

ENVIRONMENTAL IMPACT OF THE EURO-AMERICAN EMIGRATION
THROUGH SOUTHWESTERN IDAHO (1840-1862):
EFFECT ON NATIVE LIFEWAYS

by
Garrett G. Webb

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of the thesis submitted by

Garrett G. Webb

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The following individuals read and discussed the thesis submitted by student Garrett G. Webb, and they evaluated his presentation and response to questions during the final oral examination. They found that the student passed the final oral examination.

Christopher L. Hill, Ph.D. Chair, Supervisory Committee

Mark G. Plew, Ph.D. Member, Supervisory Committee

Margaret A. Streeter, Ph.D. Member, Supervisory Committee

The final reading approval of the thesis was granted by Christopher L. Hill, Ph.D., Chair of the Supervisory Committee. The thesis was approved for the Graduate College by John R. Pelton, Ph.D., Dean of the Graduate College.

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ABSTRACT

It has traditionally been held by historians that during the period of Euro-American emigration that preceded settlement of southwestern Idaho in 1863, environmental degradation stemming from emigrants undermined native lifeways and incited conflict between the two cultures. The quantitative nature of the emigration, potential ecological impacts, and the historical perspective all suggest that such claims cannot be substantiated. Overall, the negative effect upon native lifeways may have been significantly less than what is maintained by the current historical paradigm. Instead, conditions of mutual interdependence that existed during the fur trade (1811-1840 A.D.) likely persisted throughout the period of emigration. It was not until Euro-American agro-pastoralists settled within southwestern Idaho that their land-use practices precipitated widespread intercultural conflict.

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CHAPTER ONE: INTRODUCTION

The mass westward migration of Euro-American agro-pastoralists was one of the salient events of the 19th century. Beginning with Columbus' landing in the New World, this migration furthered the continental subjugation of native inhabitants in North America (Zinn 1980: 1-22). It was a period of intensified intercultural contact in the West; however, it should not be automatically assumed that wherever such interaction took place, immediate degradation of environment and subversion of native lifeways resulted. While migration acts as a mechanism of cultural change (Richerson and Boyd 2008) that typically sees hunter-gatherers conforming to agro-pastoralists to facilitate mutualism (Spielmann and Eder 1994: 307), the spatio-temporal idiosyncrasies of each region along routes of Euro-American passage should first be evaluated before concluding that emigrants caused only strife for indigenous hunter-gatherer populations. One such region that suggests emigrant-indigenous interests did not always stand in opposition but rather in alignment during emigration is southwestern Idaho.

In southwestern Idaho, Euro-American contact with native inhabitants was defined by transitory emigrant traffic for over 20 years until settlement took place. Between 1840 and 1862 it is estimated that over 53,000 emigrants and accompanying livestock utilized the physiographically expedient Western Snake River Plain en route to western Oregon territory (Unruh 1982: Tab. 1, Tab. 2). As depicted in *Figure 1.1*, Euro-American routes of passage were constrained to the relatively flat topographic areas of

the Western Plain. The main course of the Oregon Trail, which spanned the entirety of southern Idaho for nearly 400 miles (Hutchison and Jones 1993: 12), crossed the Snake River at Three Island Crossing and proceeded through the region that presently contains the modern city of Boise. The North and South Alternates offered emigrants options to the means by which they crossed the region. Both rejoined the main trail corridor at different western localities.

The seasonal passage of emigrants and livestock between 1840 and 1862 influenced the local environment within the trail corridor prior to Euro-American settlement. Whether native inhabitants perceived this as deleteriously affecting their subsistence economy and undoing native lifeways is unknown due to a paucity of verifiable evidence. Contemporary historical works (e.g., Ericson 1994: 86-87; Neitzel 1998: 75-80) that focus upon the region, however, state that resources were “severely degraded” and that “environmental degradation” exasperated cross-cultural relations,

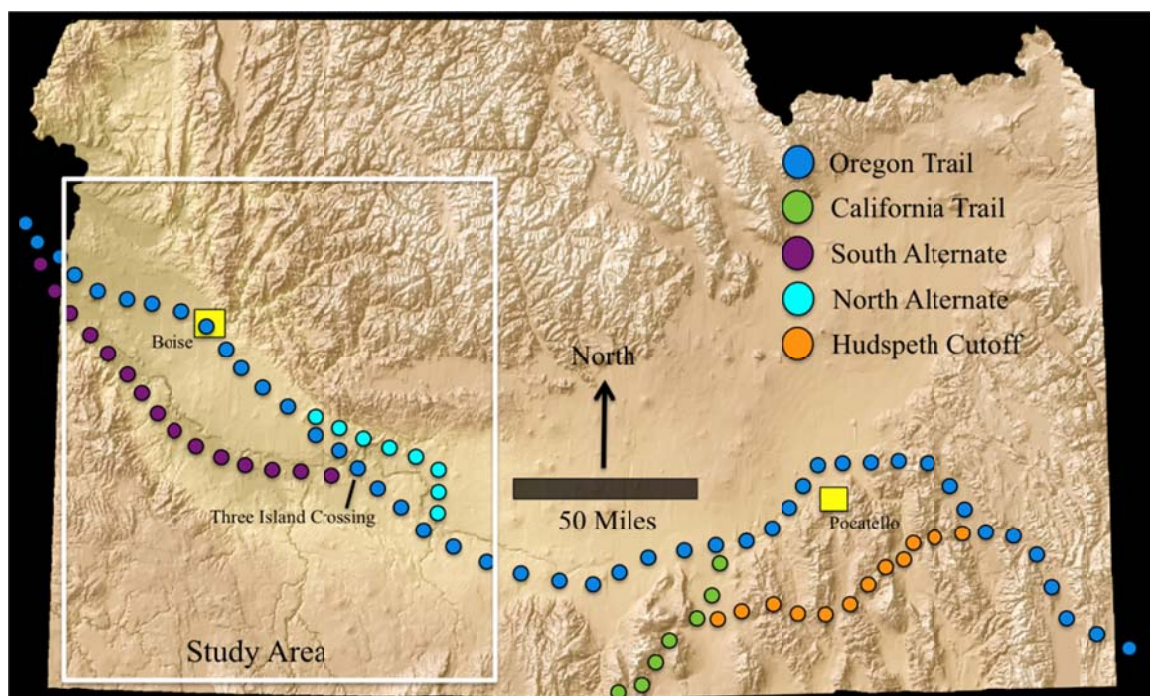


Figure 1.1 Emigrant Trails through Southern Idaho Prior to Settlement

creating conflicts over territory and resources before settlement occurred. Ericson (1994: 87) goes as far as saying that by 1853 competition over resources between the two cultures became an “undeclared war.”

Due to the narrow temporal window being discussed, the information pertaining to the natural setting, native lifeways, and the periods of indirect and direct contact creates a contextual framework from which inferences can be generated that address claims of environmental degradation and subsequent disruptions of native lifeways. By employing such a framework, one can pursue the following questions: What was the actual environmental impact of emigrating Euro-Americans in southwestern Idaho prior to settlement, and how did it affect native lifeways? A critical discussion concerning the nature of the emigration, the possible ecological impacts resulting from emigrants, and the prevailing historical perspective suggests that claims by historians cannot be substantiated. Overall, the negative effect upon native lifeways may have been significantly less than what is maintained by the current historical paradigm. Until the settlement of southwestern Idaho by Euro-American agro-pastoralists and the resulting land-use conflicts, conditions of mutual interdependence that developed during the fur trade likely persisted throughout emigration.

Numerous types of information were synthesized to facilitate a discussion of this topic. Historical literature pertaining to the region was reviewed. Primary Euro-American historical materials (i.e., diaries, journals, newspapers, photos, early census data) provided invaluable spatio-temporal insight into human-environment interactions within the region. Since ethnographic-historic works of the mid-20th century have greatly influenced the modern perception of native lifeways, a review of that material was a

necessity. Available information from the archaeological record of the Late Archaic (2,000-250 B.P.) leading to the Protohistoric (250 B.P.-Historic period) was also utilized. The cumulative amount of information provided by these sources was then used in conjunction with an environmental-anthropological perspective to construct inferences.

The anthropological significance of this study is twofold. First, it provides an example of the relationship between the biophysical environment and humanity. This interaction is reflected in the diversity of human decisions that constitute evolving socio-economic systems within a continually changing environment. The transforming environment, however, is partially a result of activities from the socio-economic system itself. Second, this study investigates conditions that promote relationships of cooperation and conflict between groups with different adaptive strategies. Cross-cultural interaction within southwestern Idaho between groups of Euro-Americans and local aboriginal inhabitants provides examples of how, why, and when cooperation can exist or breakdown within a shared environmental matrix.

CHAPTER TWO: NATURAL SETTING

A description of the natural environment of the Snake River Plain is a fundamental starting point in framing the discussion regarding whether or not emigrating Euro-Americans disrupted native subsistence and lifeways within southwestern Idaho by causing environmental degradation. The Snake River Plain is a physiographically and climatically diverse region that contains a wide variety of floral and faunal resources available for human exploitation. While hydrographically separate from the Great Basin since it discharges into the Pacific Ocean, it is ecologically part of the region (Gleason and Cronquist 1964: 375).

This setting acted as the backdrop for all human land-use practices within the region, placing constraints on the adaptive responses of indigenous populations and Euro-Americans alike. Native lifeways prior to direct Euro-American influence largely arose out of a multiplicity of responses to geologic, climatic, pedological, floral and faunal conditions within the region. During direct Euro-American contact within southwestern Idaho, these same environmental conditions affected indigenous development and the varied forms of Euro-American activities.

Environmental factors influenced the manner in which the distinct objectives of fur trappers, emigrants, and settlers were carried out. During these phases of direct cross-cultural interaction, Euro-Americans exploited different niches within southwestern Idaho that supported the indigenous economy. An overview of environmental conditions

thus provides a way of evaluating how, why, and when Euro-American activities within the region could have precipitated intercultural conflict and led to the breakdown of a functionally interdependent relationship.

Geology

The Snake River Plain is a late Cenozoic tectonic component in the North American crust that is composed of unique western and eastern parts, both of which are framed by mountains and highlands to the north and south (Malde 1991: 251). It is approximately 22 to 62 miles wide and 380 miles long (Malde 1991: 251, 256, 268). Altitudes range between 2,100 ft at the western terminus and 6,000 ft after a gradual climb near the headwaters of the Snake River in eastern Idaho (Malde 1991: 251). This nearly featureless swath of volcanically swept land provided emigrants a physiographically, expedient east to west route to western lands with minimal landscape impediments and a relatively gentle grade.

The Western Plain that emigrants passed through is a 161-mile long basin that is composed of sedimentary deposits that are underlain by thick basaltic flows and even deeper tuffaceous sediments (Malde 1991: 251, 256). Width of this part of the Plain ranges from 21 to 43 miles (Malde 1991: 256). Formation began over 17 Ma and grew headward toward the southeast until 3 Ma (Malde 1991: 251, 259). Deposits dating to the Quaternary consist of a veneer of basalt overlying basin sediments (Malde 1991: 251). Elevation gradually decreases from east to west and ranges between 3,300 ft near Hagerman in the east and 2,000 ft at the western terminus (Malde 1991: 257). Adjacent to the Western Plain are the granitic mountains of the Idaho Batholith to the north and the Owyhee Mountains and Owyhee Plateau to the south (Malde 1991: Fig. 1, 252, 256).

The Eastern Snake River Plain is characterized by rhyolitic volcanic rock beneath thinner basaltic lava flows (Malde 1991: 251). Both the rhyolite and the basalt are thought to be a result of the North American plate drifting over the hotspot that currently underlies the Yellowstone Plateau (Malde 1991: Fig. 1, 251). Lava flows are interlayered with sedimentary deposits such as loess, sand dunes, playa, fluvial, and lacustrine deposits (Hackett and Bonnicksen 1994: 41). Width of the Eastern Plain is 55 to 62 miles and the length is nearly 220 miles (Malde 1991: 268). Like the Western Plain, elevation increases to the east (Malde 1991: 268). Basin-and-Range Mountains frame the region to the north and south (Malde 1991: Fig. 1).

Shoshone Falls is one location where exposure of underlying rhyolitic rock is due to a sufficiently thin covering of basalt (Hackett and Bonnicksen 1994: 39-42). Created when Lake Bonneville breached its rim at Red Rock Pass in eastern Idaho approximately 15,000 years ago, this 212-foot waterfall acts as the eastern terminus of anadromous fish migrations on the Snake River (Hackett and Bonnicksen 1994: 42; Malde 1991: 256). This particular physiographic feature within the Snake River had a significant impact upon native inhabitants of southern Idaho by preventing migratory fish populations from running in the rivers of eastern Idaho (see Murphy and Murphy 1960; Steward 1938). Shoshone Falls is also an example of how canyon walls flanking the river in the Eastern Plain limited easy access to water for both emigrants and livestock more so than along the route in the Western Plain (i.e., South Alternate), which stayed relatively close to the Snake River (see Hutchison and Jones 1993).

Climate

Within the rain shadow east of the Cascades and relatively isolated from maritime influences, southern Idaho has a climate characteristic of semi-arid steppe with hot, dry summers and moist, cool winters (Abramovich et al. 1998; Franklin and Dyrness 1973: 51; Gleason and Cronquist 1964: 375; Whiteman 2000: 19). The Pacific and Arctic air masses are the primary flows that interact with the topography to produce these climatic conditions (Bryson and Hare 1974: 9-11).

Sustained winds in the area are frequent and can easily reach 40 mph due to the physiographic layout (Bureau of Land Management ca. 1970s.: 25). Temperatures range between 20°F in the winter and 110°F during the summer. The timing of precipitation peaks differs between the Western and Eastern Plain. Average annual rainfall ranges between 7 and 14 inches. *Figure 2.1* shows that average annual temperature decreases with eastward altitudinal rises. Also, average annual precipitation fluctuates but is highest near the Continental Divide. The main distinction between the Western and Eastern Plains concerning precipitation is not amount but intra-annual variability. Peak months in the Western Plain are during late fall and winter whereas the Eastern Plain has discontinuous peaks during the late fall and late spring (Abramovich et al. 1998). Overall, the precipitation regime of the Eastern Plain has more equability than that of the Western Plain, which affects the duration of the growing season for grasses and the nutritional quality of forage (Broughton et al. 2008: 1917).

Temperature and precipitation regimes across the Plain prove important since they influenced the impact emigrants exerted upon natural resources such as the grasses that were exploited by indigenous populations (Murphy and Murphy 1960; Steward 1938).

