, refuting the priest responded:

Must we leave this land where the bones of our fathers mingle with those of our children? Must we leave the woods which supplied us with fuel and game? This prairie which has fed our horses? This river which has given us trout and beaver? We are good and healthy. Our children are fat. Our wives are comfortable in our lodges and log houses. We are not like you. You need bread. We have camas. You require good clothing; we are satisfied with deer skins and buffalo robes. We can live comfortable on what you would think
poor and wretched. I know not what my fellowmen may decide but as for myself, I will stay to live and die in my native land and there will my bones be buried with those of my fathers and children’s bones. (Frey 2001:68)

Under much persuasion, the Coeur d’Alene finally consented to move the mission and by 1882, the new mission was constructed. Moving to the new mission meant traditional subsistence pursuits of camas digging, berry gathering, hunting, and fishing were largely replaced by agricultural pursuits (Frey 2001:67). The Coeur d’Alene were also forced to stop their annual buffalo hunts with the Salish.

**The Establishment of the Coeur d’Alene Reservation**

With the help of the Jesuits, the Coeur d’Alene actively petitioned the federal government for a reservation. Coeur d’Alene tribal leaders understood that without a formal treaty, white settlers would continue to seize Coeur d’Alene land. In 1855, Territorial Governor Isaac Stevens met briefly with Coeur d’Alene chiefs at the Sacred Heart Mission. Stevens explained his intentions to hold a council with the Coeur d’Alene, along with the Colville and Okanogan tribes in September to discuss reservation prospects (Richards 1979:226). Unfortunately, Stevens was not able to fulfill this promise due to the outbreak of the Yakima War.

In 1866, without the knowledge or consent of the Coeur d’Alene tribe, Idaho Territorial Governor David Ballard proposed the first reservation boundary for the Coeur d’Alene. It was to begin:

At the head of the Latah, about 6 miles about the crossing on the Lewiston trail, a road to the Spokane Bridge: thence running north-northeasternly to the St. Joseph River, the site of the old Coeur d’Alene Mission; thence west to the boundary line of Washington and Idaho territories thence south
to a point due west of the place of beginning; thence east to the place of
beginning. (Woodworth-Ney 2004:82)

With approval from Congress, President Andrew Johnson issued an Executive Order for
the reservation for the Coeur d’Alene on June 14, 1867 (Dozier 1962a:3; Figure 2). The
reservation enclosed only 20 square miles and 250,000 acres. Surprisingly, the Bureau of
Indian Affairs did not attempt to force the Coeur d’Alene to live within these boundaries.
The Coeur d’Alene later rejected this boundary, claiming it was too small and that it did
not include the Sacred Heart Mission.

In 1873, an Indian Commission comprised of John Shanks, John Montieth, and
John Bennett were sent to the Coeur d’Alene to formally establish a reservation (Dozier
1962 a:3). After several days of deliberation, an agreement was reached as to where the
new reservation would be. Reservation boundaries were to:

Begin at a point on the top of the dividing ridge between Pine and
Latah (or Hangman’s) Creek directly south to a point on said last
named creek, six miles above the point where the trail from
Lewiston to Spokane Bridge crosses said creek; thence in a
northeasternly direction in a direct line to the Coeur d’Alene
Mission, on the Coeur d’Alene River (but not to include the lands of
said mission); thence in a westerwardly direction, in a direct line, to
the point where the Spokane River heads in, or leaves the Coeur
d’Alene Lake; thence down along the center of the channel of said
Spokane River to the dividing line between the territories of Idaho
and Washington...Thence south along said dividing line to the top
of the ridge between Pine and Latah (or Hangman’s) Creek thence
along the top of said ridge to the place of beginning. (Dozier
1962a:3)

Under the agreement of 1867, the Coeur d’Alene were also to receive horses,
tools, a gristmill, a sawmill, a school, a blacksmith and $170,000 in five percent bonds to
be paid annually to the tribe. In return, the Coeur d’Alene were to surrender nearly four
million acres of their aboriginal territory (Woodworth-Ney 2004:96). Although President
Ulysses S. Grant issued an Executive Order on November 8, 1873 for the proposed reservation, Congress did not ratify the agreement. The rejection from Congress thereby forfeited any promises within the treaty yet created a reservation boundary. In turn, the Coeur d’Alene received their reservation but did not receive any compensation for the four million acres. Refusing to give up the title for the land, Chief Seltice and the Jesuit priests continued to petition the government for congressional recognition of the reservation and compensation for land illegally taken (Woodworth-Ney 2002:32).

In 1887, persuaded in part by a petition signed by the Pine Creek residents, Congress sent the Northwest Indian Commission (John Wright, Jarred Daniels, and Harry Andrews) to once more negotiate a reservation boundary (Woodworth-Ney 2002:33). The commissioners were received warmly as the “the entire male population and many women and children” filed in front of the Commission, “each one shaking hands with them and saying some kind words” (U.S. Department of the Interior 1970:36).

The commissioners in a letter to the Secretary of Interior wrote the Coeur d’Alene were “industrious, thrifty, provident and good traders” and dressed “in citizen’s dress from head to foot” (U.S. Department of the Interior 1970:50). The commissioners were furthermore impressed by the students at the Mission school, writing, “The proficiency shown by these Indian children was as great as that of any school anywhere ever visited by the commission” (U.S. Department of the Interior 1970:50). The commissioners elected to give all lands promised in the 1873 agreement and formed a new agreement in 1887.

The Coeur d’Alene consented to give all lands outside of the 1873 agreement and allow the Lower Spokane Band to be transferred to the Coeur d’Alene reservation. The
commissioners hoped that the Coeur d’Alene’s industrious nature would “influence” the Spokane (U.S. Department of the Interior 1970:51). In return, the Coeur d’Alene were to receive an additional $150,000 to construct a sawmill, a gristmill, and other improvements needed on the reservation (Woodworth-Ney 2004:138). Unfortunately, the 1887 agreement also failed to meet Congress’s approval. The Coeur d’Alene were told later the agreement had not been ratified because Congress “had not had the time to consider it yet” (U.S. Department of the Interior 1970:7). The Coeur d’Alene once again petitioned the federal government to accept the 1887 agreement. In response, Congress sent another commission in the following year composed of Benjamin Simpson, John Shupe, and Napoleon Humphrey.

The commission convened in Oregon on August 1, 1889 and arrived at DeSmet four days later. In comparison with the commission of 1887, the Coeur d’Alene met the new commission coldly, as mistrust of the government had obviously grown from previous meetings (Woodworth-Ney 2004). It was apparent from the beginning of the negotiations that tribal leadership was not going to accept any new terms unless the 1887 agreement was also included. It also was apparent that the federal government was interested in buying nonagricultural lands located in the northern part of the reservation (U.S. Department of the Interior 1970:7). This land consequently included traditional winter villages located on the Spokane and Coeur d’Alene Rivers, which several families relied on for subsistence in addition to farming (Woodworth-Ney 2002:37).
Figure 2. Proposed Coeur d'Alene Reservations 1867-1889 (Dozer 1961:3)
In his opening remarks of the council, Simpson told Chief Seltice that the 1887 agreement would be approved only if the tribe agreed to discuss the release of nonagricultural tribal lands. To this Chief Seltice replied:

We built a strong high fence with the Government; we built it round that the ends nearly met. We done our part, but the gap that was left had never been finished by the Government at Washington. Now you three friends and headmen must close up that gap. I am afraid, my friends, of that treaty, I am doubtful. If I was not doubtful there would not be hard work of this. That treaty is a wall we can not see through. When it is down we can see through and talk. (U.S. Department of the Interior 1970:7)

Apprehensively, Chief Seltice granted the commission’s request and allowed the commission to inspect the lands in the northern part of the reservation. Another council was held two weeks later to once again negotiate an agreement between the Coeur d’Alene and the government. Simpson told Seltice that his object was to select lands of no benefit to the Coeur d’Alene, but useful to whites and offered the Coeur d’Alene $2.50 an acre (Woodworth-Ney 2002).

Four days later Coeur d’Alene leaders and the commission reconvened. Seltice told the commission “there was two kinds of talk, one was strong and one was weak.” The tribe agreed to sell the land along the northern boundary of the reservation and other tracts of land the government was interested in buying (U.S. Department of the Interior 1970:9). Seltice, however, requested a higher sum of five dollars per acre. Simpson responded that Congress would never buy land for five dollars and would not agree to ratify the 1887 agreement. To this Seltice replied: “when you make your report to Washington let them say whether it is too much” (U.S. Department of the Interior 1970:11). After the council adjourned, the commission telegraphed the Secretary of the
Interior asking permission to buy the ceded lands for $500,000 (U.S. Department of the Interior 1970:11).

The council met for the fourth and final time on September 8th 1889. Seltice and another Coeur d’Alene chief, Pierre Wildshoe, wanted individuals to receive compensation for the loss of their farms on the rivers. The commissioners rejected this request explaining those individuals would have to receive compensation from the $500,000 for the ceded lands. Despite this rejection, Seltice and the other tribal leaders agreed to sign the commissioner’s proposal. Overall, the Coeur d’Alene received $150,000 in accordance with the 1887 agreement and another $500,000 for the ceded lands as stipulated in the 1889 agreement.

The establishment of the reservation in 1889 “sealed the fate” for individuals who were still living in the traditional villages and refused to move to the new reservation boundaries (Woodworth-Ney 2002:38). These individuals were not only outside the boundaries, but also beyond the protection of the tribe, the Jesuits fathers, and the Bureau of Indian Affairs. According to Woodworth-Ney (2002), these individuals disappeared from any federal documents, which may account for population decline in the 1890’s.

**Population and Disease History to 1900**

Documented resources regarding diseases and epidemics among the Coeur d’Alene tribe for the eighteenth and nineteenth centuries are scant, making it difficult to recreate an accurate population history. However, by the time the Coeur d’Alene had permanently been confined to the reservation, their population had already declined
significantly. The presence of European diseases along with conflicts with neighboring tribes and the U.S. government, contributed to depopulation.

The greatest period of depopulation occurred between first European contact and the 1850’s. In 1806, Lewis and Clark initially recorded a population of about 2,000 Coeur d’Alene, but apparently did not know about the villages at Hayden Lake or near the Coeur d’Alene River (Woodworth-Ney 2004:15). Including these villages, it is possible that there were close to 2,600 individuals within the Coeur d’Alene tribe. Through a series of European introduced epidemics and diseases, the population decreased to 640 individuals by the 1830’s (Boyd 1998:474). According to early records, the Coeur d’Alene increase their population to 700 by 1838, but by 1853 had declined to 320 individuals (Boyd 1998:474). Within 25 years after first contact, the Coeur d’Alene experienced more than 60 percent population decrease (Table 1).