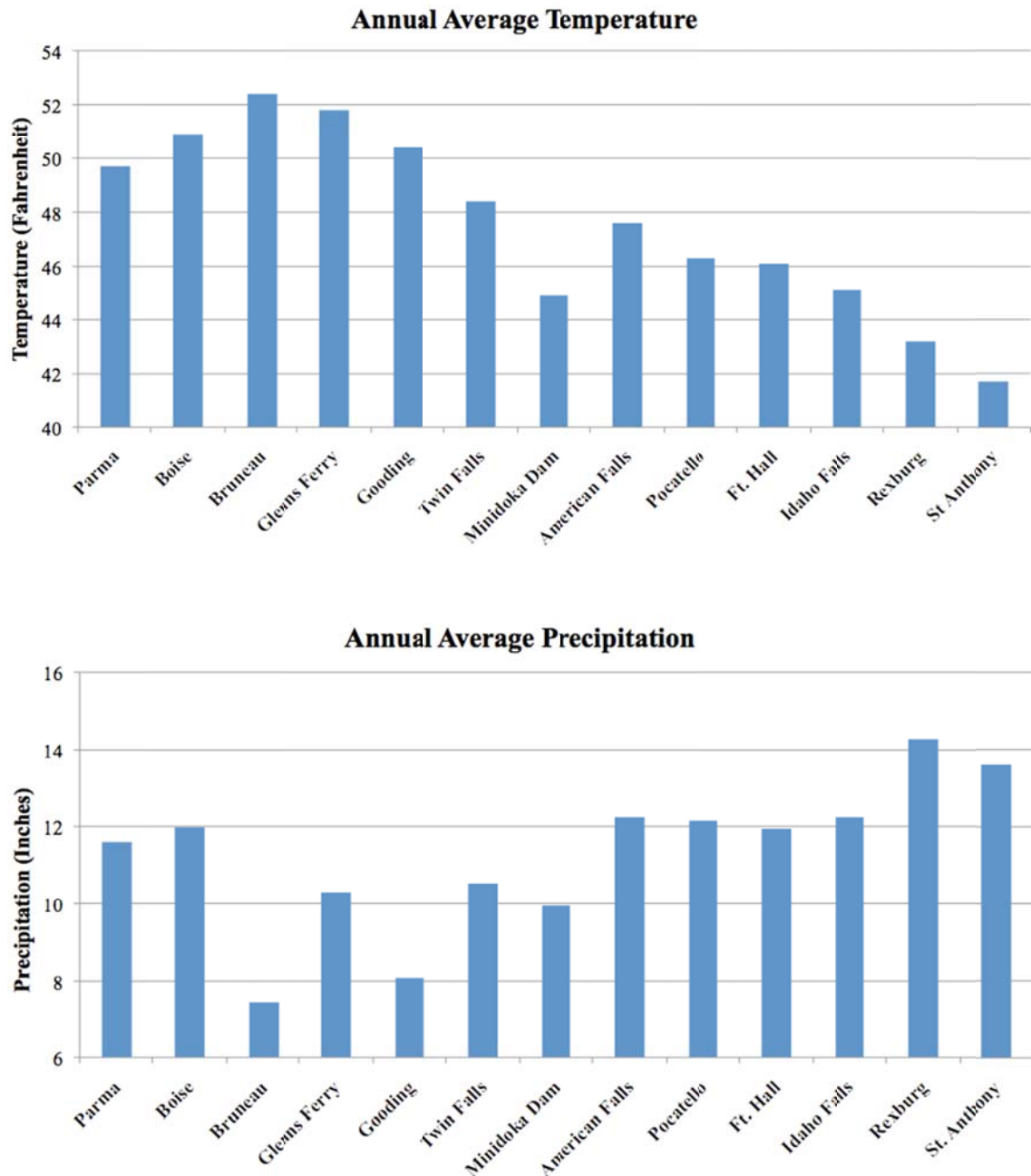


Figure 2.1 Temperature and Precipitation Locations are west to east, starting with Parma in the extreme western edge of the Snake River Plain and ending with St. Anthony in the east. Average annual temperatures and precipitation amounts reflect data collected over three decades for nearly all sites by Abramovich et al. (1998).

As will be discussed later, these same factors affected bunchgrass growth, reproduction, and dormancy in sagebrush-steppe communities, all of which had taken place by the time emigrants arrived in late summer and early fall.

Soils

Soils act as another important component of biogeography across the Plain. Regional soils mainly consist of aridisols (Barker et al. 1983). Large sections are blanketed with fertile aeolian sediments comprised of loess originating from a fluvial system that existed during the last glaciation (ca. 30 to 10 ka.) when much of the Snake River Plain was covered in large pluvial lakes (Forman and Pierson 2003: 192; Hackett and Bonnicksen 1994: 52). Soils are also derived from alluvial deposits (Barker et al. 1983). Due to differences in soil deposition, topography, and elevation there are many different floral habitats and varied animal population distributions across the Plain making it a mosaic of micro-ecosystems (Henry 1984: 8-9).

Flora

The Snake River Plain resides within the Great Basin floristic province and abuts the Cordilleran Forest region to the north (Gleason and Cronquist 1964: 176). Varying physiographic and pedographic conditions have created a non-uniform distribution of plant communities throughout the Plain and on the adjacent mountain slopes (Henry 1984: 10-11). Utilized by indigenous inhabitants in a myriad of ways (see Murphy and Murphy 1960; Steward 1938), the breadth of floral resources was minimally exploited by emigrants due to their ephemeral passage through the region and their overall objectives. Plant resources that emigrants primarily sought out were grasses for forage and woody material for fuel. Unlike native occupants of the region, emigrants placed little to no emphasis upon flora for subsistence.

The Snake River Plain is predominantly sagebrush-steppe (Daubenmire 1952: 3-4; West and Young 2000: 263). This semi-desert region is primarily comprised of shrubs

and perennial bunchgrasses (Daubenmire 1952: 3-4; West and Young 2000: 263). Prevailing within the region are *Artemisia tridentata* (large sagebrush), *Artemisia tripartita* (threetip sagebrush), *Purshia tridentata* (antelope bitterbrush), *Tetradymia canescens* (spinless horsebrush), and a variety of *Eriogonum* (buckwheat) species (Daubenmire 1952: 3-4). The perennial bunchgrasses that co-dominate the region include *Agropyron spicatum* (Bluebunch wheat grass), *Poa secunda* (Sandberg bluegrass), *Festuca idahoensis* (Idaho fescue), *Koeleria cristata* (Junegrass), *Agropyron dasystachyum* (thickspike wheatgrass), *Stipa* spp. (needlegrass), and *Oryzopsis hymenoides* (Indian rice grass) (Ada Council of Governments 1973: 53; Daubenmire 1952: 3-4).

Salt-desert shrub range is present primarily south of the Snake River in the Western Plain as a result of less precipitation and more saline and alkaline soils (Henry 1984: 10; Sharp and Sanders 1978: Fig. 4, 21). Flora is characterized by *Atriplex confertifolia* (Shadscale), *Sarcobatus vermiculatus* (greasewood), and by less grass than the sagebrush-steppe (Henry 1984: Fig. 2, Fig. 3; Sharp and Sanders 1978: 21).

Root plants include *Perideridia gairdneri* (yampa), *Camassia quamash* (camas), *Valeriana edulis* (tobacco root), *Lewisia rediviva* (bitterroot) and *Balsamorhiza sagitata* (arrowleaf balsamroot) (Murphy and Murphy 1986: 293; 167; Torgeson 1982; Statham 1982). Growing within riparian corridors are *Carex* (sedges), *Juncus* (rushes), *Prunus virginiana* (chokecherries), *Salix* (willow), *Populus* (cottonwoods), *Amelanchier* (service berry), *Scirpus* (bulrush), *Equisetum* (horsetail) and *Typha* (cattail) (Ada Council of Governments 1973: 87; Daubenmire 1952: 1-17). Mountains north of the Western Plain are characterized by *Pinus ponderosa* (Ponderosa pine) and *Pseudotsuga menziesii*

(Douglas fir), whereas those north of the Eastern Plain primarily have only Douglas fir (Daubenmire 1952: 7-8). Hills and mountains south of the Snake River contain stands of *Juniperus occidentalis* (western juniper) and *Cercocarpus ledifolius* (mountain mahogany) (Daubenmire 1952: 6-7).

Fauna

As compiled by Davis (1939) there is a wide range of mammals found throughout the region. Small mammals include *Thomomys talpoides* (northern pocket gopher), *Spermophilus townsendii* (Townsend's ground squirrel), an assortment of mice and rats, *Lepus californicus* (black-tailed jack rabbit), *Vulpes vulpes* (fox) and *Procyon lotor excelsus* (Snake River Valley raccoon). Large mammals consist of *Canis latrans* (coyote), *Odocoileus hemionus* (Mule deer), *Cervus Canadensis* (elk), *Ovis canadensis* (mountain sheep), *Antilocapra americana* (pronghorn antelope), *Ursa americanus* (black bear), *Mephitis mephitis* (skunk), *Taxidea taxus* (badger), *Marmota flaviventris* (yellow-bellied marmot), *Ondatra zibethicus* (muskrat), *Lutra Canadensis* (otter) and *Castor Canadensis* (beaver). *Bison bison* (American buffalo) previously roamed most of the Eastern Plain, but beginning in the 1840s their population precipitously declined until disappearing (Kingston 1932: 166; Russell 1965: 138-139). There are also 136 species of birds and 25 species of amphibians and reptiles (Bentley and Oakley 1994: 64).

Aquatic resources within the Western Snake River Basin include anadromous and other native fish species. Prior to large dam construction and other activities associated with Euro-American settlement, *Onchorhynchus tshawytscha* (Chinook salmon), *Salmo gairdnerii* (Steelhead trout), and *Oncorhynchus nerka* (Sockeye salmon) migrated from the Pacific Ocean into the Snake River and many of its tributaries to spawn (Evermann

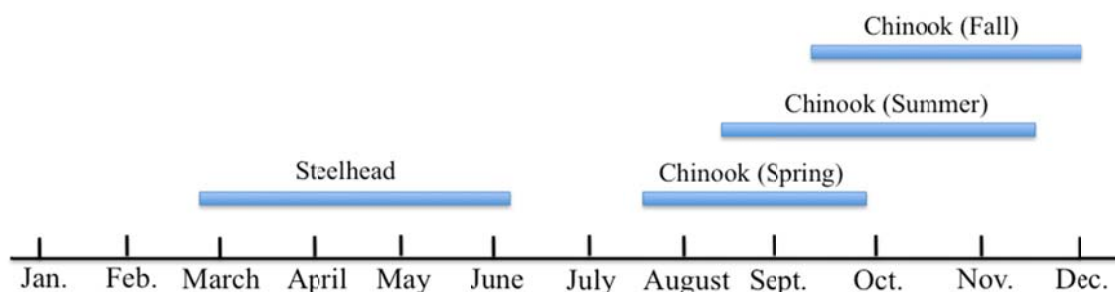


Figure 2.2 Fish Runs Approximated dates of anadromous fish runs through the Western Snake River Basin based on Evermann (1896: 282-283) and Fulton (1968).

Arbitrary divisions for Chinook runs are based on the time when they return to the Columbia River from the sea, not when they arrive in the Snake River and its tributaries (Fulton 1968: 3, 22).

1896, 1897; Fulton 1968). Chinook Salmon and Steelhead trout were the most abundant within the study area since Sockeye salmon primarily migrated up the Salmon and Payette Rivers (Evermann 1896; Fulton 1970: 24, Tab. 8). Steelhead would run during the spring, and three different runs of Chinook occurred during the summer and fall (Figure 2.2) (Evermann 1896: 282-283; Fulton 1968, 1970: 3, Tab. 3). Native fish species of importance include *Salmon gairdnerii* (rainbow trout), *Acipenser transmontanus* (Columbia River sturgeon), *Salmo clarki* (Cutthroat Trout), *Prosopium williamsoni* (Mountain whitefish) and *Ptychocheilus oregonensis* (northern squawfish) and *Lampetra tridentata* (Pacific lamprey) (Simpson and Wallace 1978).

Emigrant Trails

Environmental variation along the routes of emigrant passage in the Western Plain affected the nature of how emigrants could have potentially impacted local resources. They can be broken down into three environmentally unique stretches: Salmon Falls to the Boise River, the South Alternate, and the Boise River.

From Salmon Falls to Boise, streams run perpendicular to the emigrant route (see *Figure 6.7*). The trail primarily crosses over basaltic terrain but borders the Idaho Batholith in the western third of the section (Malde 1991: Fig. 3; Webb 2009). Average annual precipitation and soil conditions are optimal for sagebrush and bunchgrass growth (Abramovich et al. 1998; Barker et al. 1983). Similar conditions likely were present during the mid-19th century since Euro-Americans referred to the region as being a mosaic of sagebrush and dried bunchgrasses (e.g., Meacham 1979a; Fremont 1970). Fauna consists of rodents, rabbits, coyotes, fox, badger, and larger mammals such as pronghorn and Mule deer (Larrison 1967: 142).

The South Alternate, often described as being barren and denude of vegetation by emigrants (Meacham 1979b), is entirely underlain by basalt (Malde 1991: Fig. 3). Streams run perpendicular to the trail corridor, except for the Snake River, which parallels the route. Soil salinity and alkalinity are higher on the south side of the river, and precipitation is less (Abramovich et al. 1998; Sharp and Sanders 1978: 21). Salt-desert shrub land prevails as a result (Sharp and Sanders 1978: Fig. 4). Fauna resembles that of the main trail on the north side of the Snake River.

The Boise River stretch of trail was relatively lush compared to the other two sections according to emigrant accounts, especially the South Alternate (e.g., Belshaw and Belsaw 2000; Ebey 1997; Meacham 1979a). Underlain by basalt and characterized by soils less saline and alkaline than those on the South Alternate, this region has a relatively rich riparian corridor that supports the patchy distribution of trees (Ada Council of Governments 1973; Barker et al. 1983; Malde 1991: Fig. 3). Currently receiving slightly more precipitation than the other regions, the trail paralleling the Boise River

consistently provided the best grass to emigrants in the Western Plain (Abramovich et al. 1998; Ebey 1997: 160; Murphy and Murphy 1960: 319; Palmer 1999: 98). Within the riparian corridor, species diversity and population densities are greater (Ada Council of Governments 1973; Larrison 1967: 143-144). The Boise River region is known as a migration route for Mule deer and has a high population of jackrabbits (Ada Council of Governments 1973).

The Snake River Plain has a wide array of physical, climatic, and biotic diversity, all of which put certain parameters on indigenous and Euro-American behaviors and adaptive strategies. These environmental characteristics assist our ability to answer how, why, and when intercultural interaction switched from being mutually beneficial to misaligned during phases of indigenous contact with Euro-Americans. However, an overview of other elements is essential before inferences can be made that address whether emigrants caused environmental degradation and undermined native lifeways in southwestern Idaho prior to settlement.

CHAPTER THREE: NATIVE LIFEWAYS

To better generate inferences concerning the impact of Euro-American emigrants upon native populations residing within southwestern Idaho, an understanding of aboriginal socio-economics and socio-political spheres is critical. Due to limited archaeological data within southern Idaho, a clear and definitive model of native lifeways has yet to emerge. What does exist, however, are two competing models pivoting upon the degree and nature of fish acquisition within the region. The ethnographic-historic model advocates bulk procurement of anadromous fish and storage for winter subsistence use that allowed for semi-sedentary residency. The alternative model questions the optimality of such a subsistence strategy and suggests that indigenous populations engaged in broad-spectrum procurement, relied only on short-term storage, and were highly mobile. Since the competing hypotheses infer variety concerning hunter-gatherer socio-economics, an understanding of both is necessary when addressing the impact that emigrating Euro-Americans had upon the environment and native lifeways.

Local Inhabitants

Occupants at the time of first Euro-American contact in southwestern Idaho were the Northern Shoshone and Northern Paiute (Murphy and Murphy 1960: 318). Northern Shoshone inhabited central and southern Idaho and were interspersed with Northern Paiute in the lower Payette, Weiser, and possibly Boise River Valleys (Liljeblad 1957:

62-63; Steward 1938: 172). The primary distinction was linguistic since socio-cultural arrangements and economic activities between the two groups closely paralleled one another (Plew 2008: 15; Murphy and Murphy 1986: 284). The Northern Paiute spoke a Western Numic vernacular and the Northern Shoshone used a Central Numic dialect (Fowler and Liljeblad 1986: 435; Murphy and Murphy 1986: 284).

Population Densities

Population estimates by Kroeber (1939: 137) and Steward (1938: Fig. 6, 46-49) depict low population densities for indigenous inhabitants of southern Idaho. Kroeber (1939: 137) estimated that densities were one person for every 38 square miles (1:38mi²) within the Snake and Salmon River drainages. Steward (1938: Fig. 6, 46-49) split southern Idaho into three regions: the Boise, the Bruneau, and Ft. Hall (*Figure 3.1*).

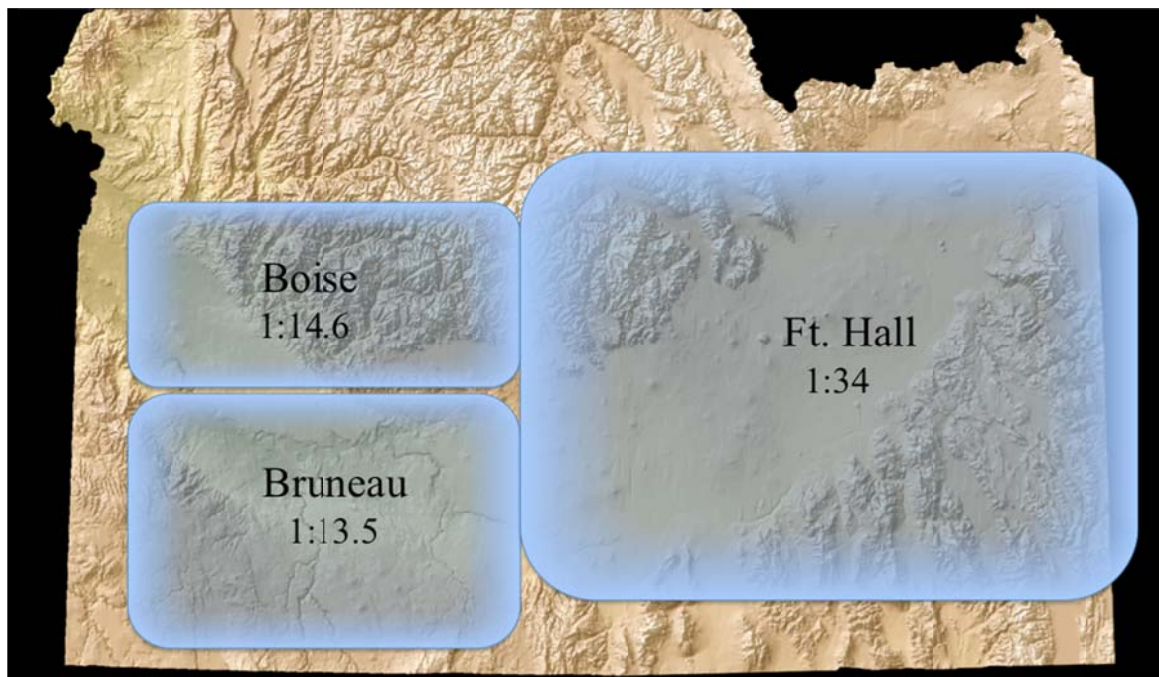


Figure 3.1 Population Density Estimate from Steward Reproduction of approximated boundaries of different population densities in southern Idaho according to Steward (1938: Fig. 6). Ratio is one individual per square miles.

The Boise area average was estimated as 1:14.6mi², the Bruneau as 1:13.5mi², and Ft. Hall as 1:34mi². While these low population densities are only estimates of what the demographic landscape was like prior to large-scale Euro-American presence within the region, they nevertheless provide an important comparative baseline for evaluating the impact emigrants could have had on native inhabitants.

Ethnographic-Historic Model

Ethnographic-historic studies by Steward (1938), Liljeblad (1957), and Murphy and Murphy (1960) provide an overview of the groups living in the region. These efforts represent the prevailing anthropological outlook of socio-political organization and native subsistence strategies during the Protohistoric period (beginning at approximately 250 BP) and into the early Historic period. Their reconstruction of aboriginal lifeways created a cultural datum by which subsequent generations of archaeologists have compared and contrasted material findings.

Socio-political organization is depicted as being diffuse, amorphous, and lacking territorial boundaries and possession of food areas (Liljeblad 1957: 34, 36; Murphy and Murphy 1960: 316-322; Steward 1938: 169, 172). Bands fitting the description of stable political bodies and existing within territorial units were non-existent across all of southern Idaho (Liljeblad 1972: 17-18; Murphy and Murphy 1960: 316; Steward 1938: 169). Group names did exist but did not denote stable socio-political aggregates (Murphy and Murphy 1986: 287; Steward 1939). Designations were determined by regional resources and could apply to several groups operating in geographically discontinuous areas (Liljeblad 1957: 54-56; Murphy and Murphy 1986: 287; Steward 1938: 172, 1939).

The primary socio-political body was an economically independent group comprised of singular or multiple families (Liljeblad 1957: 35-36; Steward 1938: 167, 169).

For the majority of the year, individual family units or possibly small camp groups migrated throughout the land pursuing seasonal subsistence activities (*Figure 3.2*) (Murphy and Murphy 1960: 319, 322; Steward 1938: 167-168). Most remained in southwestern Idaho, but those who became mounted could accompany Ft. Hall Shoshone on annual buffalo hunts across the Continental Divide (Liljeblad 1957: 64-65; Murphy and Murphy 1986: 288).

Subsistence activities focused primarily upon the bulk procurement of anadromous fish along the Snake River and many of its tributaries west of Shoshone Falls that ran at different times throughout the year (see *Figure 2.2*) (Liljeblad 1972: 11; Murphy and Murphy 1960: 316-322, 1986: 293; Steward 1938: 165, 167-169, 172-173, 234). Other native fish were caught such as sturgeon, trout, and Pacific lamprey to supplement the harvest of Steelhead and Chinook (Steward 1938: 43; Walker 1993: 232).

Methods for catching fish included nets, hooks, spears, traps, dams, and weirs (Fowler and Liljeblad 1986: 441; Murphy and Murphy 1960: 322; Steward 1938: 167-168, 1943: 268-270; Walker 1993: 218-231). Steward (1938: 169) mentions that dam and weir construction was usually the result of a few families cooperating and working under the direction of an individual who oversaw the building of the structure and its catch. Salmon caught during the fall run were subsequently preserved for winter storage (Liljeblad 1972: 11; Murphy and Murphy 1960: 319; Steward 1938: 165, 167, 234). The main form of preservation was drying, but it was also smoked (Steward 1938: 167; Walker 1993: 231).

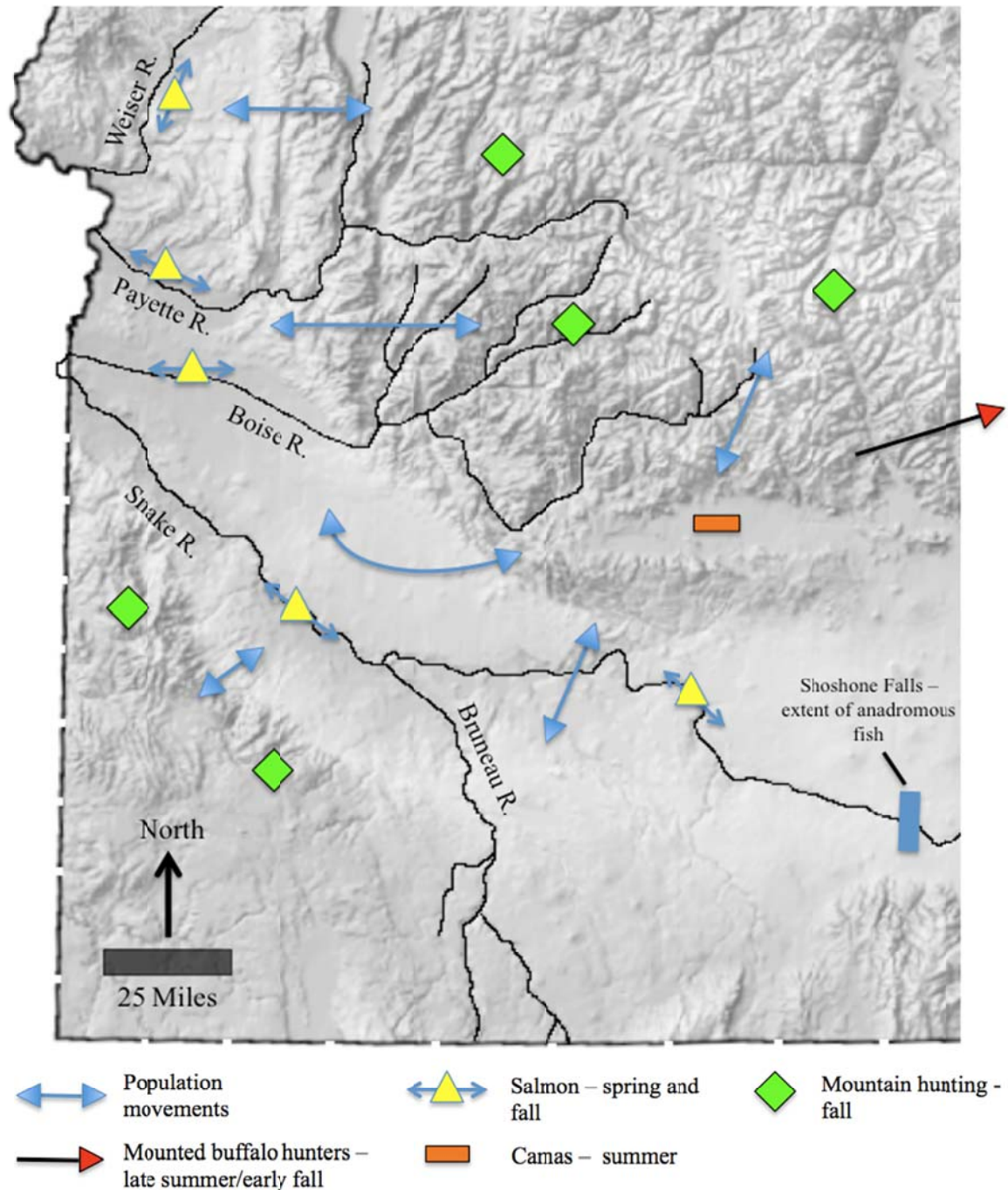


Figure 3.2 Annual Subsistence Activities A general overview based on Steward (1938), Liljeblad (1957), and Murphy and Murphy (1960, 1986).

The gathering of roots such as *Camassia quamash* (camas), *Perideridia gairdneri* (yampa), *Valeriana edulis* (tobacco-root), *Lewisia rediviva* (bitterroot), and an assortment of berries and seed crops bolstered procured fish resources (Fowler and Liljeblad 1986:

441; Liljeblad 1972: 11; Murphy and Murphy 1986: 293; Steward 1938: 167; Torgeson 1982). Camas in particular offered a relatively stable and plentiful resource to most populations within southern Idaho (Murphy and Murphy 1960: 322; Statham 1982: 72; Steward 1938: 166-167). Typically growing between 5,000 and 7,000 ft above sea level within mollisols, the high-energy values of camas warranted annual migrations to the resource-rich Camas Prairie (Murphy and Murphy 1960: 319, 322, 328, 331; Plew 1992: 220; Statham 1982: 52-53; Steward 1938: 167, 203). During late spring or early summer occupants of the Western Snake River Plain traveled to the region and gathered significant quantities of camas to preserve for the winter (Murphy and Murphy 1960: 319, 322; Steward 1938: 167). According to Steward (1938: 167) the main method of preservation was boiling in clay pots.

The hunting of large game in the surrounding mountains during the fall supplemented the dietary mainstays of fish and assorted plant resources (Murphy and Murphy 1960: 319, 321; Steward 1938: 167-168). Game pursued north of the Snake River was primarily Mule deer, elk, bear, and bighorn sheep, while south of the river it was only Mule deer (Murphy and Murphy 1960: 319, 321; Steward 1938: 167). This activity was undertaken by small groups and did not involve corporate efforts (Murphy and Murphy 1960: 319; Steward 1938: 167).

Winter camps would consist of a few families dispersed along the Snake River and its tributaries (e.g., Boise river), subsisting primarily upon caches of salmon, tubers, and jerked or dried meat (Liljeblad 1957: 35; Murphy and Murphy 1960: 319, 322; Steward 1938: 165-166). Personal preference dictated camp social arrangements and location, causing significant annual change (Liljeblad 1957: 36; Murphy and Murphy

1960: 319, 322). This social fluidity and independence underscores Steward's (1938: 169) observation that the "true political unit was the village, a small and probably unstable group." This usage of "village," however, should not be construed as suggesting a level of socio-political complexity that represented group organization with enduring membership (Liljeblad 1957: 35-36).

Alternative Model

While the previously described model has value for archaeological reconstructions of native lifeways, a rigid adherence to *post hoc* ethnographic-historical studies that surveyed rapidly acculturating people may create a skewed interpretation of past human behavior. Critical to remember and an issue that Murphy and Murphy (1960: iii) openly acknowledge is that the model is predicated upon native memory culture of a few individuals and supplemented with sometimes dubious Euro-American accounts. Such reports construct blanket generalizations based on few samples regarding subsistence and do not elucidate spatio-temporal variability of native lifeways.

In agreement with the ethnographic-historic model, a number of previous archaeological studies propose that bulk procurement of anadromous fish, a relatively high degree of riverine sedentism, and storage of foodstuffs were essential elements of native lifeways within the Snake River Plain during the late Holocene (e.g., Meatte 1990: 20, 66-67; Pavesic and Meatte 1980: 19-23, 75-79). Because of the apparent profusion of riparian adaptations, Meatte (1990: 66-67) advocates that the archaeological interpretation of the prehistoric record in the Western Snake River Basin is too reliant upon the Great Basin cultural framework when it actually parallels economic conditions found within the Columbia Plateau.

However, evidence contrary to the ethnographic-historic model has produced an alternative model that challenges the normative view of late Holocene adaptive strategies within the region. Founded primarily upon an analysis of the optimality of available resources and the archaeological record, the model argues that broad-spectrum foraging activities were more pervasive than a collector strategy centered on the bulk procurement of anadromous fish (Plew 2008: 136, 2003: passim; Gould and Plew 1996). Since this alternative model suggests a different depiction of indigenous behavior, an overview of its contention is important due to the implications concerning Euro-Americans and the degree to which they potentially impacted native lifeways.