Records concerning diseases and epidemics, which occurred on the Plateau during the eighteenth century, are cloudy. The Bureau of Indian Affairs did not record conditions of the Coeur d’Alene until the 1880’s as they were considered a non-treaty tribe. Consequently, even after Indian Agents did record conditions, they seldom wrote more than a paragraph. In some years, Indian Agents wrote only a few sentences about the Coeur d’Alene. Between 1853 and 1890, the population continued to fluctuate due to high mortality, as the Coeur d’Alene did not reach 500 individuals until 1893 (Palmer 1998:322). By 1900, however, the Coeur d’Alene population had again decreased to 450 individuals (Annual Report 1900:652; Figure 3).
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1780</td>
<td>Estimated 3,000-5,000</td>
</tr>
<tr>
<td>1805</td>
<td>Estimated 2,600-2,000</td>
</tr>
<tr>
<td>1853</td>
<td>320</td>
</tr>
<tr>
<td>1893</td>
<td>422</td>
</tr>
<tr>
<td>1900</td>
<td>450</td>
</tr>
<tr>
<td>1915</td>
<td>601*</td>
</tr>
<tr>
<td>1930</td>
<td>606</td>
</tr>
</tbody>
</table>

Source: Palmer 1998; BIA Censuses 1915, 1930
Note: * Includes Spokane Indians enumerated on the Coeur d'Alene reservation

A number of smallpox epidemics prevented population growth until the twentieth century. Scholars suspect that smallpox was first introduced to the Plateau tribes during the 1780's when hunters returned from the Plains (Boyd 1998:472; Dobyns 1966:441). Smallpox epidemics occurred again in 1805, 1830/1831, 1853, and again in 1870. Epidemiological studies indicate there are two types of smallpox, *variola minor* and the more lethal and commonly known smallpox, *variola major*. *Variola major* has an incubation period of 7-18 days, during which an infected person unknowingly infects everyone they encounter (Boyd 1999:293). “Virgin soil” (a population which has never been exposed to a disease) populations have a 100 percent incidence rate for every age group and fatality can reach 30 to 50 percent (Thornton, Miller, and Warren 1992:192). Death comes swiftly as the entire process from incubation to death (or immunity) takes only one month (Fenner et al. 1988). Oral history confirms high smallpox mortality that often annihilated entire villages (Frey 2001:56-59).
According to the Bureau of Indian Affairs medical records between 1889 and 1895 the Coeur d’Alene experienced measles, influenza, gonorrhea, dysentery, malaria, rheumatic fever, syphilis, bronchitis, eczema, pneumonia, tuberculosis, and typhoid fever, though not all in epidemic proportions. However, there were epidemics of measles and scarlet fever in 1888 and another epidemic of influenza and pneumonia in 1890 (Annual Report 1888:224; Annual Report 1892:494). Relatively few individuals died due to measles and scarlet fever, but at least 25 individuals succumbed to the epidemic of influenza and pneumonia (Annual Report 1892:494).

In addition to epidemic episodes, the Coeur d’Alene suffered incidences of conjunctivitis (pink eye), neuralgia, and tuberculosis. Bureau of Indian Affairs medical
records from 1889 to 1893 diagnosed at least ten percent of the population with
cconjunctivitis, and from two to five percent with neuralgia (Annual Report 1889; Annual
Although both conjunctivitis and neuralgia are not causes of mortality, continual
incidences suggest underlying poor health conditions. Conjunctivitis may inadvertently
signify the presence of gonorrhea or chlamydia in a population, while incidences of
neuralgia may signal serious disorders of diabetes, arthritis, syphilis, or malnutrition
(Papp 1999:800; Turkington 1999:2047).

Similarly, the presence of tuberculosis also indicates poor health conditions of a
community, specifically crowded and unsanitary housing and malnutrition. Physician
C.K. Smith attributed the high incidence of tuberculosis among the Coeur d’Alene to
changes in diet and the transition from teepees to houses. Smith wrote, “The great plague
of this tribe, and in fact of all Indian tribes, is tuberculosis, generally of the lungs”
(Annual Report 1893:325). Indian Agent, Rickard D. Gwydir, noted that many
individuals suffered from “consumption and scrofula more than any other disease”
(Annual Report 1887:208). Unfortunately, tuberculosis was also the main cause of
mortality, especially among children, after the formation of the reservation.

Summary

This chapter briefly described the historical setting and landscape of the Coeur
d’Alene to the twentieth century. This period was a time of rapid social, political,
economic, and religious change. Increased contact with outsiders such as fur traders and
other native peoples introduced European infectious diseases and linked the Coeur
d’Alene to a more global economy. Jesuit missionaries introduced a new religion and new subsistence patterns. Traditional subsistence patterns were gradually replaced by the planting and cultivating of foods such as oats, potatoes, and wheat. The establishment of Coeur d’Alene Reservation further confined individuals to boundaries imposed by the government and those who refused to give up traditional ways were disassociated from the tribe. Traditional dwellings replaced by dark and damp houses furthered the spread of diseases, especially tuberculosis.
CHAPTER 3

Materials and Methods

Sources of Data

Primary data for this study came from the Indian Census Rolls (The National Archives, Record Group 75), the Annual Report to the Commissioner of Indian Affairs, the Superintendent’s Annual Narrative and Statistical Reports From Field Jurisdiction of the Bureau of Indian Affairs and two U.S. Federal Censuses. These combined data sets were used to construct a historical demographic profile of the Coeur d’Alene from 1900-1930.

Indian Census Rolls

Early Indian census rolls contained the following information: 1) last census roll number 2) present census roll number 3) Indian name 4) English name 5) relationship to the head of the family (wife, son, daughter, granddaughter, grandson, niece, nephew, step-daughter, step-son, brother or sister) 6) year of birth or age at time of census 7) sex (Table 2). Later censuses included information concerning: 8) tribe(s) of individuals 9) martial status (married, widow, widower, divorced, or single) 10) blood quantum and 11) residence location. In addition, later censuses also included lists of individuals who had been born, died, or otherwise not counted within the census.
Table 2. Example of Early Indian Census

<table>
<thead>
<tr>
<th><strong>Number</strong> (last census/present census)</th>
<th>Indian Name</th>
<th>English Name</th>
<th>Relationship</th>
<th>Age</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>62/62</td>
<td>Cyp-ri-an</td>
<td>Augusta, Gabriel</td>
<td>Head</td>
<td>44</td>
<td>M</td>
</tr>
<tr>
<td>63/63</td>
<td>Qui-Quil-too</td>
<td>Augusta, Christine</td>
<td>Wife</td>
<td>37</td>
<td>F</td>
</tr>
<tr>
<td>64/64</td>
<td>Camile, Samuel</td>
<td></td>
<td>Step-Son</td>
<td>20</td>
<td>M</td>
</tr>
<tr>
<td>65/65</td>
<td>Augusta, Lucy</td>
<td></td>
<td>Daughter</td>
<td>13</td>
<td>F</td>
</tr>
<tr>
<td>66/66</td>
<td>Augusta, Mary</td>
<td></td>
<td>Daughter</td>
<td>6</td>
<td>F</td>
</tr>
<tr>
<td>67/67</td>
<td>Augusta Bertha</td>
<td></td>
<td>Daughter</td>
<td>1</td>
<td>F</td>
</tr>
</tbody>
</table>

** This number simply refers to the order in which the individual was enumerated into the census. For example, Gabriel Augusta was the 62nd individual enumerated in the previous census and was the 62nd individual enumerated within this census.
In 1884, an act of Congress stipulated that Indian agents compile and submit annual census records of native populations (Campbell 1987:20). The first census of the Coeur d'Alene occurred in 1885 and with few exceptions continued annually until 1937. Although the Coeur d'Alene reservation was established in 1889, a separate census from the Colville Agency was not taken until after the year 1905. However, even after 1905, individuals from the Spokane tribe were often enumerated with Coeur d'Alene tribal members, as census takers did not distinguish between the tribes. For this reason, demographic calculations also include the fertility and mortality rates of Spokane individuals who lived on the Coeur d'Alene reservation until 1915 when Spokane tribal members were enumerated separately from Coeur d'Alene tribal members.

**Federal Censuses**

The 1900 and 1910 federal censuses provided specific data regarding fertility, intermarriages, and migration. Specifically, federal censuses included questions on the number of children a woman had, how many children were still living, and duration of marriage. These answers were used to generate data on the mean number of own children (children who were currently living with their mother at the time of census), as well as estimating the childless rate of the Coeur d'Alene.

**Demography**

Demography is essentially, "the scientific study of human populations," which focus on six different aspects of human populations such as "size, geographic distribution, composition, population dynamics, and socioeconomic determinants and consequences of population change" (Swanson and Siegel 2004:1). To describe these
aspects within a population, demographers rely upon statistical formulas. Demographic formulas allow for comparison across space and time to measure and describe changes within a population.

While population studies of all sizes are potentially problematic, demographic studies of small populations, such as the Coeur d'Alene, are inherently so. Demographic statistics are sensitive to the number of individuals within a study so one individual in a small community can make a significant statistical difference compared to one individual in a larger population. Thus, small populations are subject to sharp fluctuations. This does not mean that small populations cannot be useful to study demographic processes; it does mean that one must evaluate the data carefully in light of these considerations.

The rest of this chapter describes the formulas and methods used to gauge population changes, fertility and mortality rates, sex ratios, and interpreting population pyramids.

**Population Change**

Demographers use two basic rates to determine changes in population size. The first rate, called the absolute change, measures size differences in the population from one year to another. It is calculated by subtracting the total population of the first year from the total population from the second year.

\[
\text{Absolute change} = \text{Total Population}^{(Year\ 2)} - \text{Total Population}^{(Year\ 1)}
\]

The second rate measures the percent the population has changed from one year to the next by dividing absolute change by the total population and multiplying the result by 100 (Perz 2004:253).
Percent change = \[
\frac{\text{Absolute change (Year } 2 - \text{Year } 1)}{\text{Total population (Year 1)}} \times 100
\]

For this study, population changes were computed in five-year periods beginning in 1900 and ending in 1930.

**Fertility**

One of the three principal foci of demography is fertility. It is often confused with fecundity, which refers to the physiological capacity of individuals to reproduce. For this study, fertility refers to the number of births that occur within a population or to “the reproductive performance of a woman, man, couple or group” (Swanson and Stephan 2004:760). Demographers generally measure a population’s fertility in reference to live births only. A live birth is defined as:

The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which after such separation, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live-born (Shryock, Siegel, and Associates 1973:389).

According to this definition, stillbirths, miscarriages, and abortions are not considered live births and were not included in census information.