The alternative model does not discount that some historic groups engaged in bulk procurement of fall Chinook runs but states that within the region there were groups employing variable strategies (Gould and Plew 1996; Plew 2008: 131). Most aboriginal populations, however, likely rejected the low cost-benefit ratio of bulk procurement, particularly of salmon (Gould and Plew 1996; Plew 1983, 2003). In this scenario, groups were highly mobile foragers practicing a broad-spectrum subsistence pattern that exploited contiguous, but varied environmental habitats, along with employing short-term caching. In lieu of fish, resources with greater post-encounter return rates that ranked higher within the native diet breadth were sought. One such resource was camas, which proved more optimal due to its abundance, harvesting costs, nutritional quality, and portability (Plew 1992, 2008: 132, 2003: 278; Statham 1982). Large game that tended to congregate in warmer regions such as canyons and lowlands along the Snake River Plain during the fall and winter would have also been relied upon as a highly ranked resource (Steward 1938: 36; Plew 2008: 136, 2003: 278; Simms 1985).

Plew (1983) lists variables that may have prevented anadromous fish from being a dietary mainstay. These include fluctuations in the annual migration, numbers of fish, duration of run, preparation methods, and fish energy expenditure. The most compelling variable may be the nutritional impact upon fish resulting from energy expenditure during spawning migrations. Plew notes that nutritional losses experienced by salmon migrating upstream at distances equal to that of the Middle Snake River were considerable (78-96% fat and 31-61% protein losses). Such losses drastically reduced the nutritional quality of the resource.

Steward's (1938: 234) observations regarding salmon correspond to a couple of Plew's (1983) variables. First, he recognized that salmon occasionally failed to run, which occurred in the early 1860s along the Boise River (Liljeblad 1972: 19). Whether Steward based his statement upon the single occurrence mentioned by Liljeblad is unknown. This particular episode will be addressed later as to whether it was precipitated by natural or anthropogenic forces. Second, Steward (1938: 43, 234) records that the quantity and quality of these salmon were noticeably less than those near the Pacific coast. Those that reached the Snake River and its tributaries were "emaciated and covered with sores."

Nutritionally deficient fish would require that more fish be caught for winter storage (Plew 2008: 133). According to Plew (1983: 62), approximately 2,700 lbs would be required for 30 persons over 90 days during the heart of winter for survival. While the Liberty Millet's fishery experiment of 1894 proved this amount could be obtained, the processing methods (i.e., drying and smoking) and concomitant time requirements may have decreased the optimality of the resource due to inordinate handling costs. Even if

enough fish were caught and stored, dried salmon rarely preserve for more than a month due to decay, canid disturbance, and insect infestation (Plew 2008: 133).

Another critical point of contention concerns the amount and type of archaeological remnants that are indicative of an intensive collector strategy focused on bulk salmonid acquisition. The majority of archaeological evidence for the Late Archaic into the Protohistoric is characteristic of foragers and not collectors (e.g., Gould and Plew 1996; Plew et al. 2006). A primary distinction between these two subsistence-settlement strategies of hunter-gatherers is that foragers bring consumers to resources (residential mobility), while collectors bring resources to consumers (logistical mobility) (Binford 1980). The by-products of both subsistence strategies thus create dissimilar archeological remnants as a result of a different set of behaviors (*Table 3.1*) (Binford 1980).

Limited fish remains, fishing gear (i.e., nonperishables such as weights, sinkers, spears), processing loci, and storage pits provide little support for a tradition of intensive bulk procurement (Gould and Plew 1996; Plew 1983: 59, 2008: 18, 133-134, 2003; Plew et al. 2006). Fish remains are not commonly found along the Middle Snake River (Plew 2008; Plew et al. 2006). Deer, rabbit, and other small mammals comprise faunal remains at most sites, suggesting they were a primary focus of foraging subsistence strategies

Table 3.1 Foragers and Collectors Based on Binford (1980)

Foragers	Collectors
- High residential mobility	- High logistical mobility
- Little bulk procurement (i.e., limited storage)	- Greater bulk procurement (i.e., reliance on storage)
- Daily food-procurement strategies (i.e., “encounter” basis)	- Specific procurement goals (i.e., not based on “encounter” basis)

(Plew et al. 2006). Specialized tools associated with task-specific goals of collectors are primarily absent; instead tools appear to have been manufactured for general use, which indicates foraging activities (Gould and Plew 1996; Plew et al. 2006). Lithic assemblages also correlate with a high degree of residential mobility (Jacobs 2009; Plew et al. 2006). Overall, this archaeological data suggests that many indigenous inhabitants were broad-spectrum foragers with a high degree of residential mobility and not collectors focused on intensive procurement of salmon (e.g., Gould and Plew 1996; Plew 2003; Plew et al. 2006).

Both models make important statements about hunter-gatherer behavior concerning procurement strategies, mobility and socio-political organization that hinge upon the degree of anadromous fish acquisition. They in turn affect the perceived nature of intercultural relations during the Euro-American emigration. Any substantive inferences attempting to examine the impact that emigrants had upon the environment and native lifeways in southwestern Idaho must consider both models to better understand the indigenous economy and culture that Euro-Americans came into contact with on their journey west.

CHAPTER FOUR: INDIRECT CONTACT

Prior to direct contact with Euro-Americans, native lifeways of southwestern Idaho had already been affected through indirect means. Indigenous populations encountered by the earliest explorers throughout the West were not pre-Columbian cultures untouched by western civilization. Between approximately 1700 and 1811 A.D., the introduction of the horse and possibly Old World diseases and Euro-American material goods modified socio-political, cultural, and economic spheres within the region. During this Protohistoric period, traditional lifeways and adaptive strategies absorbed significant change, thus bringing into focus the world of southwestern Idaho with which Euro-American explorers, trappers, and emigrants interacted. An understanding of the period of indirect contact furthers a discussion that addresses claims of environmental degradation and subversion of native lifeways caused by emigrants prior to settlement. This period displays that indigenous adaptive strategies were not rigid and fragile but instead consisted of flexible activities and behaviors that could be modified to changing circumstances within the environment.

Introduction of the Horse

Though specifics concerning the impact of the introduction of the horse are limited within southern Idaho, generally the use of horses increased mobility, stimulated trade, redefined economics, and even encouraged slavery throughout the Great Basin (Shimkin 1986: 519-521). Acceptance of the horse by scattered groups in southern Idaho

ushered in a period of significant social, cultural and economic reforms, some of which affected the means by which emigrants could have influenced aspects of native lifeways. One example of particular importance is the increased value placed upon the quality pasturage by indigenous inhabitants that later emigrants utilized for feeding their livestock. In this way, acquisition of the horse increased the likelihood of later conflicts between natives and emigrants over a particular resource that previous to 1700 A.D. had been available but that had less value in the local economy (see Murphy and Murphy 1986: 286-287; Steward 1938: 18-19, 232). The changes brought about by the horse, however, did not replace core aboriginal lifeways but rather modified their form for some groups (e.g., Lowie 1909). This vehicle of inadvertent Euro-American acculturation greatly redefined interconnectivity and possibly acted as the instrument of introduction for other Old World and Euro-American imports that may have affected indigenous populations within southwestern Idaho.

The establishment of Spanish settlements in the late 16th century and early 17th century in New Mexico most likely facilitated rapid acquisition and dispersal of the horse within the West (Haines 1938; Liljeblad 1972: 14; Shimkin 1986: 17). The Shoshone of southern Idaho are believed to have resided along one of two main arteries of distribution that eventually led to the spread of the horse throughout western North America (Haines 1938). As early as 1690 A.D., Shoshone in southern Idaho may have acquired the horse through Shoshone living along the Green River (Neitzel 1998: 45). The proposed route of distribution led north from Sante Fe to the headwaters of the Colorado River to the Green River, and then to the Snake River (Haines 1938).

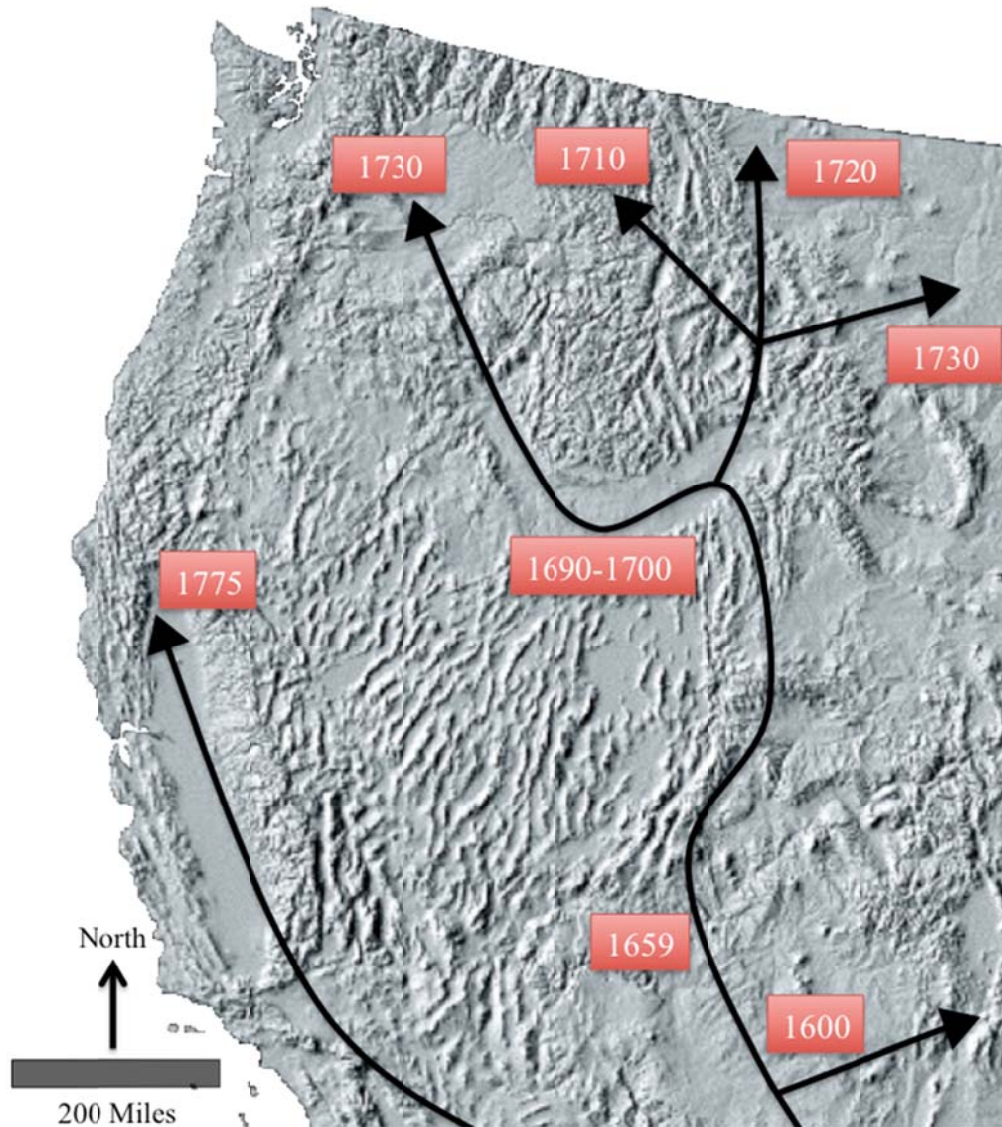


Figure 4.1 Northward Spread of the Horse in the West Approximated routes and dates are based on Haines (1938).

Around 1500 A.D. and before acquisition of the horse, there was an eastward migration of Utah Shoshone-Comanche populations that crossed the Continental Divide (Liljeblad 1972: 14). During the early 18th century, mounted Shoshone are believed to have expanded their geographic range as far north as the South Saskatchewan River on the High Plains (Liljeblad 1972: 14; Shimkin 1986: 517). At the same time the closely related Commache, which had also acquired the horse, expanded south of the Arkansas

River into modern day Texas (Liljeblad 1972: 14; Shimkin 1986: 517). By the end of the 18th century, their territories ceased to be connected, but because of the relatively recent divergence and their Numic origins, both can still linguistically communicate (Murphy and Murphy 1960: 295, 1986: 284).

Use of the horse may have given Shoshone groups an initial military advantage as they entered areas inhabited by other indigenous peoples such as the Blackfeet in the High Plains. Accounts of David Thompson, an early Canadian explorer, indicate that the Snake (a designation for Shoshone) were employing horses in warfare against the Blackfeet sometime around the 1720s or 1730s (Haines 1938; Shimkin 1986: 517; Thompson 1916: 327-335). This equestrian advantage dissolved quickly after the Blackfeet obtained French and English guns, along with horses for themselves (Murphy and Murphy 1960: 295; Shimkin 1986: 517; Wells 1980: 19). Shoshone territorial expansion may have reached its peak in the mid-18th century. After that it began to decline due to military pressures that pushed the Shoshone back west of the Continental Divide (Murphy and Murphy 1960: 296; Liljeblad 1972: 14). The Shoshone that had remained in Idaho incorporated retreating populations back within their fluid socio-political system (Murphy and Murphy 1960: 296; Liljeblad 1972: 14).

While Shoshone territorial extension into the High Plains may have antedated horse acquisition, it could have hastened expansion into territory that was rich in buffalo (Murphy and Murphy 1960: 295). Use of the horse expedited migration, buffalo hunting, and trade with tribes along the Missouri River as far as the Mandan villages of North Dakota (Liljeblad 1972: 14). These Shoshone were among the first Native Americans to

possess, breed, and use horses, making them a key fixture of their society (Liljeblad 1972: 16; Haines 1938).

Diffusion of cultural features originating from the Great Plains occurred throughout the 18th century as mounted groups engaged in considerable trans-montane travel. Expressed primarily by Northern Shoshone and Bannock of the Eastern Snake River Plain, cultural traits acquired from the Plains included the use of the tipi, ornate skin clothing, jerking meat, feathered head dresses, a number of ceremonial dances, use of the travois, skin containers in place of baskets, and the semblance of increased socio-political complexity due to the bulk procurement of bison (Hutchison and Jones 1993: 114; Liljeblad 1972: 16). Since fewer groups in the Western Plain used the horse and took practically no part in corporate procurement activities, socio-political development is believed to have remained the same, along with subsistence activities (Liljeblad 1972: 17; Murphy and Murphy 1960: 319; Steward 1938: 165-167).

Differences between precipitation regimes and the preponderance of grasses across the Plain proved a barrier to widespread horse acquirement throughout the Western Plain (Abramovich et al. 1998; Murphy and Murphy 1960: 319, 1986: 285-286; Steward 1938: 165-167, 235). The exception to this were the relatively lush valleys of the Boise, Payette, and Weiser Rivers (Murphy and Murphy 1986: 285; Steward 1938: 172).

Regional environmental conditions that regulated whether the horse would be seen as either a food source or as a beast of burden in southern Idaho were typical of other regions throughout the Great Basin (Fowler and Fowler 1971; Malouf and Findlay 1986: 500; Shimkin 1986: 521). Western Shoshone, most Northern Paiute, Southern

Paiute, and many groups of Utes also remained unmounted (Fowler and Fowler 1971; Malouf and Findlay 1986: 500; Steward 1938: 235). Only the Utes within the Uintah Basin, Wasatch Piedmont and along the Sevier River could adopt the horse because of favorable ecological conditions (Malouf and Findlay 1986: 500).

Within southwestern Idaho, the primary distinctions between mounted and unmounted inhabitants would have been the level of mobility and different seasonal subsistence cycles. Compared to unmounted groups, those with the horse could join inhabitants of the Eastern Plain in their annual migratory circuit of 1,200 miles that included crossing the Continental Divide in pursuit of bison (Liljeblad 1957: 64-65; Murphy and Murphy 1960: 316-322, 1986: 288).