**Crude Birth Rates**

There are several methods to measure the fertility performance of a population. A basic, yet descriptive formula, which demographers use to assess a population’s fertility, is the crude birth rate (CBR). The crude birth rate is useful because it demonstrates variations of fertility within the population while taking into account the size of the
population (Shryock, Siegel, and Associates 1973:7). Crude birth rates are calculated by dividing the number of births in a year, by the midyear population, multiplied by 1000 (Estee 2004).

\[
\text{CBR} = \frac{\text{Births}}{\text{Population}} \times 1000
\]

Information regarding the number of births within census years was obtained from several sources. For the year 1900, birth information came from the Annual Report of the Commissioner of Indian Affairs. However, the Annual Report of the Commissioner of Indian Affairs did not contain any information relating to the births (or deaths) for the year 1905. After the year 1911, census takers began recording death and birth dates within the census. This provided the necessary data to calculate demographic information such as fertility and mortality rates. It was also necessary to check the next census year for additional births that occurred after the census was taken. After 1924, the birth information was taken from supplementary information added at the end of census rolls. The lists named all individuals who had been born between January and December of that year. In addition, births recorded in statistical reports compiled by Indian agents were used. Statistical reports were only used as a further reference since reports often did not match birth information within the census itself.

Although a crude birth rate is statistically descriptive, it does not take into consideration the age structure of a population, nor does it describe a population’s composition. Populations with unequal age compositions may produce skewed results. For example, populations with a higher percentage of younger women within the reproductive age will most likely have higher crude birth rates because younger women produce a higher percentage of babies (McFalls 2003:7).
General Fertility Rate

Although the crude birth rate indicates population growth or decline, it is
influenced by the age structure of a population. A measure of fertility not affected by
differences in age composition is the general fertility rate (GFR). The general fertility
rate is defined as the number of births per 1000 women of childbearing age (Estee
2004:379). It is calculated by dividing the number of births, by the number of women of
childbearing age (15-44), multiplied by 1000.

\[
\text{GFR} = \frac{\text{Number of Births}}{\text{Number of Women}^{15-44}} \times 1000
\]

Child-Woman Ratio

Another measure of fertility, which can be obtained from a census, is the child-
woman ratio (CWR). The child-woman ratio is the ratio of children who are under five
years old to women of childbearing age (between 15 and 49) within a population. The
child-woman ratio is calculated by the number of children (less than five years old)
divided by the number of women of childbearing age, multiplied by 1000.

\[
\text{CWR} = \frac{\text{Number of children}^{<5 \text{years old}}}{\text{Number of women}^{15 \text{to} 49}} \times 1000
\]

Women outside childbearing ages are excluded from this ratio. This does not present a
statistical problem because women older than 49 usually have few children under the age
of five in a population (Shryock, Siegel, and Associates 1971:500).

There are several factors that influence the interpretation of this ratio as a measure
of fertility. This ratio is strongly influenced by the underenumeration of young children.
Although underenumeration may occur for any age group, young children are often
omitted from censuses. In addition, children’s ages tend to be rounded, as children under
five may mistakenly be included with children over five (Shryock, Siegel, and Associates 1973:512). Another factor that affects the interpretation of this ratio is mortality. The child-woman ratio always understates recent fertility because the rate of survival is higher for women than children (Shryock, Siegel, and Associates 1971:502).

There are, however, clear advantages associated with the child-woman ratio. It can be calculated without a special question on a census and can be used to obtain fertility statistics for small populations (Shryock, Siegel, and Associates 1971:501). The child-woman ratio can also estimate general fertility even though vital events data may be absent or considered unreliable (Swan and Campbell 1989:61).

**Age-Specific Birth Rates**

A further detailed analysis of fertility may be ascertained by calculating the age-specific birth rate (ASBR). The age-specific birth rate is defined as the number of births to women of a given age group per 1000 women in that age group (Estee 2004:380):

\[
\text{ASBR} = \frac{\text{Number of births to women in age cohort}}{\text{Number of women in age cohort}} \times 1000
\]

Cohorts are typically in five-year age groups beginning with ages 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49. The age-specific birth rate demonstrates at what ages in the population the majority reproduction takes place. Although the peak of childbearing is considered between the ages of 20 and 29, this may vary from culture to culture. Most importantly, the age-specific birth rate provides data to calculate a population's total fertility rate.

**Total Fertility Rate**

The total fertility rate (TFR) is another measure of fertility that takes into account age composition. The total fertility rate represents the total number of children a
1000 women would have, if all the women passed through their reproductive lives (McFalls 2003:6). It is computed by summing the age-specific birth rates of a population, divided by 1000, multiplying the total by five (Estee 2004:391). The rate is multiplied by five because age-specific birth rates are calculated in five-year age cohorts (15-19, 20-24 etc.).

\[
TFR = \frac{\text{Sum of Age-Specific Birth Rates} \times 5}{1000}
\]

**Mortality**

Death is another principal demographic event. The United Nations and the World Health Organization offer the following definition of death: “Death is the permanent disappearance of all evidence of life at any time after birth has taken place” (Shryock, Siegel, and Associates 1973:389). By this definition, death can only be understood in relation to the occurrence of a live birth. For this reason, fetal deaths such as stillbirths, miscarriages, or abortions are not viewed as “live births” and thus are not included in mortality statistics.

**Crude Death Rates**

The most common measure of mortality is the crude death rate (McGehee 2004). The crude death rate (CDR) is calculated by the number of deaths within a year, divided by the mid-year population, multiplied by 1000.

\[
CDR = \frac{\text{Deaths in year}}{\text{Total population}} \times 1000
\]

McFalls (2003:10) notes that crude death rates are more affected by age structure than by the total health of a population. Therefore, it is common for death rates to be higher in developed countries than in less developed countries. Developed countries have a larger
proportion of individuals who live to an age where most deaths occur naturally (McFalls 2003:10). Individuals in less developed countries tend to die at earlier ages.

In this study, crude death rates were calculated from a variety of sources. For earlier censuses, death rates were calculated from information in the Annual Report of the Commissioner of Indian Affairs. For the 1910 census, death rates were calculated from cemetery records and from the 1911 census. Crude death rates for censuses 1915, 1920 and 1925 were computed based on names of individuals who had been crossed off the censuses indicating they had died at some point within the year. To complete crude death rates for the 1930 census, supplemental information concerning deaths at the end of census were used. The supplemental lists contained information pertaining to an individual’s full name, date of death, sex, age at death, cause of death, tribal information, and degree of blood. In addition, tribal cemetery records were used to check and verify data where possible (Shane and Shane 1987).

Most censuses also included a statistical report filed by the superintendent of the Coeur d’Alene reservation. The statistical reports contained information on the number of births and deaths, used as further references in calculating fertility and mortality rates. However, statistical reports of births and deaths numbers often did not match the number of births and deaths counted within the censuses. Birth and death discrepancies might have occurred because different individuals were compiling demographic information on the Coeur d’Alene reservation at different times of the year. It is also possible that census takers relied solely on information given by Coeur d’Alene individuals while those who compiled statistical reports relied solely on official documentation from medical personnel.
Idaho state death certificates were used to examine causes of death among the Coeur d’Alene from 1911-1930. Earlier death records were not available since Idaho did not record births or deaths prior to 1911. Information recorded in death records were provided by family members, doctors, Indian agents, and coroners (Trafzer 1997:68). There are several missing certificates in comparison to death records from cemetery or census records.

**Age-Specific Death Rates**

As previously noted, age is the most important variable in terms of mortality. One way to measure variation in mortality by age, is to calculate the age-specific death rate (ASDR). Age-specific death rates are calculated by dividing the number of deaths of individuals of a given age, during a year per 1000 of the mid-year population at that age.

\[
\text{ASDR} = \frac{\text{Deaths (by age)}}{\text{Population (by age)}} \times 1000
\]

Demographers usually compute these rates in ten year age groups (5-14, 15-24, 25-34 etc.) except for age groups under one and from ages one to four, due to the high mortality rate of these younger ages (McGehee 2004:273). There are a certain number of deficiencies associated with age-specific death rates namely misreporting of age at the time of death, absent age information, and the frequent occurrence of under-registration of deaths especially for infants (Shryock, Siegel, and Associates 1971:397).

**Infant Mortality Rate**

Another age-specific death rate that can be calculated is the infant mortality rate, sometimes called the conventional infant mortality rate (IMR). Unlike other death rates, such as the crude death rate, it is not affected by the age composition of a population.
The infant mortality rate is found by dividing the number of infant deaths (children under 12 months of age) per year by the number of live births in a year multiplied by 1000.

\[ \text{IMR} = \frac{\text{Deaths of infants}}{\text{Live Births}} \times 1000 \]

The infant mortality rate serves as an approximation for the chances of death between birth and a child’s first birthday (Shryock, Siegel, and Associates 1971:410). Whipple (1960) has called the infant mortality rate “the most sensitive index of social welfare and of sanitary improvements which we possess” thus indicating the level of health in a community (Wrong 1977; McGehee 2004:284).

**Migration**

Migration is considered the third demographic event, besides fertility and mortality that affects population changes (Edmonston and Michalowski 2004). Demographers define migration as mobility across a relevant political or administrative boundary (Morrison, Thomas, and Swanson 2004:493). Migration is important to the study of demography because unlike fertility and mortality it is not essential to the survival of a population (Wrong 1977:93).

For this study, however, only fertility and mortality were studied in relation to population change. Fertility and mortality statistics were complied for the entire population of the Coeur d’Alene tribe, including those who were not residing on the reservation. Residential differences were not distinguished until later censuses, as Indian agents did not record the number of individuals coming or leaving the reservation. In addition, there are no specific questions on censuses regarding migration history or birthplaces of individuals.
Sex Ratio

One way demographers can determine a population’s composition is the sex ratio. The sex ratio measures the gender balance in a society. The sex ratio is expressed by the number of males in a population divided by the number of females in a population multiplied by 100.

\[
\text{Sex ratio} = \frac{\text{Number of males}}{\text{Number of females}} \times 100
\]

A sex ratio of 100 indicates an equal number of males and females within a population. A sex ratio above 100 denotes an excess of males in a population and a sex ratio below 100 indicates an excess of females in the population (Hobbs 2004:136). However, a sex ratio of 105 is considered balanced because males have slightly higher mortality than females.

From the sex ratio, one can determine if members of one sex suffer excess morality (Hull 1990:63). Although there are usually a higher number of males in a population than females, higher male mortality causes the sex ratio to decrease slowly over time. Events such as migration, epidemics, and war may account for sex ratios that deviate considerably from 100, such as below 90 or above 105 (Hobbs 2004:136).

Population Structure

Age is the most important variable in the study of mortality and fertility (Shryock, Siegel, and Associates 1971:201). To demonstrate effectively age-sex composition of the Coeur d’Alene reservation from 1900 to 1930, population pyramids were constructed.
The pyramid form consists of rectangular bars, which represent age groups in ascending order from the lowest to the highest, stacked horizontally on one another. Bars on the left represent the number of males in a population, while the bars on the right, represent the number of females in the population. Ages in five-year cohorts are located to the far right of the pyramid.

Demographers typically tabulate data into five year age groups (0-4, 5-9, 10-14, etc.) to help eliminate statistical bias from age heaping, misreporting of ages, and inconsistencies in age registration (Presnell 2000:42; Swan and Campbell 1989). Individuals older than the age 85 were left in open-ended age groups. Separate age groups beyond this point would convey very little information due to the small number of individuals within this cohort. It would also cause the upper section of the pyramid to have an elongated needlelike form (Shryock, Siegel, and Associates 1971).

Lengths of bars reflect the fertility, mortality, and migration patterns in a population (Pressat 1972:272). Irregular variations in the lengths of bars reflect past fluctuations in the numbers of births, migrations, or mortality from war or epidemics (Hobbs 2004:169; Pressat 1972).

According to Newman and Matzke (1984), there are three general profiles of population pyramids. The expansive pyramid has a broad base with each succeeding rectangle length getting smaller as the cohorts gets older. The broad base and narrowing of the pyramid suggests a combination of high birth and death rates (Hobbs 2004). This type of pyramid is often associated with developing countries. The constrictive pyramid is similar in shape to the expansive pyramid but has a smaller base. The smaller base is a result from a recent drop in births. This pyramid is associated with countries just
beginning the demographic transition of lower birth and death rates. The third type of pyramid is called a stationary pyramid. Each age cohort is nearly equal (with the exception of the older age cohorts getting smaller due to offset of death) giving the appearance of a beehive or barrel-shape. This pyramid is typical of the industrial world and suggests patterns of low fertility and mortality.
CHAPTER 4

Results

The previous chapter described various demographic rates and ratios used to evaluate changes in the population structure and size of the Coeur d’Alene tribe 1900-1930. Demographic changes link together patterns of underdevelopment, diseases, and illnesses and are manifested through differences within the population structure (Choong 1992:12). This chapter specifically illustrates the fertility, mortality, sex ratios, and population structures changes and the extent the Coeur d’Alene tribe was successful in adapting to a new environment confined to the reservation.

Population Change

As discussed in Chapter 2, the Coeur d’Alene experienced drastic population decline in the nineteenth century due to high mortality caused by diseases. However, by 1930 mortality had declined enabling the population to grow 32 percent (Table 3 and Figure 4). This is an increase of 156 more individuals in the Coeur d’Alene tribe. The highest amount of growth occurred between 1905 and 1910 with a population increase of 28 percent and an absolute change of 139. The population dropped between 1910 and 1915, and 1920 to 1925, but stabilized by 1930 with 606 individuals.
The accelerated rise in population from 1905 to 1910 is most likely due to the enumeration of Spokane Indians in Coeur d’Alene censuses. Census takers did not differentiate between Coeur d’Alene and Spokane tribal members until the 1915 census which also explains a population decline from 1915-1920. The 1910 Annual Report to the Commissioner of Indians Affairs states a population of 537 Coeur d’Alene and 96 Spokane. With the adjusted number of 537, population change from 1905 to 1910 has only an absolute change of 103 and percent change of 20.85. Similarly, the population drop from 1920 to 1925 is also likely due to census takers only enumerating Coeur d’Alene enrolled individuals, rather than a fertility decline as crude birth rates actually increased from 1920 to 1925 (Table 4).
Crude Birth Rates

Crude birth rates for the Coeur d’Alene are illustrated in Table 4. The highest birth rate occurred in 1900 at 75.55. The lowest birth rate occurred in 1915 with a rate of 33.27. The average birth rate between 1900 and 1930 was 47.85. This average is almost twice in comparison to other Idaho natives and the United States general population at this time (Meriam et al. 1928:200).

Underenumeration of individuals and especially of infants occurred in each census with the exception of 1930. For example, although only 16 births were recorded in 1900 BIA census, 18 additional births of children born in that year were found in later censuses. Colville agency physician, E.J. Thomas, stated as native women did not ask for medical assistance during childbirth, he had to rely upon families reporting births to him.
later (Annual Report 1894:316). If families failed to report infant’s births it can be concluded that they also failed, perhaps more so, to report infant’s deaths to the reservation doctor. The Coeur d’Alene had beliefs that it was bad luck to discuss or mention the dead (see Chapter 2).

Table 4. Coeur d’Alene Crude Birth Rates, 1900-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Crude Birth Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>75.55</td>
</tr>
<tr>
<td>1905</td>
<td>54.66</td>
</tr>
<tr>
<td>1910</td>
<td>47.39</td>
</tr>
<tr>
<td>1915</td>
<td>33.27</td>
</tr>
<tr>
<td>1920</td>
<td>40.78</td>
</tr>
<tr>
<td>1925</td>
<td>45.37</td>
</tr>
<tr>
<td>1930</td>
<td>37.95</td>
</tr>
</tbody>
</table>

Table 5 shows not only the number of births that occurred within each of the study years, but also the distribution of females and males. According to Table 5, there were 87 female births to 85 male births. The number of female deaths also outnumbered male mortality during the study years by a margin of 75 to 57 (Table 11).

Table 5. Coeur d’Alene Births, 1900-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Births</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>34</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>1905</td>
<td>27</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>1910</td>
<td>30</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>1915</td>
<td>20</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>1920</td>
<td>25</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>1925</td>
<td>27</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>1930</td>
<td>23</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Annual Report 1900; BIA Censuses 1900, 1905, 1910, 1920, 1925, 1930
Children Ever Born and Childless Percentages

According to the 1900 U.S. federal census, Coeur d’Alene women (age 45 and older) had an average of 7.42 children ever born. However, the average number of living or own children among Coeur d’Alene women was 1.92, indicating not only high fertility, but also high mortality to the year 1900. According to the 1910 U.S. federal census, Coeur d’Alene women had an average of 4.25 children ever born with an average of 2.53 own children, signifying a decline in both fertility and mortality within ten years.

Despite having high birth rates, Coeur d’Alene women also demonstrated a high childless rate. From data collected from the 1900 federal census, women age 45 and older had a childless rate of 11.6 percent. While it is possible a high infertility rate did exist among Coeur d’Alene women, it is equally possible that many women refused to give the correct number of children born to them in fear of attracting ghosts (see Chapter 2). In contrast, data collected from the 1910 federal census indicated a much lower childless rate of 2.8 percent. According to Frank (1983:138) a three percent childless rate is common within developing populations.

Child-Woman Ratios

The child-woman ratios results are shown in Table 6. The child-woman ratio reached its peak in 1905 at 796 children per 1,000 women of childbearing age. From 1910, the ratio dropped reaching its lowest point in 1925 at 413 but rose again in 1930 to 577. The average child-woman ratio for the Coeur d’Alene reservation from years 1900-1930 was 622.29 children per 1,000 women. Shoemaker found the child-woman ratio for the Native American population in the United States remained about 750 until 1940 (Shoemaker 1999:12).
Table 6. Coeur d'Alene Child-to-Woman Ratios, 1900-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Child-Woman Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>707.54</td>
</tr>
<tr>
<td>1905</td>
<td>796.12</td>
</tr>
<tr>
<td>1910</td>
<td>716.31</td>
</tr>
<tr>
<td>1915</td>
<td>521.73</td>
</tr>
<tr>
<td>1920</td>
<td>627.90</td>
</tr>
<tr>
<td>1925</td>
<td>413.43</td>
</tr>
<tr>
<td>1930</td>
<td>577.77</td>
</tr>
</tbody>
</table>

General Fertility Rates

Overall, the year 1900 had the highest general fertility rate of 273.58 children per 1,000 women (Table 7). The year 1900 also had the highest birth rate. 1915 had the lowest general fertility rate of only 144.92, almost 50 percent of the general fertility rate of 1900. The average general fertility rate within the study period was 213.78 children per 1,000 women.

Table 7. General Fertility Rates, 1900-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>General Fertility Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>273.58</td>
</tr>
<tr>
<td>1905</td>
<td>262.14</td>
</tr>
<tr>
<td>1910</td>
<td>205.67</td>
</tr>
<tr>
<td>1915</td>
<td>144.92</td>
</tr>
<tr>
<td>1920</td>
<td>193.37</td>
</tr>
<tr>
<td>1925</td>
<td>203.00</td>
</tr>
<tr>
<td>1930</td>
<td>170.37</td>
</tr>
</tbody>
</table>
Age-Specific Birth Rates

Table 8 and Figure 5 show the age-specific birth rates for Coeur d'Alene women 1900-1930. Women who were non-Indian or had died (or for another reason was absent from the family) before the census was taken, were not enumerated in the census, thus accounting for missing data for censuses years 1900 and 1905. Non-Indian women and women belonging to other tribes, names were often listed in the census, but age or other information was not included. As no information was recorded for Coeur d'Alene women who were missing between censuses, it is assumed these women had died before the next census was taken.

For the year 1900, at least one woman in each cohort produced a child. Women in the 35-39 age cohort produced the greatest number of children with a 386.42 age-specific birth rate followed by women with the 25-29 age cohort of a age-specific birth rate of 352.94. Women in the 45-49 cohort produced a 83.33 birth rate, the highest birth rate of any year studied for that cohort.

The highest age-specific birth rates within the study period occurred in 1905. The 30-34 cohort had a birth rate of 555.55 children per 1,000 women. This may be misleading since there were only nine women in this age group and five of them gave birth to children in this year. Ironically, the second highest birth rate was in the next cohort of women ages 35-39 who had a birth rate of 538.46 children per 1,000 women. There were 13 women in this age group and seven of them bore children within the year.

In 1910, the 20-24 cohort produced the most children at a birth rate of 350 children per 1,000 women. Women in the 30-34 cohort made up the second largest age-specific birth rate. The 40-44 cohort produced the highest birth rate of 277.78 among
<table>
<thead>
<tr>
<th></th>
<th>1900*</th>
<th>1905*</th>
<th>1910</th>
<th>1915</th>
<th>1920</th>
<th>1925</th>
<th>1930</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>100</td>
<td>176.47</td>
<td>29</td>
<td>129.03</td>
<td>31</td>
<td>34.48</td>
<td>29</td>
<td>200</td>
</tr>
<tr>
<td>20-24</td>
<td>263.15</td>
<td>285.71</td>
<td>23</td>
<td>350</td>
<td>20</td>
<td>296.29</td>
<td>27</td>
<td>269.23</td>
</tr>
<tr>
<td>25-29</td>
<td>352.94</td>
<td>238.09</td>
<td>29</td>
<td>173.91</td>
<td>23</td>
<td>266.66</td>
<td>15</td>
<td>346.15</td>
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<tr>
<td>30-34</td>
<td>350</td>
<td>555.55</td>
<td>30</td>
<td>300</td>
<td>20</td>
<td>230.76</td>
<td>13</td>
<td>230.76</td>
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<tr>
<td>35-39</td>
<td>368.42</td>
<td>538.46</td>
<td>30</td>
<td>142.85</td>
<td>14</td>
<td>43.47</td>
<td>23</td>
<td>181.81</td>
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<td>40-44</td>
<td>90.9</td>
<td>142.85</td>
<td>30</td>
<td>277.78</td>
<td>18</td>
<td>230.76</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>45-49</td>
<td>83.33</td>
<td>0</td>
<td>30</td>
<td>66.66</td>
<td>15</td>
<td>0</td>
<td>18</td>
<td>0</td>
</tr>
</tbody>
</table>

**Source:** BIA censuses 1900, 1905, 1910, 1915, 1920, 1925, 1930

**Note:** n = the number of women in that cohort

* = missing the age of at least one mother
women in that cohort for the entire study period. Theoretically, these women could also be part of the 35-39 cohort of 1905 which produced a birth rate of 538.46. One woman age 45 had a child, making it only the second time recorded in 30 years that a woman in the 44-49 cohort to produce a child.