While there is no known evidence of Indian slave trade in Idaho, other unmounted groups throughout the Great Basin such as the western Shoshone and southern Paiutes became the targets of mounted Utes that sought women and children for trade with Mexicans traveling the Old Spanish Trail (Fowler and Fowler 1971; Malouf 1966: 11). This trend continued into the historical period when the Utes realized they could capitalize on Mormon sympathy for such individuals (Malouff 1966: 15-16). There is also evidence that equine-encouraged slavery extended as far west as the Klamath of Oregon (Shimkin 1986: 519).

Disease

The dynamics of increased mobility and interconnectivity largely redefined the Protohistoric Great Basin. An unforeseen consequence of the dissolution of spatial barriers between physiographic regions may have been the spread of Old World pathogens. Since no written records exist during the Protohistoric period, few details are

known concerning the impact that foreign diseases had throughout the Snake River Plain (Neitzel 1998: 54). Outbreaks of Old World pathogens, particularly smallpox, in the 18th and 19th century in regions adjacent to the Snake River Plain (Boyd 1999: 25-32; Calloway 2003: 413; Fenn 2001: 252, 254-255; Mann 2005: 109; Thornton 1987: 336) suggest that native inhabitants of the region could have been affected as well. Sources of historical epidemiological importance come from early Euro-American explorers and traders, along with remembered events from Indian informants written down at later dates. If disease did pass through the region causing high mortality rates, the effect on demography and cultural integrity would have been devastating, drastically altering the aboriginal world that Euro-Americans would eventually observe.

European diseases such as measles, influenza, typhus, bubonic plague, cholera, and primarily smallpox circulated across the Americas post-1492, playing a role in eventual European hegemony (Diamond 1999: 77; Thornton 1987: 44). Originating in Old World domesticated animals, these pathogens were carried by the relatively immune Europeans to the immunologically defenseless populations of the New World (Diamond 1999: 92; Thornton 1987: 44-47; Mann 2005). Beginning along the Atlantic Coast and expanding westward, native occupants were decimated by foreign disease, undermining cultural cohesion and perpetuation of native lifeways (Mann 2005; Thornton 1987).

As an example, four years before the Mayflower set anchor near Plymouth Rock in 1620, New England coastline populations were ravaged by a pestilence that may have killed 90% of the native inhabitants (Mann 2005: 55). From the early 16th century until the beginning of the 20th century, it is estimated that a series of 93 epidemics and

pandemics of Old World pathogens afflicted the immunologically susceptible native population of North America (Thornton 1987: 45-46).

Before Wilson Price Hunt's expedition passed through southern Idaho in 1811 there is no known historical account of the region and its inhabitants. What can be said about the epidemiological protohistory of the territory concerns the likelihood that virulent outbreaks of Old World diseases occurred. It is reasonable to think that due to its geographic position the historically documented smallpox pestilence of 1775-82 afflicted southern Idaho (Fenn 2001: 6). Unlike previous smallpox epidemics, this one in particular was well documented by individuals in the eastern colonies, central America, and by non-American explorers such as Puget, Vancouver, and Thompson, who either witnessed the devastation or the physical remnants of the demographic fallout (Fenn 2001: 6-10; Calloway 2003: 415, 421-423).

Originating in Mexico City in August 1779, smallpox was reported to have spread in all directions (Mann 2005: 108). Heading northward most likely through a network of established exchange routes, it quickly reached the Great Plains and Rocky Mountains (Mann 2005: 109). The unparalleled mobility provided by the recent diffusion of the horse throughout the American West undoubtedly hastened the dissemination of such novel diseases (Calloway 2003: 418). Synchronic evidence of this epidemic comes from New Mexico missions, the Pueblo Southwest, Baja California, the Mandans, Hidatsas, Ojibwes, Blackfeet, Crows, Shoshone (east of Continental Divide), Comanche, Sioux, Flathead, Nez Perce and tribes of the Pacific Northwest (Boyd 1999: 28, 32; Calloway 2003: 421, 422; Thornton 1987: 79-81).

By the end of the 18th century, rival tribes such as the Blackfeet had pushed the Shoshone of the High Plains back across the Continental Divide using guns most likely acquired from Cree and Assiniboine, along with horses obtained from the Shoshone themselves (Fenn 2001: 204; Shimkin 1986: 518). While the increasingly belligerent Blackfeet had grown in military power, smallpox may have been a major contributing factor to the Shoshone retreat (Murphy and Murphy 1960: 295; Shimkin 1986: 517).

Based on David Thompson's (1916) narrative from his winter camp in 1787-88, a Piegan informant named Saukamappee, himself marked with pox scars, claimed infection first came from the Shoshone around 1781:

We thus continued to advance through the fine plains to the Stag River [Red Deer River which meets with the Bow River] when death came over us all, and swept away more than half of us by the Small pox, of which we knew nothing until it brought death among us. We caught it from the Snake Indians [Shoshone]. (Thompson 1916: 336)

This statement asserts that Shoshone on the eastern side of the Rockies were indeed infected with smallpox. Moving west, the disease affected the Flathead and Nez Perce (Fenn 2001: 252). Two mid-19th century Euro-Americans, one a Jesuit missionary named Gregory Mengarini, the other Asa Bown Smith, both provide accounts from Flathead and Nez Perce elders that independently mention a terrible disease afflicting their people during the last quarter of the 18th century (Boyd 1999: 28-29; Fenn 2001: 254-255). The Nez Perce account in particular suggests that the epidemic was not contained on the eastern side of the Continental Divide but crossed the mountains, which would place it directly north of the Snake River Plain.

During this same period, it is believed that smallpox depopulated the Pacific Northwest, leading Fenn (2001: 253-257) to conclude that available evidence indicates

the disease likely spread west along the Colombia River watershed, having originated in the intermontane region via the Shoshone of the High Plains. Asa Smith states explicitly that the Nez Perce and Flatheads transported the pestilence to the Snake River country (Fenn 2001: 254). However, the sparsely populated Pacific Northwest coast that led Vancouver, Puget, and Portlock to ponder at material evidence of an unaccounted population may have occurred a few years prior to the suspected continental epidemic (Boyd 1999: 25-32; Calloway 2003: 413; Mann 2005: 110). While debate circles around when smallpox was introduced to the Northwest and by what route, it is known that by the last decades of the 18th and the early 19th centuries, the disease had taken a toll on native populations, whether through multiple localized outbreaks or by regional epidemics (Boyd 1999: 38-39).

The increased mobility and interaction that the horse provided created a scenario suggesting that the same microbes which plagued southern Idaho's contiguous geographical neighbors could have been transmitted to the region (Boyd 1999: 38; Haines 1938; Liljeblad 1972: 14-19; Wells 1980: 18). This is likely when considering the contact that southern Idaho populations had with groups known to be infected with smallpox during trans-montane buffalo hunting, intertribal gatherings, and kinsmen retreating west over the Continental Divide (Ericson 1994; Fenn 2001: 252; Murphy and Murphy 1986: 286-288; Liljeblad 1972: 14-19; Thompson 1916: 336; Wells 1980: 18-19, 21). Malouf and Findlay (1986: 505-506) point out that low population densities within the intermountain West, however, may have mitigated the spread of such epidemics. While this is a valid point, the rapidity of individual movement after the acquisition of the horse coupled with the incubation period of smallpox (i.e., 7 to 17 days with no

symptoms) (Centers for Disease Control and Prevention 2010), create a scenario in which the spread of this particular disease to regions with low population densities, such as southern Idaho (see *Figure 3.1*), is feasible.

The presence of Old World diseases in the 18th and 19th century, particularly smallpox, in regions contiguous to southern Idaho (e.g., Boyd 1999: 25-32; Calloway 2003: 413; Fenn 2001: 252, 254-255; Mann 2005: 109; Thornton 1987: 336) suggest that indigenous societies of the region were also impacted. If local populations were indeed affected by these pathogens, the demographic and cultural landscape of the Snake River Plain to which emigrants and other Euro-Americans encountered may have been altered prior to their appearance.

Material Culture

Euro-American material goods probably found their way into the region through aboriginal trading networks prior to direct contact. Archaeological evidence of nonperishable trade items, primarily Pacific coast shell beads dating from the Late Archaic (2,000-250 B.P.) within the Snake River Plain, suggests the existence of a trading network that followed the Columbia and Snake Rivers before the introduction of the horse (Hughes and Bennyhoff 1986: 238-239, 244-245). The main sites that indicate this are Birch Creek, Meacham Rockshelter and Wilson Butte Cave (Hughes and Bennyhoff 1986: 244-245). It seems probable that goods of Euro-American origin made their way into the Snake River Plain during the Protohistoric since the horse increased mobility and connectivity. Thus far, however, Protohistoric archaeological sites within southern Idaho are rare.



Figure 4.2 Archaeological Evidence of Interregional Trade

The paucity of Euro-American trade items may be a result of several factors. First, relatively recent and near surface deposition makes material remnants vulnerable to disturbance and it is unlikely that they remain *in situ*. Second, sites that could have contained artifacts along or near watercourses have likely been altered or entirely destroyed by agro-pastoralism and other settlement activities. Third, a period of just over a century is an extremely narrow archaeological target considering the limited number of individuals within the region that could have acquired nonperishable materials of Euro-American origin. In contrast, periods such as the Early Archaic (8,000–5,000 B.P.), Middle Archaic (5,000–2,000 B.P.) and Late Archaic (2,000–250 B.P.) (Plew 2008: 26) extend thousands of years. Lastly, the quantities of Euro-American material goods within the region were simply negligible. To the knowledge of this author, early fur trappers and explorers fail to mention any items of Euro-American manufacture already in the

possession of native southern Idaho inhabitants, although this certainly does not preclude the existence of such goods.

Whether through direct or indirect contact, Great Basin populations replaced elements of indigenous material culture with implements of Euro-American provenance such as iron tools (e.g., awls, axes, arrow points), blankets, clothing, and glass beads (Arkush 1990: 29). Evidence of this acculturation process is confirmed in southern Idaho by the discovery of a handful of points manufactured out of metal (Crabtree 1968; Plew 1989; Plew and Meyer 1987). These tools, however, are most likely associated with direct contact due to artifact proximity along the Oregon Trail. The Rattlesnake Canyon cremation site (Bonnichsen 1964) near present-day Mountain Home may provide the best evidence of the presence of Euro-American material culture in the region during indirect contact. Aside from the cremated remains of a number of individuals and an assemblage of stone tools, two small pieces of copper of possible Euro-American origin were discovered; although these too were possibly acquired during the early Historic period.

On account of the acquisition of the horse, it seems improbable that indigenous populations within southern Idaho could have avoided obtaining material goods indirectly from Euro-Americans. The absence of such evidence should not yet be used to conclude that Euro-American material products were non-existent in native society. Refined archeological methods and continued fieldwork in the future within southern Idaho will likely delineate this brief temporal period of growing Euro-American material influence.

The introduction of the horse, along with the likelihood that Old World diseases and Euro-American material goods were present, led to significant changes for some

populations living in southern Idaho prior direct contact. Acquisition of the horse created two groups, mounted and unmounted, which affected the niches exploited and annual seasonal rounds. If Old World disease impacted the region, a reduction in population would have occurred. Euro-American trade goods likely affected local inhabitants minimally and do not appear to have played a significant role in the indigenous economy prior to direct contact. Lasting approximately between 1700 and 1811 A.D. the Protohistoric period began to reshape native populations through acculturation and possibly epidemiological attrition. An understanding of the period of indirect contact assists the discussion concerning environmental degradation and subversion of native lifeways by emigrants prior to settlement. It does this by further illustrating that adaptive strategies of indigenous populations within southwestern Idaho were comprised of flexible activities and behaviors that could be modified to changing circumstances in the environment.

CHAPTER FIVE: DIRECT CONTACT

Changes that resulted from the period of indirect contact created a situation where even the earliest explorers to the Snake River Plain could not witness pre-Colombian cultures. Development during direct contact proceeded on a trajectory of continual transformation as indigenous populations developed social relations of exchange with Euro-Americans. This evolution of interaction can be classified into three distinct phases of intercultural contact: the fur trade, emigration, and settlement.

To better examine the question regarding Euro-American emigrants and their potential environmental and economic impacts on native subsistence and lifeways, an historical overview of direct contact is necessary. Three generations of scholars have chronicled the fur trade, emigration, and early settlement in southwestern Idaho and all echo the historical milieu of the day (i.e., Beal and Wells 1959; Bird 1934; Chaffee 1927; Defenbach 1933; Ericson 1994; Illingworth 1937; Madsen 1980; Neitzel 1998). All of these studies fall short of recognizing the adaptability of hunter-gatherer populations to changing economic conditions within the environment. The following section presents an outline of the events associated with the array of changing variables that affected traditional lifeways. It also provides the basis for examining possible native adaptive responses to Euro-American contact during emigration.

In this review issues pertaining to environmental impact during the phases of contact will be examined only when they are known to have been documented, for

example the overtrapping of beaver, the presence of a visible trail corridor, and the devastation caused by placer mining. Impacts concerning the phase of emigration such as the depopulation of Snake River Plain game, degree of overgrazing, deforestation of riparian zones, and the introduction of exotic flora will be addressed in Chapter Six.

By coupling an environmental-anthropological perspective with an outline of culture history, it can be proposed that Euro-Americans appear to have become integrated into native subsistence activities beginning with the fur trade and then refocusing their economic strategy to include seasonal emigrants. Based on the nature of emigration and the adaptability of native hunter-gatherer economics, conditions of mutual interdependence could have persisted until the onset of settlement. The end of this relationship occurred, however, when large numbers of Euro-American settlers began intensively competing for the same available resources used by native inhabitants from a variety of resource patches. This transformation nullified any form of viable mutual relationship and marginalized the interests of hunter-gatherers.

Fur Trade

Aside from ecologically impacting riverine systems by overtrapping beaver, the fur trade was instrumental in opening up the West to later emigration and settlement. Fur trappers demystified the land west of the Rockies, making the very thought of emigration accessible to Euro-American agrarian families. For nearly three decades, they were the emissaries of a culture very different from those of the Northern Shoshone, Bannock, and Northern Paiute. They primarily focused on economic exploitation of riparian environments. In doing so, fur-trappers benefited from the volunteerism of natives, effectively establishing nascent social relations of exchange. During this phase of

contact, native populations indirectly took part in the market economy, altering their behavior for the same economic system that fur trappers operated under. Overall, relations between trappers and indigenous peoples of southern Idaho were cooperative and defined by functional interdependence.

Andrew Henry, an American fur trapper working for the Missouri Fur Company, is credited for being the first known Euro-American to have visited southern Idaho in 1810 (Beal and Wells 1959: 88). Along the North Fork of the Snake River (i.e., Henry's Fork), he established Ft. Henry near modern-day St. Anthony, which was also the first American fur post on the Pacific slope of the Rockies (Beal and Wells 1959: 88; Clements 1974: 30; Ogden 1950: xxvii).