The year 1915 had the second lowest age-specific birth rates for the study period. This is to be expected since 1915 had the lowest crude birth rates and the lowest total fertility rate. Women in the 20-24 cohort had the highest age-specific birth rate in 1915 with 296.29 children per 1,000 women. The 15-19 cohort produced the lowest birth rate within the study of 34.48.

![Figure 5. Age-Specific Birth Rates 1900 and 1930](image)

Source: Table 8

In 1920, only women between the ages of 16 and 37 produced children in this year. Women in the 25-29 cohort had the highest age-specific birth rate of 346.15
children per 1,000 women. Women between the ages of 35-39 had the lowest birth rate of 181.81 children per 1,000 women.

Women between the ages of 25 and 29 had the greatest number of children within this cohort of any year in 1925. Women in the 15-19 cohort also had the greatest number of children within their cohort of any year. The 20-24 cohort had the lowest age-specific birth rate of 238.09 of that cohort of any year.

The highest age-specific birth rates among cohorts occurred within women between the ages of 25 and 29. The peak childbearing years are considered to be between the ages of 20 and 29 (Estee 2004:380). However, peak childbearing years for Coeur d’Alene women, range later between the ages of 25 to 34.

On average, the 15-19 cohort displayed the smallest age-specific birth rates (besides the 45-49 cohort of any year). This is most likely because young women did not marry or have children until late in their teens such as 18 or 19 years old. According to the 1910 federal census, 19.5 was the average age at which Coeur d’Alene women were married.

Total Fertility Rates

Total fertility rates for the Coeur d’Alene were calculated from the age-specific birth rates (see Table 9). The highest fertility rate was in 1905 with 7.46 children per woman followed closely with a total fertility rate of 7.29 recorded in 1900. Shoemaker (1999) found similar total fertility rates among the Seneca, Cherokee, Red Lake, Yakama, and Navajo tribes for the year 1900. In comparison, whites were found to have a total fertility rate of 5.5 (Shoemaker 1999:47). The total fertility rate for the Coeur d’Alene dropped to its lowest at 4.90 children per woman in the year 1930. According to
Shoemaker, a total fertility rate between five and seven is average for women in “non-industrial, pre-demographic-transition societies” while a total fertility rate below five is considered low (Shoemaker 1999:44).

**Table 9. Total Fertility Rates, 1900-1930**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Fertility Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>7.29</td>
</tr>
<tr>
<td>1905</td>
<td>7.46</td>
</tr>
<tr>
<td>1910</td>
<td>6.45</td>
</tr>
<tr>
<td>1915</td>
<td>5.00</td>
</tr>
<tr>
<td>1920</td>
<td>6.14</td>
</tr>
<tr>
<td>1925</td>
<td>6.11</td>
</tr>
<tr>
<td>1930</td>
<td>4.90</td>
</tr>
</tbody>
</table>

**Mortality**

Crude Death Rates

Table 10 shows the crude death rates for the Coeur d’Alene 1900-1930. In 1905, as there was no number of deaths recorded in the *Annual Reports to the Commissioner of Indian Affairs*, data was obtained from cemetery records (Shane and Shane 1987). The highest death rate occurred in the year 1900 at 104.44. This is most likely due to a smallpox epidemic that began in 1899 and ended in the spring of 1900. The average crude death rate for the Coeur d’Alene 1900-1930 was 44.55.

In comparison, the crude death rate for Idaho natives was 35.8, while for the United States (1930) the crude death rate was drastically lower at 11.3 (Meriam et al. 1928:200; Wrong 1977:34). According to Wrong (1977:35), crude rates over 20 indicate “especially poor health and living conditions” and areas with rates over 40 resemble
eighteenth century Western Europe. The crude death rate for the Coeur d’Alene did not go below 20 until the 1930’s, demonstrating improved living and health conditions. However, the death rate is still higher than other populations in the United States.

<table>
<thead>
<tr>
<th>Year</th>
<th>Crude Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>104.44</td>
</tr>
<tr>
<td>1905</td>
<td>22.26</td>
</tr>
<tr>
<td>1910</td>
<td>44.23</td>
</tr>
<tr>
<td>1915</td>
<td>44.92</td>
</tr>
<tr>
<td>1920</td>
<td>35.88</td>
</tr>
<tr>
<td>1925</td>
<td>40.33</td>
</tr>
<tr>
<td>1930</td>
<td>19.80</td>
</tr>
</tbody>
</table>

Table 11 shows the distribution of deaths among males and females. For 1900, there were no records concerning either the age or gender of individuals who had died. In the following years, there were 75 females to 53 male deaths in the population. Newell (1988) suggests malnourishment and maternity are two risk factors that contribute to higher female mortality in less developed areas. Women may also have higher mortality because they are usually the caretakers of the ill, which further spreads disease and illness within a community.

Table 11 also illustrates the age distribution of deaths that occurred in the census years of the study. Almost 35 percent of all deaths recorded from 1910 to 1930 were of children age five or younger. In the year 1915, 48 percent of deaths that occurred belonged to children five years and younger. Other Idaho natives experienced similar high death rates. Lewis Meriam reported that 35.9 percent of deaths were of children under the age of three among Idaho Indians (Meriam et al. 1928:200).
Table 11. Coeur d’Alene Deaths, 1900-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
<th>Males</th>
<th>Females</th>
<th>&lt;5 YRS</th>
<th>Older than 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>47</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1905</td>
<td>11</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1910</td>
<td>28</td>
<td>12</td>
<td>16</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>1915</td>
<td>27</td>
<td>8</td>
<td>19</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>1920</td>
<td>22</td>
<td>11</td>
<td>11</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>1925</td>
<td>24</td>
<td>13</td>
<td>12</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>1930</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Annual Report 1900; Shane and Shane 1987; BIA Narrative Reports 1916, 1925, 1930
Note: -- Statistical information missing from Annual Report of the Commissioner of Indian Affairs.

Infant Mortality Rate

The year 1915 had the highest infant mortality rate at 550.00. This is nearly triple the rate recorded in other years and five times higher than the average U.S. infant mortality rate of 95.7 (Meckel 1990:238). The lowest mortality rate occurred in 1930 with a rate of 86.95.

Table 12. Coeur d’Alene Infant Mortality Rates, 1910-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Infant Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910</td>
<td>200.00</td>
</tr>
<tr>
<td>1915</td>
<td>550.00</td>
</tr>
<tr>
<td>1920</td>
<td>200.00</td>
</tr>
<tr>
<td>1925</td>
<td>185.18</td>
</tr>
<tr>
<td>1930</td>
<td>86.95</td>
</tr>
</tbody>
</table>

Age-Specific Death Rates

The age-specific death rates are shown in Table 13 and Figure 6 for the Coeur d’Alene from 1910 to 1930. No data was available for years 1900 and 1905. Overall, the
highest age-specific death rates occurred within children younger than one year and
adults who were 75 years and older. Individuals between the ages of 25-34 experienced
the lowest death rate of any age group having a rate of zero, four out of the five years
studied. The lowest death rate recorded for any year (besides zero) was 2.7 in 1910 for
ages 15 to 24.

The year 1915 proved to have the highest death rates of any year within the study
period. Surprisingly though, there were no deaths recorded for individuals between the
ages of 25 and 44. The highest age-specific death rates recorded for infants were 370.37
deaths per 1,000. This is expected since 1915 also had the highest infant morality rate of
any census year studied. Ironically, 1915 also had the lowest birth rate of any year of the
study period.

Table 13. Age-Specific Death Rates, 1910-1930

<table>
<thead>
<tr>
<th>Age</th>
<th>1910</th>
<th>1915</th>
<th>1920</th>
<th>1925</th>
<th>1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 1</td>
<td>120.00</td>
<td>370.37</td>
<td>160.00</td>
<td>148.14</td>
<td>76.92</td>
</tr>
<tr>
<td>Under 5</td>
<td>158.73</td>
<td>194.44</td>
<td>100.00</td>
<td>171.42</td>
<td>29.41</td>
</tr>
<tr>
<td>1-4</td>
<td>62.50</td>
<td>17.86</td>
<td>33.33</td>
<td>57.14</td>
<td>0</td>
</tr>
<tr>
<td>5-14</td>
<td>36.76</td>
<td>46.51</td>
<td>7.29</td>
<td>0</td>
<td>16.12</td>
</tr>
<tr>
<td>15-24</td>
<td>2.7</td>
<td>25.00</td>
<td>32.60</td>
<td>10.10</td>
<td>0</td>
</tr>
<tr>
<td>25-34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>39.21</td>
<td>0</td>
</tr>
<tr>
<td>35-44</td>
<td>49.18</td>
<td>0</td>
<td>15.62</td>
<td>0</td>
<td>29.85</td>
</tr>
<tr>
<td>45-54</td>
<td>0</td>
<td>18.18</td>
<td>19.60</td>
<td>17.85</td>
<td>20.83</td>
</tr>
<tr>
<td>55-64</td>
<td>0</td>
<td>34.48</td>
<td>0</td>
<td>66.66</td>
<td>23.25</td>
</tr>
<tr>
<td>65-74</td>
<td>54.05</td>
<td>24.39</td>
<td>83.33</td>
<td>90.90</td>
<td>210.52</td>
</tr>
<tr>
<td>75 and-over</td>
<td>187.50</td>
<td>166.66</td>
<td>181.81</td>
<td>208.33</td>
<td>38.46</td>
</tr>
</tbody>
</table>

*Note: Missing data for 1900 and 1905*

In 1920, deaths of children under five declined and for children between five and
14. However, deaths of children between the ages of one and four increased by 50
percent from 1915. No deaths occurred for individuals between the ages of 25 and 34, while the highest death rates occurred for individuals 75 years and older.

In the year 1925, children under five years of age experienced higher death rates than in 1920. However, age-specific death rates for children under one declined from 1920. No deaths were reported for children ages five to 14 and for adults aged 35 to 44. Adults 75 years and older had the highest death rate of 208.33 within this age cohort of any census year.

![Graph showing age-specific death rates](image)

*Source:* Table 13

**Figure 6. Age-Specific Death Rates, 1910 and 1930**

The year 1930 had the lowest age-specific death rates of the study period. According to census records, children one to four and individuals 15-34 did not experience any deaths. Children under five experienced a drastic decrease of deaths from 1925. While infants’ death rates declined by 1930, infant mortality was still higher than national averages. Adults within the 65-74 cohort had the highest death rate within this year.
Death Certificates

Information taken from death certificates from years 1911-1930 revealed the five frequent killers of the Coeur d’Alene were tuberculosis, pneumonia, influenza, meningitis, and accidents. Several certificates were marked “unknown” or “no physician present” leaving many certificates with no identifiable cause of death. This holds true especially for infants. Other certificates listed symptoms of illnesses such as “cough,” “fever,” or “cold” as the cause of death. Fevers or coughs may be associated with many illnesses making it difficult to determine the true cause of death. In addition, not all death certificates could be read due to poor microfilm quality.

Tuberculosis was the most frequent killer of the Coeur d’Alene (37 percent). Tuberculosis is an infectious disease caused by *Mycobacterium*. It spreads easily from individual to individual in aerosolized droplets of mucus expelled through coughing, sneezing, laughing, or singing (Starke 1993:332). Symptoms include “coughing, difficulty in breathing, weakness and lethargy, loss of appetite and weight, hoarseness and loss of voice pitch control, chills, night sweats, irritability, female amenorrhea and male impotence,” and fever (Roberts and Buikstra 2003:20).

Malnutrition, overcrowded populations, unsanitary housing conditions and poverty in general are linked to a high prevalence of tuberculosis within a population. Studies have also found other conditions of susceptibility to tuberculosis include personal crises, economic and occupation change, and changes in residential environments, such as moving from a rural to an urban community (Kark 1974:264).

Although it is typical in many populations for men to outnumber women in tuberculosis infections, the opposite was true for the Coeur d’Alene. According to death
certificates, there were reported at least 50 females to 43 males that died from tuberculosis. There are many suggestions why gender differences in tuberculosis infections and deaths occur in different populations. One group of scholars suggest tuberculosis rates of infection progress faster in women of reproductive age than for men of the same age group (Holmes, Hausler, and Nunn 1998:96). Hudelson (1996:393) suggests gender differences exist because of the sexual division of labor, and cultural patterns of socialization.

The second main cause of death was pneumonia (20 percent). Pneumonia, like tuberculosis, was common to reservations. “Poor housing, inadequate diets, lack of public health and sanitation, and insufficient medicine and medical staff” contributed to the spread of infections (Trafzer 1997:97).

Pneumonia is a serious infection that inflames the lungs. It is caused by bacteria, viruses, and in some cases, fungi (Carson-DeWitt 1999:2290). There are generally two types of pneumonia, lobar pneumonia and bronchopneumonia. Lobar pneumonia is characterized by one or more infections in the major lobes of the lungs. Bronchopneumonia is a result of a bacteria infection spreading from the upper respiratory tract to the lower respiratory tract. Individuals with pneumonia suffer from coughing, chills, fevers, and chest pain (Carson-DeWitt 1999:2290, 2292).

Although pneumonia was the second leading cause of death among adults, it was the main cause of death of infants. Almost 40 percent of infant’s certificates reported pneumonia as the primary cause of death and 28 percent of children under five died from pneumonia.
Influenza was the third leading cause of death (7 percent) on the Coeur d'Alene reservation 1911-1930. Influenza is an airborne disease that spreads through coughs or sneezes from an infected individual. Entering the body through the upper respiratory system such as the mouth or the nose, influenza then enters into the lungs (Trafzer 1997:103). After one to four days, an infected individual may experience chills, fever, headache, malaise, backache, sneezing, and coughing (Davenport 1981:389). Fatality rates for influenza are less than one percent (Barnes 2005). However, the weakened condition of the body, can lead to complications. The most common complication resulting from influenza is pneumonia. Individual who develop viral pneumonia from influenza suffer high fever, anxiety, will cough up bloody sputum, have difficulty breathing and will eventually turn blue. Death occurs usually from five to ten days later (Barnes 2005:339).
The fourth cause of death was meningitis from 1911-1930 (4.5 percent). Meningitis is caused by the airborne bacteria *Neisseria meningitides*, which inflames the meninges "the three layers of protective membranes that line the spinal cord and the brain" (World of Health 2000:750). Individuals who have meningitis often suffer severe headaches, neck stiffness, fevers, and vomiting. Meningitis has a fatality rate of 15 percent, particularly affecting infants and adults over sixty. All Coeur d’Alene individuals who died from meningitis were children under the age of eight. Although meningitis can be treated with antibiotics and vaccines, penicillin was not discovered until 1928 and was not readily available on the reservations (Trafzer 1997:150).

Deaths from accidents made up the fifth (4 percent) most frequent killer among the Coeur d’Alene from 1911-1930. Accidental deaths occurred from poisoning, drowning, falls, gunshots, skull fractures, and automobiles accidents. Deaths from accidents remain one of the leading causes of deaths of native peoples within the United States (Young 1994).

**Sex Ratio**

Table 14 shows the sex ratios for the Coeur d’Alene Reservation from 1900-1930. In each census year, with the exception of 1900 and 1920, there are more males in the population than females. Sex ratios for years 1905, 1915, and 1925 remained relatively the same with ratios of 101.63, 101.67 and 101.69 males per 100 females. The year 1930 came closest to an equal sex ratio of 100 with only two more males in the population than females. The lowest sex ratio recorded was in 1900 at 96.50 females per 100 males.
The Native American sex ratio has been over 100 every decade until 1970 (Thornton 1987:174). It is difficult to ascertain why the sex ratio began at 96.50 in the year 1900. It is possible that males suffered a higher mortality rate due to the smallpox epidemic of 1899-1900. The sex ratio of 99.00 in 1920 is due to young men enlisting in the military in the previous year (BIA Narrative Report 1919).

**Table 14. Coeur d’Alene Sex Ratios, 1900-1930**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Pop</th>
<th># Females</th>
<th># Males</th>
<th>Sex Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>450</td>
<td>229</td>
<td>221</td>
<td>96.50</td>
</tr>
<tr>
<td>1905</td>
<td>494</td>
<td>245</td>
<td>249</td>
<td>101.63</td>
</tr>
<tr>
<td>1910</td>
<td>633</td>
<td>316</td>
<td>317</td>
<td>100.31</td>
</tr>
<tr>
<td>1915</td>
<td>601</td>
<td>298</td>
<td>303</td>
<td>101.67</td>
</tr>
<tr>
<td>1920</td>
<td>613</td>
<td>308</td>
<td>305</td>
<td>99.02</td>
</tr>
<tr>
<td>1925</td>
<td>595</td>
<td>295</td>
<td>300</td>
<td>101.69</td>
</tr>
<tr>
<td>1930</td>
<td>606</td>
<td>302</td>
<td>304</td>
<td>100.66</td>
</tr>
</tbody>
</table>

*Source: BIA Censuses 1900, 1905, 1910, 1915, 1920, 1925, 1930*

**Morbidity**

Morbidity refers to the incidence of disease or illness within a population (Swanson and Stephan 2004). Unlike mortality, there is not an overall measure for morbidity. Morbidity is difficult to evaluate because infected individuals within a population may not necessarily die. Furthermore, it is difficult to examine all the incidences of diseases and illnesses on the Coeur d’Alene Reservation due to the incompleteness of medical records and the absence of a full time physician.

Although the Coeur d’Alene suffered from many diseases and epidemics, tuberculosis and trachoma were the most evident among the Coeur d’Alene during the study period. Superintendent Bryon Sharp described tuberculosis “as the greatest enemy” of the Coeur d’Alene (BIA Narrative Report 1915). Similarly, Lewis Meriam reported in
the 1920’s, that tuberculosis was among the foremost diseases among native peoples in the United States, infecting native peoples ten times more than the rest of the population (Trafzer 2001a:88). Native Americans were also four times as likely to die from this disease (Benson 2001:54).

Table 15 shows the number of individuals found to have tuberculosis between the years 1912 and 1930. The highest number of individuals who had tuberculosis occurred in 1915. Table 15 also shows the estimated number of individuals that the physician expected to have tuberculosis. It is likely these numbers included children as well.

The 1925 physician’s report estimated that at least ten percent of the population was infected with tuberculosis (BIA Narrative Report 1925). Although ten percent is extremely high, it is possible actual infection rates were higher because tuberculosis is difficult to diagnose. According to Barbara Gutmann Rosenkrantiz, “Not even a well-trained physician would diagnose [tuberculosis] without an X-ray or other procedures to distinguish between the coughs, sputum, and breath-sounds that different pulmonary diseases have in common” (Trafzer 1997:94).

Another common condition on the Coeur d’Alene reservation was trachoma. Trachoma is an eye infection caused by the bacteria Chlamydia trachomatis. Although trachoma is not fatal, if left untreated causes extensive scaring and blindness. In fact, trachoma is the world’s second leading cause of blindness (Alexander and Harrison 1977:159).
Table 15. Tuberculosis and Trachoma
Numbers for the Coeur d'Alene, 1912-1930

<table>
<thead>
<tr>
<th>Year</th>
<th>Number with Tuberculosis</th>
<th>Number with Trachoma</th>
<th>Estimated with Tuberculosis</th>
<th>Estimated with Trachoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>1912</td>
<td>12</td>
<td>7</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>1914</td>
<td>49</td>
<td>15</td>
<td>69</td>
<td>20</td>
</tr>
<tr>
<td>1915</td>
<td>59</td>
<td>15</td>
<td>77</td>
<td>15</td>
</tr>
<tr>
<td>1916</td>
<td>37</td>
<td>8</td>
<td>66</td>
<td>8</td>
</tr>
<tr>
<td>1917</td>
<td>34</td>
<td>52</td>
<td>66</td>
<td>52</td>
</tr>
<tr>
<td>1918</td>
<td>31</td>
<td>52</td>
<td>31</td>
<td>52</td>
</tr>
<tr>
<td>1919</td>
<td>20</td>
<td>57</td>
<td>69</td>
<td>73</td>
</tr>
<tr>
<td>1920</td>
<td>20</td>
<td>57</td>
<td>69</td>
<td>73</td>
</tr>
<tr>
<td>1921</td>
<td>20</td>
<td>57</td>
<td>69</td>
<td>72</td>
</tr>
<tr>
<td>1922</td>
<td>26</td>
<td>27</td>
<td>60</td>
<td>58</td>
</tr>
<tr>
<td>1925</td>
<td>26</td>
<td>24</td>
<td>60</td>
<td>58</td>
</tr>
<tr>
<td>1926</td>
<td>26</td>
<td>27</td>
<td>60</td>
<td>58</td>
</tr>
<tr>
<td>1927</td>
<td>15</td>
<td>55</td>
<td>15</td>
<td>200</td>
</tr>
<tr>
<td>1928</td>
<td>11</td>
<td>54</td>
<td>No estimates</td>
<td>No estimates</td>
</tr>
<tr>
<td>1929</td>
<td>15</td>
<td>19</td>
<td>No estimates</td>
<td>No estimates</td>
</tr>
<tr>
<td>1930</td>
<td>47</td>
<td>41</td>
<td>47</td>
<td>41</td>
</tr>
</tbody>
</table>

Source: Annual Reports 1912-1919—BIA Narrative Reports 1920-1930
Note: Missing data for 1913, 1923, and 1924

Trachoma has an incubation period of about a week in which an infected individual experiences sensitivity to light, pain, tearing, and swollen eyelids. If not treated promptly:

tiny reddish clumps of blood vessels form in the conjunctiva, the clear layer of tissue lining the inside of the eyelids and the surface of the white of the eye. As time progresses, granular follicles, filled with debris and discharge also develop in the conjunctiva and on the tarsus, a cartilage like plate of tissue that lies between the conjunctiva and the eye muscle, which gives the eye its shape. (Benson 2001:55)

Trachoma spreads easily through hand to eye contact, and through sharing toiletry items such as towels or handkerchiefs (Frey 1999:2887). Other factors that increased infection rates include a dry environment, overcrowded housing conditions, and poverty.
Studies conducted on reservations in the 1920’s, revealed trachoma infection rates of 25 to 50 percent (Benson 2001:54). Children are the most prone to trachoma with a possible 100 percent infection rate by the second or third year in life (Alexander and Harrison 1977:165). Superintendent Sharp estimated an infection rate of eight percent (BIA Narrative Report 1925).