In 1811, a party led by Wilson Price Hunt traversed the width of southern Idaho, passing Ft. Henry en route to the mouth of the Columbia River on behalf of John Jacob Astor's Pacific Fur Company (Chaffee 1927: 5; Dary 2004: 20; Hutchison and Jones 1993: 17). This expedition is the first known group of Euro-Americans to experience the environmental conditions of the Snake River Plain (Irving 1976: 194-209). Passing through the region by way of an old Indian trail system that took a course similar to that of the future emigrant route, they also became the first known Euro-Americans to directly interact with local inhabitants, having been aided by trade and Shoshone guides (Brandon 1982: 70-71; Hutchison and Jones 1993: 17; Irving 1976: 194-209).

Heading east the next year with dispatches for Astor that apprised him of the Columbia River project, Robert Stuart's party traded and conversed with Snake Indians while crossing the Snake River Plain (Dary 2004: 34, 37-40; McCartney 2003: 140; Stuart 1953: 76-98). During this trek east, Stuart is believed to have traveled a large

portion of the future overland migration route including the substantially easier path over the Continental Divide through South Pass in southwest Wyoming (Dary 2004: 42-43; McCartney 2003: 1; Unruh 1982: Map 3).

In 1813, John Reid, a member of Hunt's original party, made the first organized attempt to trap the Snake River country, beginning with the Boise River tributary (Chaffee 1927: 10). The result was the death of every member of his party minus Marie Dorion and her two children at the hands of the Snakes (Bird 1934: 45-46; Chaffee 1927: 10; Hutchison and Jones 1993: 18). In 1819, Donald McKenzie, on behalf of the North West Fur Company, established a positive relationship with natives within the Snake River Plain, allowing organized trapping activities to commence (Beal and Wells 1959: 122; Hutchison and Jones 1993: 18). With this arrangement McKenzie marked the beginning of large trapping brigades that would criss-cross southern Idaho (Beal and Wells 1959: 122; Hutchison and Jones 1993: 17).

By the early 1820s, the British had monopolized the Snake Country since Astor's Pacific Fur company had dissolved in 1813 and the Northwest Company merged with Hudson's Bay Company (HBC) in 1821 (Beal and Wells 1959: 109-110, 123; Dary 2004: 48-53; Ogden 1950: xx). The British operated fur-trapping expeditions that harvested southern Idaho for *Castor canadensis* (beaver) pelts until 1834 functioned under the "scorched-earth policy" of the HBC, which was economically and politically motivated (Hutchison and Jones 1993: 19; Neitzel 1998: 60; Ogden 1950: xlii-xliii). The objective of British brigades was to create a zone without beaver, eliminating monetary incentives for St. Louis-based fur trappers to venture in or through the region (Beal and Wells 1959: 141, 144; Ogden 1971: 17-18 fn). Based on the theory that American trappers would

become colonizers, the ultimate goal of the policy was to protect British economic interests and prevent land annexations by the United States in the Northwest (Beal and Wells 1959: 141; Ogden 1950: xliii, 1971: 17-18 fn).

Donald Mckenzie, Finan McDonald, Alexander Ross, Peter Skene Ogden, John Work, and Francis Ermatinger led HBC Snake expeditions until the construction of Ft. Boise and Ft. Hall in 1834 altered the nature of the fur trade in the region (Bird 1934: 55; Neitzel 1998: 60). These British brigades, along with their American competitors, heavily trapped the Snake River country throughout the 1820s and early 1830s (Hutchison and Jones 1993: 17-18).

During this period of intense trapping, native economics responded to the demand placed upon beaver. Mutually beneficial trading relationships that hinged upon Euro-American material goods and beaver pelts as currency eventually developed between Snake River brigades and native inhabitants (Ogden 1950, 1971; Ross 1956; Wells 1980: 24; Work 1971). Traditional economic models suggest such exchanges take place only if a positive surplus (i.e., the difference between the buyer's and seller's acceptable price) can be obtained, meaning that a fair transaction is one where the surplus is divided evenly (Frank 1988: 164-165). While dubious in its overall historic accuracy, Ross' (1956: 171-172, 267) depiction of exchange relationships that persisted into the phase of Euro-American emigration suggests that both parties perceived such transactions as being fair and materially advantageous. Because of socio-cultural differences concerning the value of the traded materials, this complementary exchange relationship likely thrived due to each party's belief that valuable items had been obtained at fair prices. This favorable market apparently provided enough incentive to alter native subsistence activities solely

to provide fur trappers with goods such as beaver pelts (Liljeblad 1957: 48; Wells 1980: 24).

The resulting impact of British, American, and indigenous trapping in southern Idaho quickly created a noticeable decline in the beaver population by 1827 (Ogden 1971: 12-18). Daily catches of seventy to eighty beaver that Alexander Ross recorded along the Boise River in 1824 began to dwindle to the point that after Ogden (1971: 17) trapped the region in October of 1827, he commented that “the once famed Snake Country for beaver is a ruined one now.” By 1830, the expedition led by John Work trapped the Salmon River region since the Snake Country could no longer sustain a large brigade (Work 1971: xxii). Like southwestern Idaho, the rest of the Snake Country was nearly devoid of significant beaver returns by 1832 (Ogden 1950, 1971).

Beginning in 1834, a significant shift in the nature of Euro-American-indigenous interaction within the Snake River Plain took place. After the recently dissolved Rocky Mountain Company reneged on a contract with Nathaniel Wyeth for the supply of provisions during the rendezvous at Green River in 1834, Wyeth moved westward into the Eastern Snake River Plain and constructed Ft. Hall, the first permanent U.S. post west of the Continental Divide (Beal and Wells 1959: 182-184; Dary 2004: 57-61). In response to this competitor, the HBC constructed Ft. Boise in the Western Plain under the supervision of Thomas McKay the same year (Hutchison and Jones 1993: 18). Eventually, HBC bought out Ft. Hall, thus controlling trade in both the eastern and western regions of Snake Country (Beal and Wells 1959: 193).

The construction of permanent forts within the Snake River Plain was a harbinger of change concerning Euro-American-indigenous contact and economic interdependence.

This transition to fixed bases gradually lessened the necessity for annual rendezvous just as the falling price of beaver belts had made trapping unprofitable in the West (Hutchison and Jones 1993: 19). By 1840, the accustomed form of contact with Euro-Americans in southern Idaho began to transition from roving bands of fur trappers to seasonal and primarily unidirectional emigrants within a narrow corridor. While this presented a different form of Euro-American socio-economic interaction within the region, native populations were nonetheless inclined to perpetuate relations of functional interdependence.

Euro-American Emigration

Between 1840 and 1869, the Oregon Trail, which popularly refers to the series of routes etched across the West, were the means by which Euro-Americans occupied the country (Dary 2004: xiii). The Oregon Trail represented a change in socio-cultural and economic contact between Euro-Americans and native populations within southwestern Idaho and surrounding regions. Unlike fur trappers of previous decades who had focused on riparian economic exploitation of the Snake Country, emigrants sought a topographically expedient east-to-west route through the Plain. This transitory Euro-American population defined the nature of intercultural contact in southwestern Idaho until the discovery of gold in the Boise Basin in 1862 (Beal and Wells 1959: 296; Chaffee 1927: 52; Hart 1993: 6).

By 1860, an estimated 300,000 emigrants, many of whom traveled to places other than Oregon, irrevocably altered the demographic layout of the West (Unruh 1982: Tab. 1, Tab. 2). Depending on geographic location, the impact emigration had upon the

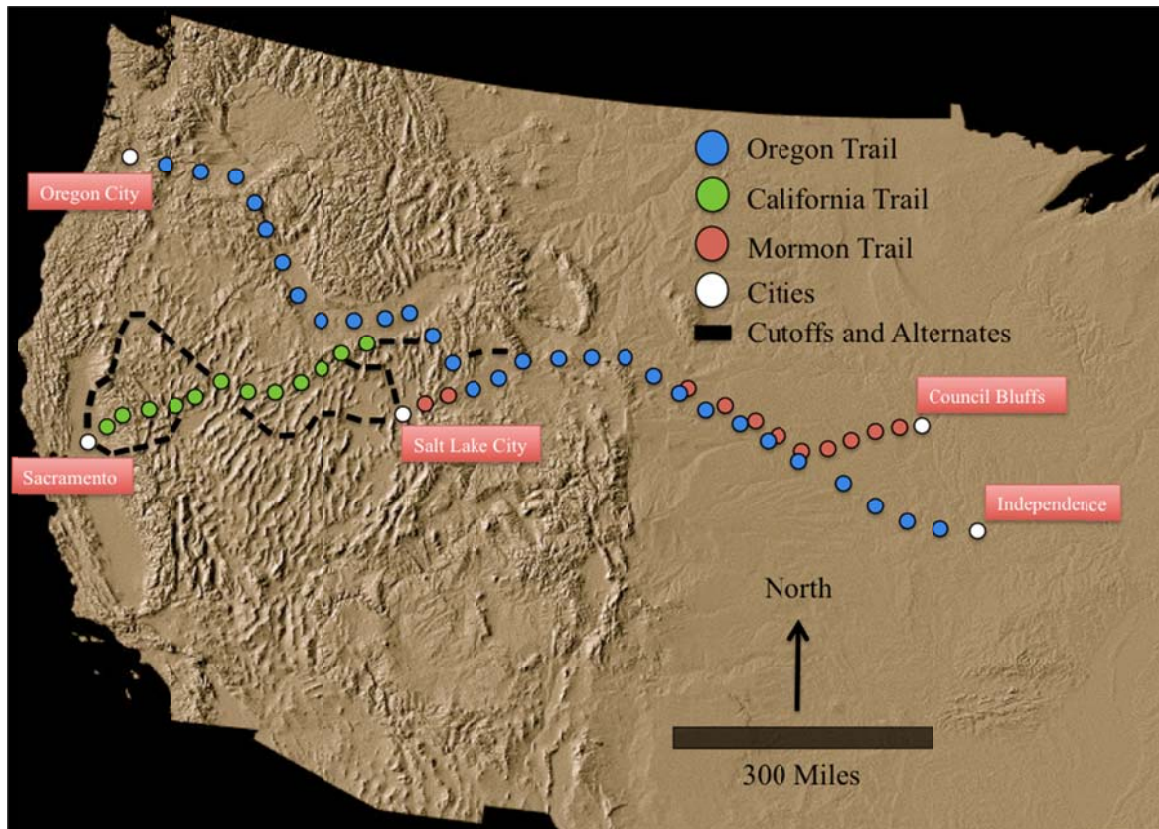


Figure 5.1 Main Routes of Westward Emigrant Passage

environment and native lifeways varied. While Euro-American in origin, the historical records that document the final development of the trail and the overland migration through the Western Snake River Plain provide valuable information. These records include details on the changing nature of cross-cultural interaction, the form of mutual economic interdependence, and the means by which emigrants potentially impacted the environment within the region.

As early as 1813, depictions of Oregon Country and the ease of passage West were promoted in the East by newspapers, politicians and eventually missionaries (Unruh 1982: 1-2, 59-60). Due largely to fur trappers criss-crossing the West by way of game trails and Indian paths, the possibility of a route leading westward gradually emerged as geographical intelligence of the region grew out of continual economic

activity within the interior of the continent (Beal and Wells 1959: 216; Hutchison and Jones 1993: 18).

Beginning in 1825, wagon trains traveled westward to annual rendezvous with the objective of providing supplies to fur trappers and a means to transport beaver pelts and other furs to eastern markets (Dary 2004: 55-56; Hutchison and Jones 1993: 18). This activity not only represented the possibility of an eventual migratory route to the Pacific side of the continent but also the manner in which average agrarian families could migrate (Dary 2004: xiii; Unruh 1982: 2). In 1830, William Sublette brought the first wagons to an annual rendezvous near South Pass, effectively demonstrating the viability of an overland emigrant trail across the apparent “Great American Desert” (i.e., Great Plains) and up to the Continental Divide (Beal and Wells 1959: 164-165; Dary 2004: 54-55; Hutchison and Jones 1993: 19; Unruh 1982: 3). A number of papers hailed this feat as an achievement that refuted claims that the Rocky Mountains were a geographic impediment to westward expansion (Unruh 1982: 2). Two years later in July of 1832, B.L.E. Bonneville led the first wagons over South Pass (Irving 1977: 33; Todd 1982: 276). Such inroads beyond the “Great American Desert” and over the Rocky Mountains signified that a migratory route west for average Euro-Americans was closer to becoming a reality.

Benefiting from the experience and guidance of fur trappers, early interest in forging an emigrant route arose out of Euro-American missionary efforts in the Northwest (Hutchison and Jones 1993: 18, 42). A number of missionaries headed west through southern Idaho during the 1830s (Dary 2004: 60-61; Hutchison and Jones 1993: 42). They eventually returned east, advocating the economic benefits of Oregon Country

through books, lecture tours, conversations and missives to religious leaders and politicians (Dary 2004: 71; Hutchison and Jones 1993: 42). Their roseate description of an agrarian paradise coincided with the depression of 1837, the collapse of the international fur trade in 1839, and yet another depression in 1841 (Beal and Wells 1959: 217; Dary 2004: 71; Defenbach 1933: 221; Unruh 1982: 61).

In 1834, Reverend Jason Lee, a Methodist preacher, traveled west in response to a supposed appeal from a Nez Perce and Flathead delegation visiting St. Louis in 1831 for the Book of Heaven (Dary 2004: 56-57; Hutchison and Jones 1993: 42). Accompanying Nathaniel Wyeth and HBC traders into Oregon Country, he established the first agricultural community in the Willamette Valley (Dary 2004: 60-61). In 1835, Marcus Whitman and Samuel Parker were the first Presbyterian missionaries to head west (Dary 2004: 61). Soon after arriving, Marcus Whitman headed back east and the next year returned under the guidance of a fur-trade caravan with his wife and another couple (Dary 2004: 62; Unruh 1982: 83). This was the first group to reach Ft. Boise with a wagon, having converted it into a handcart west of Ft. Hall (Dary 2004: 62; Hutchison and Jones 1993: 42). The achievement indicated that not only was trans-continental wagon travel nearly a reality, but also it could be done by a family unit, an important factor to the agrarian settlers who mainly comprised the annual migrations prior to the 1849 gold rush (Hutchison and Jones 1993: 42; Unruh 1982: 63).

The appearance of husbands and wives hauling possessions in a wagon along with a number of cattle all pointed to the reality of permanent settlers. These kinds of arrivals at Ft. Hall and Ft. Boise, along with the goods that necessity demanded be left behind, were another push in the direction of British-owned fur trade posts becoming supply

stations for emigrant traffic (Beal and Wells 1959: 193; Hutchison and Jones 1993: 18).

This trend became evident as the number of travelers unassociated with the fur trade increased within westward-bound fur caravans. For example, in 1840, the convoy of Andrew Drips included Pierre-Jean De Smet, the Jesuit missionary, five Congregationalist missionaries, plus the first proclaimed emigrants to Oregon, the Walker family (Dary 2004: 63-64).

Also in 1840, Robert Newell, Joseph Meek and William Craig earned the distinction of being first to take wagons through the entire width of southern Idaho to Ft. Walla Walla (Hutchison and Jones 1993: 42; Newell 1959: 23; Tobie 1982: 357). Setting out from Ft. Hall, Newell later recounted that the difficult wagon crossing through the Snake River Plain, which in some places had sagebrush “higher than the mules’ backs,” was made worthwhile by knowing they had broken the first wagon trail through the region (Dary 2004: 64).