Table 15 demonstrates the number of individuals and estimated number of individuals with trachoma from 1912 to 1930. Trachoma infections rates increased by more than 50 percent during this study. The highest number of infections occurred between 1917 and 1920. Table 15 also shows the sex distribution of trachoma. Based on the available data, there were little differences of infections between men and women. However, women did outnumber men slightly. This is to be expected since women are typically the caretakers of those who are ill (Alexander and Harrison 1977:167).

**Population Pyramids**

One advantage to population pyramids is that they can be used to estimate a population’s vital rates from changes in the age-sex composition of a population (Campbell 1987:161). To illustrate changes in the Coeur d’Alene age-sex structure, seven population pyramids were constructed using BIA censuses (Figures 8-14).

The 1900 age-sex population pyramid (Figure 8) reveals an irregular pyramid or an expansive type pyramid (see Chapter 3). Irregular shaped pyramids are common in small populations that have high fertility “and simple stochastic fluctuations in births, deaths, and migrations,” produce eccentricities (Campbell 1987:161). The large base of the pyramid indicates a high fertility, which is consistent to the crude birth rate of that
year (see Table 4). The ten to 14 cohort shows a significant decrease of males and females from the five to nine cohort. The pyramid also shows a considerable indexation of women in the 15-19 and 25-29 age cohorts. This either shows a higher mortality for women in these age groups or the extent of women who married into other tribes. Peculiarly, there were more women in the 40-44 cohort than any adult male or female cohort.

The 1905 population pyramid (Figure 9) indicates population growth, especially in the younger population. Although fertility dropped, the Coeur d'Alene population increased by almost ten percent or by 44 individuals (sees Table 3). This suggests a decline in mortality. The 30-34 rectangle shows a considerable indexation of females as there are very few women in this cohort. While there are few women over the age of 60, there are no men over the age of 79.

The 1910 Coeur d’Alene population remained consistent to the population pyramid of 1905 (Figure 9). The zero to four cohort is smaller than the five to nine cohort signifying a decline in fertility. There are more older individuals in the 1910 population than the 1905 population for both men and women. The 45-49 cohort of males is indented, as well for women in the 30 to 34 cohort.

The irregular age-sex structure continued in the 1915 population pyramid (Figure 11). This pyramid indicates a smaller population from the previous pyramid. Not only did fertility decline in this year, but mortality remained high, stunting any considerable population growth. Infants mortality rates were the highest of any year studied with the majority of deaths being female. In fact, 70 percent of all deaths that occurred in 1915 were female. However, the 35-39 women’s cohort significantly outnumbered men of the
Figure 8. Coeur d’Alene Age-Sex Population Structure, 1900

Source: BIA Census 1900
Figure 9. Coeur d’Alene Age-Sex Population Structure, 1905

Source: BIA Census 1905
Figure 10. Coeur d’Alene Age-Sex Population Structure, 1910

Source: BIA Census 1910
same cohort. Consequently, there are few older women in the population of 1915 with no women being older than 79.

Although there were several epidemics of diseases and illnesses between the years 1915 and 1920, the population recovered quickly. The base of the 1920 population pyramid is very broad as an indication of increased fertility and lowered mortality (Figure 12). In addition, ages between five and 14 have broad bases that point to a larger younger population than in 1915. There were also more females in the population than males, making it only the second times in the study period that females outnumbered males. There are very few women with the age cohorts of 30-39 and 45 to 49 compared to the number of men within these same cohorts. There are a significant number of women in the 40-44 age group compared to the number of men.

The population pyramid of 1925 reveals a very small population of children between the ages of zero and four (Figure 13). The largest population among females was ages five to nine and the largest male cohort was the age group 30-34. There is a significant decrease of males and females after the 30-34 age cohort. Little is known what occurred between 1920 and 1925 to explain the decrease in population for two reasons. 1) There was not a physician on the reservation that recorded any medical records, which might also explain the increase of mortality. 2) There are no narrative reports for the Coeur d’Alene from 1921-1925. In addition, there are few death certificates recorded on a state level to explain further the population structure of 1925.

The age-sex population pyramid of 1930 indicates significant growth from the 1925 population pyramid (Figure 14). The base of the pyramid is broad indicating a rise in fertility from 1925. There are more males in the zero to four cohort but more females
Figure 11. Coeur d'Alene Age-Sex Population Structure, 1915

Source: BIA Census 1915
Figure 12. Coeur d’Alene Age-Sex Population Structure, 1920

Source: BIA Census 1920
in the five to 14 cohorts. By the year 1930, mortality had declined drastically within all ages groups except for ages 65-74 (see Table 13). The 65-69 cohort for women is excessively indented.

Summary

This chapter revealed the changes in fertility, mortality, and morbidity that affected the Coeur d’Alene the beginning of the twentieth century. As evident from this chapter, the Coeur d’Alene experienced high fertility with an average crude birth rate of 47.85. Age-specific birth rates indicate that women in older cohorts were having the majority of the babies. The Coeur d’Alene also experienced high mortality through 1900-1930. Tuberculosis, a disease resulting from overcrowded, stressed, and malnourished conditions was the number one killer of Coeur d’Alene individuals. Age-specific death rates indicate that mortality was especially high for infants and for children, which resulted in relatively slow population growth for thirty years. Furthermore, the Coeur d’Alene had high infection rates of tuberculosis and trachoma that indicate poor heath conditions on the reservation.
Figure 13. Coeur d'Alene Age-Sex Population Structure, 1925
Figure 14. Coeur d'Alene Age-Sex Population Structure, 1930

Source: BIA Census 1930
CHAPTER 5

Discussion

As evidence in Chapter 4 suggests, the Coeur d’Alene experienced considerable demographic changes on the reservation between 1900 and 1930. Particularly affected were fertility and mortality in relation to the presence of diseases and illnesses. Other factors that affected the Coeur d’Alene demographically were the physical and social structure of the reservation, the lack of trained medical staff and adequate facilities, and the passing of the Dawes Severalty Act of 1887 that contributed to economic devastation.

Similar to other tribes, a major adjustment to the social, cultural, and ultimately health conditions of the Coeur d’Alene was the transition from traditional lodges to reservation houses. Historically, Coeur d’Alene lodges were well ventilated, spacious, and clean. Lodges were mobile and easily moved from place to place during spring-fall seasonal rounds. In contrast, reservation houses were built close together, small in size, and poorly ventilated (BIA Narrative Report 1918). Toilet facilities were placed directly against either the home or only a few feet away (BIA Narrative Report 1929).

Due to poor structural conditions of houses and the lack of knowledge of keeping them clean, houses soon became an epicenter for disease and illness. One of the most deadly diseases suffered by the Coeur d’Alene was tuberculosis. This disease spread rapidly through homes via coughing and spitting, “through sharing cups, glasses, knives,
forks, spoons, blankets, pipes, quilts, and clothing that had been contaminated with sputum filled with tubercle bacilli” (Trazfer 1997:128). Diseases also spread throughout the community by visitations from infected relatives and friends. It was not understood that visits from infected friends and relatives further spread diseases to homes or that ill families continued to spread diseases and illnesses to visitors (BIA Narrative Report 1929).

Mission schools in addition served as epicenters for diseases and illnesses. Outbreaks of smallpox, diphtheria, and influenza forced the mission schools to close on several occasions. Fortunately, these outbreaks resulted in relatively few deaths. However, overcrowded conditions caused diseases such as tuberculosis and trachoma to become common among Coeur d’Alene children. Superintendent Bryon Sharp wrote that there were a high number of tubercular children on the reservation (Narrative Report 1928). “There are a number of tubercular children on the reservation who should be placed in some tubercular sanatorium but I have not been successful in inducing the parents of any these children to enroll them at the Fort Lapwai Sanatorium although this Sanatorium is only a short distance from this reservation” (BIA Narrative Report 1929). Sharp wrote the following year, “As a result of these children remaining at home, several deaths have occurred during the past year and in all probability there have been added infections” (BIA Narrative Report 1930).

Due to how easily trachoma spreads, Superintendent Sharp also noted a high incidence among children at school.

A number of cases of trachoma were located in the Catholic Mission Schools and while it is advisable to isolate these cases and send them to their homes if necessary, this action has not been taken for the reason that if sent to their homes they would get only occasional
treatment and the conditions would grow worse and it is not possible with the conditions at the school to keep them isolated there, so that these cases have been kept in the school and have been constant treatments there and it is believed that the condition has materially improved. (BIA Narrative Report 1929)

Sharp wrote a year later in 1930, “The trachoma situation on this reservation is not alarming although there should be some definite plan to take these cases and give proper treatment where needed” (BIA Narrative Report 1930).

Diseases and illnesses similarly affected infants resulting in high infant morality. According to Mauser and Bahn (1974:188) high infant mortality rates indicate not only “unmet health needs” but “unfavorable environmental factors.” In addition, death certificates and other sources indicate respiratory ailments such as tuberculosis, pneumonia, and influenza, were the leading causes of death for infants between 1911 and 1930. Trazfer (2001b) found similar results of high infant mortality and respiratory ailments as leading causes of death among the native infants of the Yakima Tribe in Washington.

Additionally, high infant mortality was due to changes in nursing practices (BIA Narrative Report 1926). According to Diamond (1932), it was common for native mothers to nurse children for extensive periods of time. “The total absence of milk, except what the mother herself could provide and the absence of cereal among all but the agricultural tribes, lengthened the period of lactation because no infant could under the age of three years could assimilate a diet solely of meat and fish” (Diamond 1932:51). However, at some point in time, Coeur d’Alene mothers stopped nursing their babies in favor of cow’s milk.

The mothers rarely nurse their babies but immediately after birth place them on the bottle. As the homes are not always kept in a
sanitary condition and also as there are no suitable places in which to keep food supplies, the babies are fed sour and unclean milk or spoiled and unclean foods. (BIA Narrative Report 1929)

While sour or unclean milk did not directly cause infant deaths, babies can become sick because they do not have the capacity to process cow’s milk. African studies confirm switching from breast to cow’s milk causes a high rate of diarrhea in infants. An infant’s ability to recovery depended on the level of nutrition within the community. For example, infants from well-nourished communities suffered short bouts of diarrhea, but then recovered quickly. While infants from malnourished communities remained ill for several days (Kark 1974:252). Thus, malnutrition caused babies to become more susceptible to illnesses and diseases.

High infant mortality can profoundly influence fertility. As the survival of infants increases birth intervals between children, infant mortality shortens intervals between children (Romaniuk 1981:165). Fear of not having any surviving children might have further promoted fertility. This resulted in women giving birth “to underweight babies, increasing the risk of both infant and childhood mortality. Therefore, a perpetual cycle of high fertility coupled with high infant mortality would result in reproductively stressed women and children at high risk of illness and dying” (Campbell 1991:355). The pattern was also consistent among the Coeur d’Alene.

As infant mortality was high on most reservations, the federal government designed a program to decrease infant mortality. The Bureau of Indian Affairs and The Children’s Bureau organized a national campaign called “Save the Babies.” This program was designed to lower infant mortality on reservations by specifically targeting Indian mothers. The Commissioner of Indian Affairs, Cato Sells, produced several
pamphlets such as “Indian Mothers-Save Your Babies” and “Indian Babies-How to Keep Them Well,” which were distributed by field matrons and nurses (Hyer 2001:79). This program apparently had some success when it initially began on the Coeur d’Alene reservation in 1916, but overall was not successful in lowering infant mortality.

The government’s attempt to lower mortality rates among infants on the Coeur d’Alene reservation was circumvented by an absence of medical personnel and facilities. Health care on the Coeur d'Alene reservation was unsatisfactory. During the early 1900’s, the physician lived 150 miles away. In addition to serving the health needs of the Coeur d’Alene, the physician was also assigned to various other tribes within the states of Idaho and Washington. This created a patient to doctor ratio of 3,000:1 (Annual Report: 1900). The distance that the physician had to travel often proved problematic. For example, in 1900 many Coeur d’Alene tribal members died during a smallpox epidemic before the physician even had the chance to travel to the reservation to administer medical care (Annual Report: 1900).

By the year 1910, a full-time physician was located at the Jesuit Mission on the reservation. The distance at which the physician was required to travel and the lack of transportation often prohibited Coeur d’Alene tribal members with adequate health care, as several families lived 25 miles or more from the mission (BIA Narrative Report 1910).

High turnovers for physicians, field matrons and other medical personnel were common on the reservations (Choong 1992). For the Coeur d’Alene reservation, there was no physician available for the years 1921-1923. At least by the year 1925, a physician was contracted from the town of Topeka Washington to provide health care for the Coeur d’Alene. Dr. J. A. Nelson visited the Sacred Heart Mission once a week on
Sundays, providing treatments only to tribal members who attended Mass. Weekly visits did little to improve health conditions. Superintendent Sharp wrote that the health of the Coeur d’Alene would not improve “except through the close application on the part of the physician and close follow-up work within in many cases must be done in order to achieve satisfactory results” (BIA Narrative Report 1927). Although Dr. Nelson had a genuine concern for the Coeur d’Alene, time did not allow him to provide adequate health service (BIA Narrative Report 1930).

Economic conditions also influenced the demographic processes and health conditions of the Coeur d’Alene reservation. Besides the establishment of the reservation, another major shift in the economic development of the Coeur d’Alene was the 1887 Dawes Severalty Act or General Allotment Act. The Dawes Severalty Act had two purposes. One purpose was to destroy the political, social, and cultural traditions of native peoples. The other purpose was to secure millions of acres of Indian land for white settlement (Dozier 1962b:146). The federal government hoped that by farming small tracts of land (between 40 to 160 acres) native peoples would assimilate into white culture faster. Land was to be held in trust by the government for 25 years to prevent any selling of land. It was believed time was needed to educate native people concerning the proper uses and value of their lands (Cotroneo and Dozier 1974:405). Remaining lands after allotment were sold to the highest bidder often without any compensation to tribes.

Although the reservation was created after the Dawes Act, the government honored the Coeur d’Alene agreement of 1889. As agreed upon, the government paid $650,000 for ceded lands in 15 payments of $8,000 per year, with a portion of the money was used to build schools and mills (Cotroneo and Dozier 1974:408). Monies from
ceded lands, (individuals were given $1,000) also allowed individuals to build new homes as well as purchase farm implements and stock animals. Believing the reservation was now secure from further incursion, the Coeur d’Alene continued farming, ensuring the survival of the tribe and the reservation.

By the end of the nineteenth century, the Coeur d’Alene produced large quantities of hay, wheat, oats, and potatoes (Cotroneo and Dozier 1974:407). Indian Agents reported an increase from 8,000 to 100,000 bushels of wheat from 1892 to 1896 (Annual Report 1892, 1896). Farmers not only produced enough food to feed the tribe, but also shipped surplus food to local towns for extra income. From extra income, families built two homes, one on the farm, and the other in the town of DeSmet (Frey 2001:75).

The Coeur d’Alene tribe’s success in farming was short lived as federal engineers began surveying the land in 1905 for allotments in accordance to the Dawes Severalty Act (U.S. Statutes at Large, 33 Stat. 211). In protest of the allotment, Chief Peter Moctelme led a delegation to Washington in 1908. The Commissioner of Indian Affairs informed Moctelme that he was powerless to stop the allotment and that it was fortunate the Coeur d’Alene individuals to be receiving the maximum amount of 160 acres. Frustrated, Moctelme visited, William Heyburn, the Senator of Idaho. Disappointed, Heyburn told Moctelme that it was useless to fight the allotment (Cotroneo and Dozier 1974:410). Returning home to prepare his people, Moctelme discovered that allotment has already begun in his absence.

By 1909, 638 individuals (541 Coeur d’Alene and 97 Spokane Indians) had been allotted on 104,076.53 acres of land. While most allotments were on good farmland, several allotments ended in forested and mountainous areas of the reservation, only
allowing a few acres for farming (Palmer 1998; Frey 2001). Successful individuals who
had been productively farming large tracts of land lost most of their land through the
passing the Dawes Severalty Act. William Sams, the Agent issuing allotments, forbade
any Coeur d’Alene individual from choosing allotments near lake or riverfront acreage
(Woodworth-Ney 1996:313). Although waterway rights had been retained within the
1889 agreement, this prevented individuals from using the reservation waterways for
traditional subsidence needs or for any transport need items to surrounding communities
for market. In addition, there is evidence to suggest that the Coeur d’Alene tribe received
a small income from private companies who wished to use the waterways (Woodworth-

Even before the Coeur d’Alene reservation had finished being allotted, President
William H. Taft ordered all the non-mineral and unreserved land on the reservation
opened to white settlement (Dozier 1962b). Homesteaders had to apply for ownership
through a lottery. Approximately 104,416 individuals applied for land on the Coeur
d’Alene reservation between July 15th and August 5th of 1909. Only 1,350 individuals
were chosen in the lottery to receive 219,767 acres of the Coeur d’Alene reservation
(Cotroneo and Dozier 1974:413).

In 1906, Congress removed the requirement that allotted lands had to be held in
trust for 25 years. In addition, the Secretary of Interior granted authority to award land
patents to Indians considered “competent” (U.S. Statutes at Large, 34 Stat. 182). Indian
agents were to determine competency as Congress did not provide a definition.
Superintendent Morton Colgrove wrote he considered “competent” Coeur d’Alene to be
over 21 years of age, English speaking, educated, “able-bodied, and mentally stable”
(BIA Narrative Report 1913). However, no full blood’s applications for fee patents were approved until after the year 1915.

By the year 1913, 31 Coeur d’Alene individuals had applied for 5,021.49 acres in fee patents of land and by 1920, 197 additional fee patients applications existed for a total of 31,080.97 acres (U.S. Interior Department Report 1913:212; U.S. Interior Department Report 1919: 171). Most allotted land passed from Indian ownership within a short period of time. While a majority of tribal members outright sold their allotment, many individuals sold land to pay debts. By 1921, only four individuals continued to work and own their perspective allotments.

Fortunately, not all families sold their allotments but leased their land to white farmers. By 1919, 230 allotments totaling 33,230 acres were leased to non-tribal members and by 1933, the number of acres leased rose to 45,120 acres (U.S. Interior Department Report 1919:119; Cotroneo and Dozier 1974:417). The policy of allotment did not end until 1934 with the passing of the Indian Reorganization Act. By 1934, the Dawes Act had reduced tribal holdings 80 percent the 1889 reservation agreement to 62,400.64 acres.

As land holdings became smaller, individuals and families were not able to support themselves economically as they once had. However, according to Ray Brinkman (email to author, May 17, 2006), despite the establishment of the reservation and allotment, “several Coeur d’Alene families continued to regularly hunt and pick berries and dig roots and gather all kinds of plant materials in the old places, even outside of the reservation, long into the 1940s.” Yet, poor economic conditions, coupled with the lack of adequate medical personal, and overcrowded and unsanitary housing conditions,
individuals became highly susceptible to infections and death. As one scholar has said, “Not unlike the consequence of the buffalo’s demise on the Plains for the tribes of that region, with the loss of land came a loss of access to fishing, root gathering, and game hunting, the Schitsu’umsh (Coeur d’Alene) entered an era of devastating poverty and dependency on the U.S. government” (Frey 2001:96-97).

**Conclusion**

Despite the limitations of a small sample size, there are clear advantages of demographic studies on a community level. Community level studies are important to understanding the “context of contemporary patterns of illness, disease, and death” as well as the historical roots of why those patterns exist (Moffat and Herring 1999: 1823). This study examined the health conditions using demographic rates among the Coeur d’Alene during the early reservation period. From 1900 to 1930, the Coeur d’Alene tribe was in a process of recovering from drastic population decline caused primarily by European infectious diseases during the nineteenth century. Although the Coeur d’Alene had high fertility, high mortality stunted any significant population growth in the early part of the twentieth century. Other social factors such as unsanitary and crowded living conditions and the lack of access to direct health care also contributed to poor health conditions. Moreover, the Dawes Act forced the removal of many families from traditional villages, further severing the link between culture and subsistence (Frey 2001:95).

However, any efforts on the part of the federal government to control diseases and illnesses, the Coeur d’Alene reservation became a host for several infectious diseases.
Unfavorable living conditions and little knowledge concerning proper sanitation lead to high incidences of respiratory conditions such as tuberculosis, pneumonia, and influenza among Coeur d’Alene tribal members, particularly affecting children and infants. Diseases and illnesses become more than biological expressions of pathogenic agents but a manifestation of the political and social conditions present on the Coeur d’Alene reservation.
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