In 1842, with funding from the United States treasury, Dr. Elijah White led the largest emigrant wagon train to the west thus far (Beal and Wells 1959: 221; Dary 2004: 79). Hiring the fur trapper Thomas Fitzpatrick around Ft. Laramie, the wagon train continued into southern Idaho to Ft. Hall (Beal and Wells 1959: 221; Dary 2004: 105; White 1850: 153-154). After obtaining flour and other commodities, the emigrants abandoned the wagons and exchanged cattle for packhorses at the urging of Richard Grant, the fort’s chief HBC agent (Beal and Wells 1959: 227; Dary 2004: 107; White 1850: 164). Successfully crossing southern Idaho by pack train, the emigrants arrived in the Willamette Valley in October (Dary 2004: 2004).

Three weeks behind the White party, Captain John C. Fremont, a topographical engineer, set out with Kit Carson to begin a survey of the emerging Oregon Trail to South Pass for the War Department (Beal and Wells 1959: 227; Dary 2004: 81-82). By reporting that the ascent to the Continental Divide by way of South Pass was comparable to climbing the steps of Capitol Hill, politicians and media alike further promoted the dissolution of the Rocky Mountains as an impediment to emigrants (Unruh 1982: 16-17). The next year Fremont continued the survey through southern Idaho and into Oregon, compiling information concerning the region and becoming the first official military presence in the region since Lewis and Clark (Fremont 1970: 515-539; Beal and Wells 1959: 227).

In the spring of 1843, nearly a thousand emigrants, over a hundred wagons, and perhaps as many as 3,000 cattle, horses, and oxen set out for Oregon Country (Dary 2004: 85). While a few eventually broke off from the main wagon train for California after Ft. Hall, the majority crossed southern Idaho, reaching Ft. Walla Walla on the Columbia River (Beal and Wells 1959: 223; Dary 2004: 106-108). Unlike the emigrants of the previous year, those of 1843 chose to advance through the Snake River Plain with wagons (Beal and Wells 1959: 227; Dary 2004: 107; Defenbach 1933: 223, 224). After the emigration of 1843, the Oregon Trail became a practical route of passage that left little doubt as to its location and feasibility (Beal and Wells 1959: 227).

Emigrants heading for Oregon passed through the Western Snake River Plain during August and September (*Figure 5.2*). Based upon overland emigration numbers compiled by Unruh (1982: Tab. 1, Tab. 2), approximately 53,062 emigrants passed through the Western Snake River Plain between 1840 and 1860 en route for Oregon

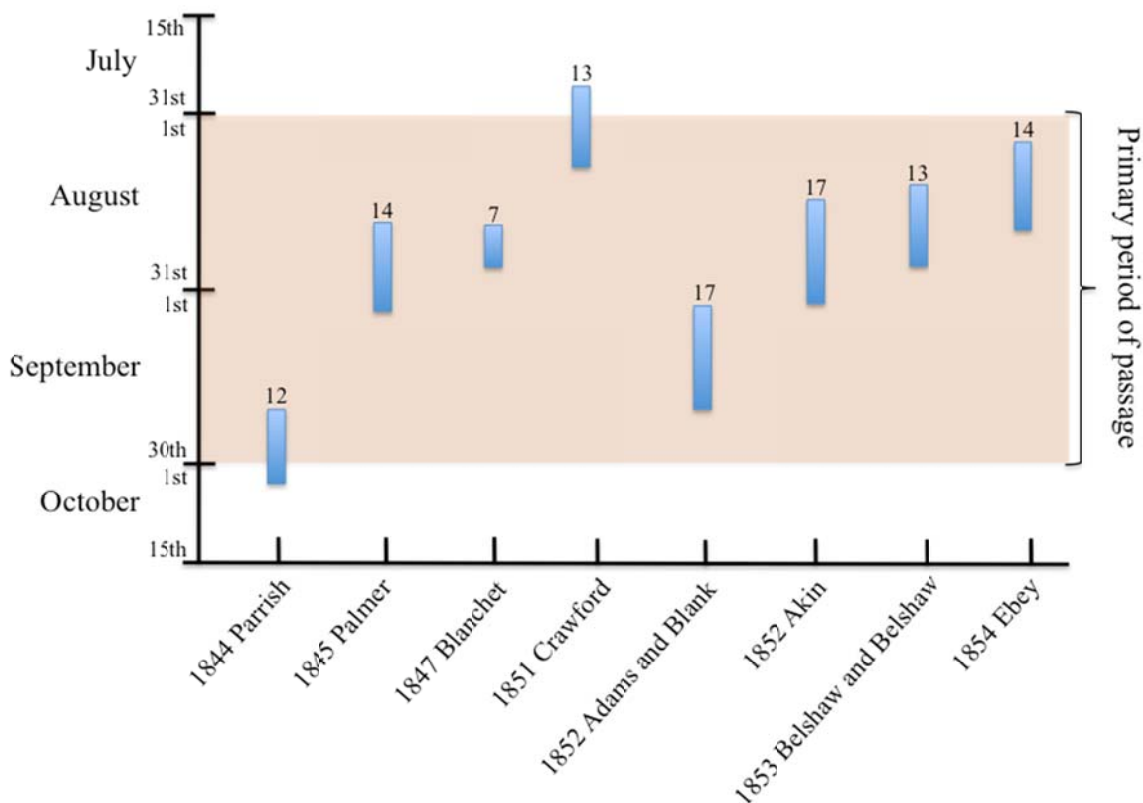


Figure 5.2 Season of Travel Primary window of emigrant travel through the Western Snake River Plain approximately between Salmon Falls and Ft. Boise (HBC) by way of the main route. Blue bars and associated numbers represent days of passage. Average duration was under two weeks (13.3 days). Travel along the South Alternate likely took a few more days since it was 60 miles longer (Meacham 1979b: 3). Within this sample, only Adams and Blank (1992) and Belshaw and Belshaw (2000) took a purposeful day of rest while passing through the region. Only Akin (1989) and Belshaw and Belshaw (2000) had to wait at least a day to cross the Snake River. Emigrant sources are Parrish (1988), Palmer (1999), Blanchet (1978), Crawford (1924), Akin (1989), Belshaw and Belshaw (2000) and Ebey (1997).

(Figure 5.3). The decline in emigrants during 1849 was the result of the discovery of gold in California at John Sutter's sawmill in 1848 (Dary 2004: 187). This discovery diverted the majority of traffic, most of them being gold-seeking males, away from Oregon (Dary 2004: 206; Defenbach 1933: 224; Unruh 1982: 63). Between 1840 and 1851, an estimated 21,562 emigrants migrated to Oregon through the Western Snake River Plain. The peak in travel occurred in 1852 with an estimated 10,000 emigrants. From 1853 to 1860, another 21,500 are estimated to have traversed the region.

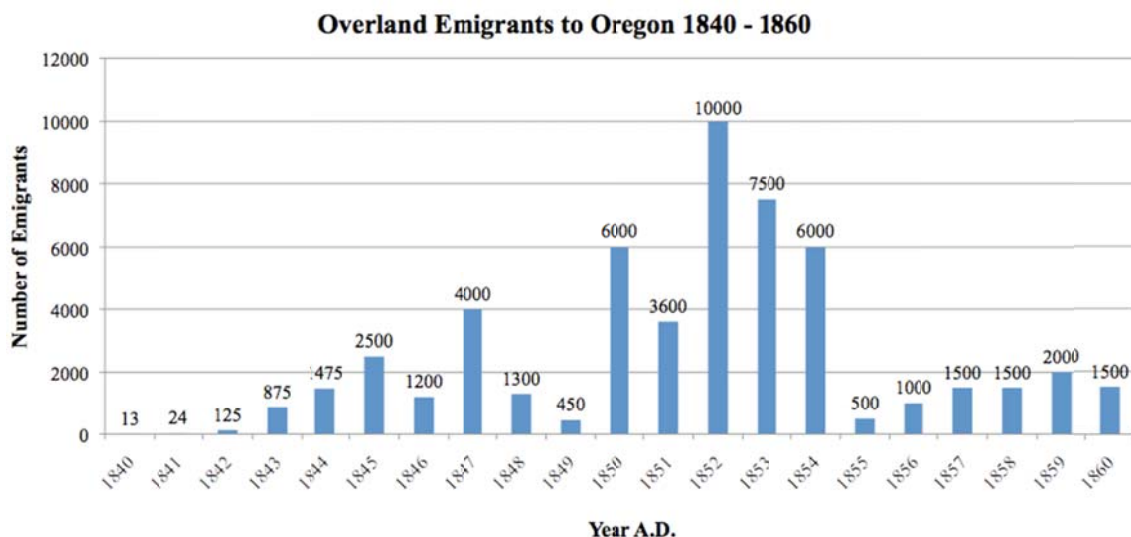


Figure 5.3 Emigrant Numbers Estimated number of emigrants from Unruh (1982: Tab. 1, Tab. 2) that headed to Oregon via the Western Snake River Plain.

During the 1840s and the early 1850s, emigrant-native relations within the Snake River Plain are depicted as being symbiotic (Hutchison and Jones 1993: 114; Neitzel 1998: 71; Unruh 1982: 117-127). Indigenous hunter-gatherers provided aid in river crossings, travel information, and food to agro-pastoralist emigrants in exchange for a wide array of Euro-American goods, including clothing, ammunition, blankets, beads, buttons, mirrors, needles, thread, edible sundries and other items (Hutchison and Jones 1993: 114; Unruh 1982: 118, 125-126). In the Western Plain in particular, exchange relationships centered upon indigenous populations trading salmon for Euro-American goods (*Table 5.1*).

Inherent within the actions of local inhabitants supplying desired goods and services to emigrants was their ability to quickly adapt to the changing nature of economic conditions within the region. During the era of fur trapping, the factor that engendered mutually beneficial relations of exchange between the two cultures focused on the demand for beaver found in riverine ecosystems throughout southern Idaho.

Table 5.1 Exchange Sample of items exchanged between Euro-Americans and indigenous inhabitants within the Western Snake River Plain during the period of emigration. Euro-American sources are Talbot (1931), Fremont (1970), Parrish (1988), Crawford (1924), Adams and Blank (1992), Akin (1989), Belshaw and Belshaw (2000) and Ketcham et al. (1961).

Euro-American	Items Exchanged
1843 Talbot	Horses → Blankets
1843 Fremont	Salmon → Clothing and likely other objects
1844 Parrish	Fish → Ammunition
1851 Crawford	Salmon → Clothing and other goods
1852 Adams and Blank	Salmon → Powder, Lead, Caps, Bread, Brass Nails, Clothing
1852 Akin	Salmon → Salt and Tea
1853 George Belshaw	Salmon → Clothing
1853 Ketcham	Salmon → Ammunition, tobacco, other items

Reacting to changes in Euro-American demand, native populations once again exploited another available resource (i.e., salmon) for reasons unrelated to direct subsistence so as to supply emigrants with a desired product. Though the conditions had changed, functional interdependence was perpetuated.

In the 1850s, however, tensions between Euro-Americans and the inhabitants of southwestern Idaho are historically believed to have increased due to greater emigrant traffic and its impact upon the environment and native lifeways (Ericson 1994: 86-87; Hutchison and Jones 1993: 115; Neitzel 1998: 75-76). However, whatever tensions may have arisen could have been symptomatic of the general attitude of Euro-American superiority that prompted a minority of overlanders to show flagrant disregard for Native American rights and humanity (Unruh 1982: 145-146). Cultural misunderstandings that

resulted from increasing cross-cultural interaction undoubtedly gave rise to strained relations as well. The best example of this is horse thievery. To Euro-Americans, horse stealing was a villainous crime punishable by death, whereas to many Native American groups, including those in the Snake River Plain, it was a praiseworthy pastime (Liljeblad 1957: 51, 1972: 15; Gard 1963: 263-265).

Increased tensions led to a number of killings. Available mortality data compiled by Unruh (1982: Tab. 4) in *Figure 5.4* suggests a pattern of mutual causation focused on non-selective reciprocal killings as the root cause of fatal encounters. Of the known 362 emigrant killings between 1840 and 1860 by Native Americans, 90 percent occurred west of the Continental Divide, primarily along the Humboldt River, the Snake River, and the Applegate Trail (Hutchison and Jones 1993: 115; Unruh 1982: 144).

In 1854, a group of Indians killed 18 members of the Ward party 25 miles east of Ft. Boise near the south side of the Boise River (Beal and Wells 1959: 239; Chaffee 1927: 43; Shannon 2004). This threat to potential emigrants must have had a profound impact when one observes the precipitous decline of emigrants the following and subsequent years as evinced in *Figure 5.3*. While historians have debated the cause, it may be more than coincidence that in the previous year an estimated 19 Shoshone died after consuming a strychnine-laced oxen that had been purposefully left by Euro-Americans in the Boise region in an attempt to prove that natives ate dead and abandoned cattle (Beal and Wells 1959: 259; Chaffee 1927: 43; Ericson 1994: 87-88; Neitzel 1998: 78-79). Four years later in 1860, traveling by way of the South Alternate and approximately 50 miles west of Salmon Falls, 18 members of the Utter-Van Ornum parties were killed by Native Americans (Neitzel 1998: 78; Shannon 1993: 1; Unruh

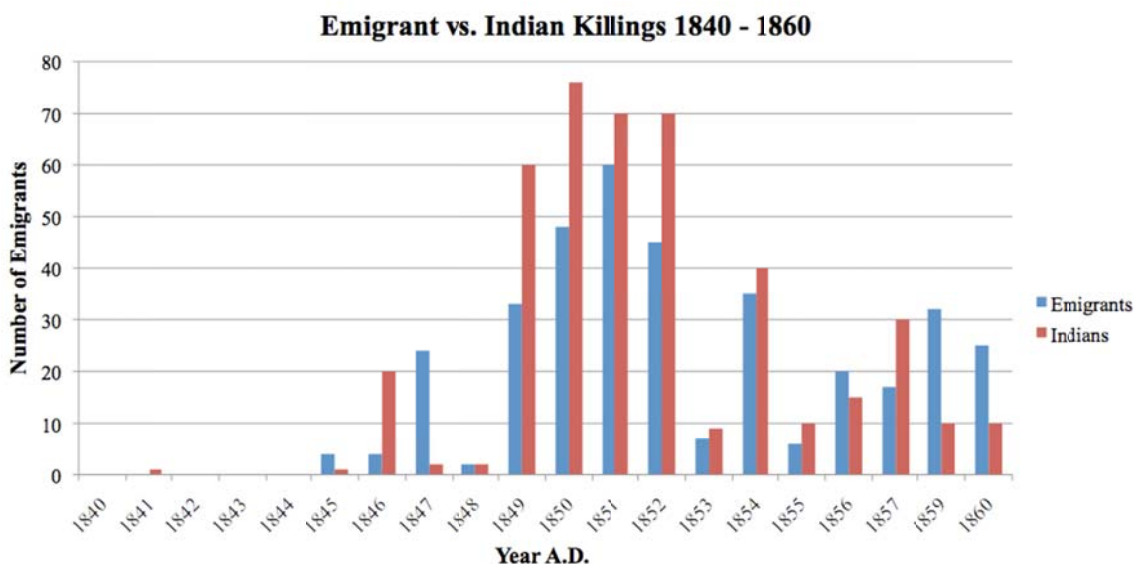


Figure 5.4 Trail Killings Known emigrant-Native American killings tend to show a pattern of reciprocal action. Adapted from Unruh (1982: Tab. 4).

1982: 149-150). Because of these two massacres, the Western Snake River Plain gained widespread national attention (Neitzel 1998: 78).

The abandonment of the partially rebuilt Ft. Boise in 1855 was symptomatic of increasing tensions within the region as indicated by the Ward Massacre (Beal and Wells 1959: 238-239; Chaffee 1927: 45). Ogden abandoned Ft. Hall the next year, effectively removing any permanent Euro-American presence in the entire Snake River Plain (Beal and Wells 1959: 240). The absence of the HBC, settlers, and a permanent United States military presence persisted until 1862 when the discovery of gold in the Boise Basin provided an impetus for large-scale Euro-American settlement in southwestern Idaho (Beal and Wells 1959: 240; Chaffee 1927: 48).

Settlement

Unlike other western regions where settlement was the objective of Euro-American emigrants (e.g., Willamette Valley, central California, and the Wasatch Valley), southwestern Idaho experienced a prolonged period of intercultural contact

without settlement or a significant military presence. What is clearly evident during the initial years of settlement is an abrupt undercutting of native economics and cultural integrity, the likes of which are not apparent during the previous decades of seasonal emigration.

Settlement inaugurated a number of factors that both the fur trade and emigration phases lacked: sudden and widespread Euro-American occupation of the region and the concomitant effects of their concepts concerning regional economic development. Accompanying Euro-American economic pursuits, a fervent anti-Indian mentality was adopted that ensured that native subsistence patterns and lifeways would become unsustainable (see Madsen 1980: 43-56).

Euro-American land-use practices (i.e., agro-pastoralism and mining) appear to have undermined indigenous economics, creating widespread competition in similar resource patches and nullifying intercultural mutualism. This conflict of interest is yet another example of a global trend toward the acculturation, subjugation, and marginalization of hunter-gatherer socio-economic systems (Spielmann and Eder 1994: 307, 309-311). Such a tendency largely hinges upon the breakdown of mutual interdependence, which results in hunter-gatherers becoming disproportionately reliant upon agro-pastoralists for food (Spielmann and Eder 1994: 311). By 1869, only six years after Euro-American occupation, this scenario materialized when many of the beleaguered indigenous inhabitants of southwestern Idaho were moved from their traditional lands to reservations (Madsen 1980: 43-56).

Euro-American settlement of southwestern Idaho commenced in 1863 after the discovery of gold in the Boise Basin by a cohort of three prospecting parties the previous

year (Beal and Wells 1959: 296; Chaffee 1927: 52; Hart 1993: 6). As in other regions of the American West, gold provided a principal incentive for economic development of southwestern Idaho (Chaffee 1927: 48-49; Rohe 1978: iii). Miners originating from Washington Territory, California, Oregon, and British Colombia all headed to the basin in pursuit of the rumor of gold (Hart 1993: 7). To illustrate the magnitude and rapidity of the Euro-American occupation and subsequent settlement, the population of Idaho City has been estimated at 6,275 by the end of 1863, making it the largest city in the Northwest at the time (Hart 1993: 8). The estimated population of the Boise Basin region was 14,910, much of which was young men (Hart 1993: 8, 10, 12).

Most mining activity in the Boise Basin focused on gold found in placer deposits (Hart 1993: 7). Placer material is any sedimentary deposit that contains valuable minerals (Rohe 1978: 1). The principal origin of placer gold is found in alluvial deposits, and mining of such deposits involves the separating of gold and other denser minerals from lighter materials, typically with water (Rhoe 1978: 1).

During the first year of settlement in southwestern Idaho, various methods of placer mining (e.g., panning, rocking, sluicing, hydraulicing) were used to extract gold in the Boise Basin, Idaho's most productive mining region (Wells 2002: 4-7; Rohe 1978: Fig. 28, 1985: 29). These methods, particularly hydraulic mining, quickly impacted local montane environments as they had throughout the West by removing vegetation, displacing sediments, and altering stream morphology (Ehrhart and Hansen 2004: 93; Hart 1993: Fig. 29, Fig. 37; Rohe 1978: 201-244).

Hydrualicing is a highly destructive form of landscape-altering placer mining that uses water shot out of cannons at high pressure to wash away gravels through a sluice

box that catches the gold and dispenses of the tailings (Rohe 1978: 147, 230). This popular form of mining in the Boise Basin began along Elk Creek during 1863 and is depicted in *Figure 5.5* (Rohe 1978: 147, 201-244, 267, 1985: 30; Wells 2002: 7).

The effects of intensive placer mining made streams dumping grounds for tailings, overloading them with sediments that greatly exceeded flow capacity (Rohe 1978: 240-241). In the Boise Basin, the *Boise Democrat* in 1868 stated;

Since then [1865] tailings, sand and gravel from adjacent hill, gulch and bar claims have been sluiced into the main creek channels of More's and Elk Creeks, to an average accumulation of not less than six to ten feet...

These heavy sediment loads literally were the result of washing away hillsides.

As previously mentioned, Liljeblad (1972: 19) states that for an unknown reason salmon failed to run in the Boise River sometime during the early 1860s after miners had entered the region. It seems more than coincidence that intensive placer mining operations within the Boise River watershed coincided with the cessation of perennial salmon migrations. Mining methods employed in the Boise River watershed beginning in 1863 (see Wells 2002), particularly hydraulic mining, are known to have serious consequences for fish by increasing the sediment load in streams (Rohe 1978: 256, 263). Impacts include, but are not limited to, covering spawning gravel, reducing dissolved oxygen, disrupting fish migration, and suffocating fish embryos and juveniles (Belsky et al. 1999: Tab. 1). In California around 1870, salmon also failed to run in the Feather, Yuba, and American Rivers, all of which was attributed to the results of hydraulic mining (Rohe 1978: 263). While correlation does not always reveal the causative agent, the concurrence of placer mining and the stoppage of salmon runs certainly suggest that Euro-American mining activities associated with settlement had an almost immediate



Figure 5.5 Effects of Mining The top photo depicts hydraulic mining around Idaho City that washed away a hillside near Elk Creek, ca. 1870-1900 (Boise National Forest 1993: 150). Though occurring after the initial years of mining, the picture nonetheless depicts the terrain altering effect of one of the principal forms of mining in the basin as well as the most destructive method (Rohe 1978: 230, 1985: 29-30). Hydraulic mining began along the same creek in 1863 (Wells 2002: 7). The bottom photo of the same location depicts that the effects of extensive mining activities can still be seen (photo taken by author in 2010).

impact upon an important resource to native inhabitants.

Although mining within the Boise Basin, the South Fork of the Boise River and Owyhee Mountains was restricted to mountainous regions away from the Snake River Plain, it directly and indirectly impacted all native inhabitants of southwestern Idaho (Wells 2002: 7-35). Aside from damaging riparian habitats, deforesting regions adjacent to mining districts, and overhunting game, miners by their very presence encouraged development of lowland supply communities such as Boise (Boise National Forest 1993: 13-14, Fig. 38a, Fig. 59a, Fig. 64a; Malouf and Findlay 1986: 513; Murphy and Murphy 1960: 319; Wells 2002: *passim*; Yensen 1982: 16).

The population within southwestern Idaho by the end of 1863 is estimated around 30,000 people (Chaffee 1927: 56). As a result of the Euro-American population within the region, President Abraham Lincoln established the Idaho Territory in March 1863, and authorization was given to build a military fort in southwestern Idaho apparently to safeguard passing emigrants and the growing number of miners and settlers (Chaffee 1927: 66; Hart 1993: 8; Madsen 1980: 43). In July of 1863, the military post of Ft. Boise was established just north of the Boise River and near the imminent townsite of Boise (Chaffee 1927: 68-69; Hutchison and Jones 1993: Map 44; Illingworth 1937: 16-17).

A few months prior to the creation of Ft. Boise, settlers Tom Davis and William Ritchey staked some of the first claims in the Boise Valley with the intent of mining the miners by growing and selling produce (Chaffee 1927: 61-63; Illingworth 1937: 14-15). The city of Boise was founded as a supply community and filled the demand for food and feed to satellite-mining communities (Arrington 1994: 197; Beal and Wells 1959: 297; Hartman 1989: 1; Illingworth 1937: 52). Agricultural development quickly established

farms along with ditches that diverted water from the Boise River to crops (Illingworth 1937: 55-57). Seven thousand fruit trees obtained from the east comprised the first orchard in the region, and young cottonwoods along the river were uprooted and planted at various locations as shade trees (Hartman 1989: 4, 80; Illingworth 1937: 53). By 1864, a majority of the land along the Boise River had already been claimed by Euro-Americans (Illingworth 1937: 53).

By the end of 1863, Euro-American settlement of southwestern Idaho was widespread. The sudden influx of Euro-Americans in the area drastically affected native subsistence and lifeways as it did in other regions of the Great Basin (Malouf and Findlay 1986: 512-513; Steward 1938: 14; Thomas 1971). Agro-pastoralists that supplied miners with food occupied the rich bottomlands along rivers throughout the Western Snake River Plain that were traditionally used for indigenous food gathering and seasonal camp grounds (Liljeblad 1972: 32; Merrill 1988: 105-107; Murphy and Murphy 1960: 316, 319; Yensen 1982: 14, 16). Fields adjacent to converted farmland were then claimed for pasture (Yensen 1982: 14). This practice was clearly evident within the Boise Valley by the end of 1864 (Illingworth 1937: 53). The journal of Julius Merrill (1988: 104-107) from the same year recorded the presence of livestock such as sheep and cattle grazing in Camas Prairie, Little Camas Prairie, and Willow Creek. The observed livestock were regularly taken to market in Boise and most likely sold to mining towns, locals, and passing emigrants (Merrill 1988: 104-107).

Throughout southwestern Idaho, Euro-American mining, farming, and ranching activities competed with native subsistence efforts by depleting food plants, overhunting game, and restricting access to resources in lowland and mountainous settings (Liljeblad

1972: 32; Neitzel 1998: 90; Yensen 1982: 14-16). In light of chronic resource scarcity, native inhabitants increasingly stole livestock, raided farms and occasionally attacked settlers, resulting in violent Euro-American retribution (Liljeblad 1972: 32; Madsen 1980: 44-46). As damaging as settler economic activities were to native subsistence, the aggression and intimidation toward indigenous inhabitants by Euro-Americans within southwestern Idaho likely had an even greater effect on hunting and gathering activities (see Madsen 1980: 44-45). This response to native inhabitants was typical of other Great Basin mining regions, many of which chose to see such people as a hindrance to Euro-American economic advancement (Clemmer and Stewart 1986: 525; Malouf and Findlay 1986: 513). Such stigmatization and subordination is not unprecedented and characterizes the majority of hunter-gatherer and agro-pastoral relationships worldwide (Spielmann and Eder 1994: 309).

Indigenous populations of southwestern Idaho are said to have begun abstaining from seasonal subsistence migrations out of fear of Euro-American aggression, and many were brought to the brink of starvation (Madsen 1980: 45-46, 54). Anti-Indian hostilities as indicated by articles in the *Owyhee Avalanche* (1866) that offered rewards for Indian scalps, ironically prompted many natives to seek refuge within the confines of Boise for safety from settlers and military patrols (Ericson 1994: 90; Madsen 1980: 56). By 1869, only six years after Euro-American occupation of southwestern Idaho, “Boise” and “Bruneau” Shoshone were situated within the newly established Ft. Hall Reservation (Madsen 1980: 53-56). This event signified the end of autonomous occupancy of southern Idaho for most Northern Shoshone, Bannock and Northern Paiute.

Throughout the phases of the fur trade, emigration, and settlement, social relations of exchange appear to develop, persist and at the onset of Euro-American occupation, to abruptly collapse. From the time of Wilson Price's crossing of southern Idaho until the discovery of gold in the Boise Basin, dramatic economic changes occurred in southwestern Idaho. Indigenous populations of the region seem to have entered into a functionally interdependent relationship with Euro-Americans during the fur trade era that persisted until the commencement of settlement. By recognizing that hunter-gatherers are highly adaptive to changes within their environment, it becomes plausible to suggest that native inhabitants of southwestern Idaho could have pursued traditional lifeways during Euro-American emigration with little disruption. Ultimately, this environmental-anthropological perspective of the history of cross-cultural interaction within southwestern Idaho may assist in better addressing and framing a discussion regarding what the environmental impact of emigrating Euro-Americans could have been and how this may have affected native lifeways.

CHAPTER SIX: DISCUSSION

Information in the preceding chapters forms contextual boundaries for a critical discussion focusing on the impact emigrating Euro-Americans may have had on the environment and on native lifeways prior to settlement in southwestern Idaho. Despite a lack of evidence, modern scholarly works (e.g., Ericson 1994; Hutchison and Jones 1993: 115; Neitzel 1998) state that environmental degradation occurred and assisted in sullyng intercultural relations by causing economic conflict that undermined native lifeways. As will be shown, environmental degradation resulting from emigrants is far from a certainty. The questions thus remain: What was the actual environmental impact of emigrating Euro-Americans in southwestern Idaho prior to settlement, and how did it affect native lifeways? A critical discussion concerning the nature of the emigration, the possible ecological impacts resulting from emigrants, and the traditional historical perspective suggests that claims by historians concerning environmental degradation cannot be substantiated. In actuality, the negative effect upon native lifeways may have been significantly less than the current historical paradigm contends.

Before discussing the specifics of the emigration, it needs to be stated that the overland passage of Euro-Americans undoubtedly had an impact on the environment of the Western Snake River Plain. However, this should not be equated with environmental degradation and subversion of native lifeways. Instead, it might be better to view this as a novel element that affected ecosystem dynamics and presented new costs and benefits

to indigenous inhabitants. Like culture, ecosystems do not exist in a state of stable equilibrium and homogeneity but are heterogeneous and subject to change (Mulder and Coppolillo 2005: 60-61, 79). Impermanence is the only constant and adaptation the necessity. The presence of emigrants within the ecosystem might be expected to have initiated adaptive responses from hunter-gatherer populations. Similar periods that resulted in alterations of behavior include the extinction of mega-fauna, the extirpation of bison in the Western Plain, the introduction of the horse, and the presence of fur trappers. In this sense, ecological and cultural transformations brought about by the passage of emigrants cannot be narrowly regarded as causing only environmental degradation and destruction to native lifeways.

Nature of Emigration

Differences exist between the Western Snake River Plain and other regions in terms of the sheer numbers of emigrants that traveled the trail prior to 1863. This factor is a central point in defining the degree of environmental impact emigrants had in particular regions. While there is no direct evidence regarding the magnitude of environmental modification in the region, this has not prevented historians from asserting it happened. For example, statements from Neitzel (1998: 75-76) and Ericson (1994: 86) leave no doubt that changes to the environment occurred. But their broad and non-specific assertions lack verifiable evidence concerning locality and magnitude. Such claims are supported from interregional examples, but these do not take into account spatial disparities in the demographic nature of the migration as indicated by Unruh's (1982: Tab. 1, Tab. 2) estimates of emigrants (*Figure 6.1* and *Table 6.1*). This is critical

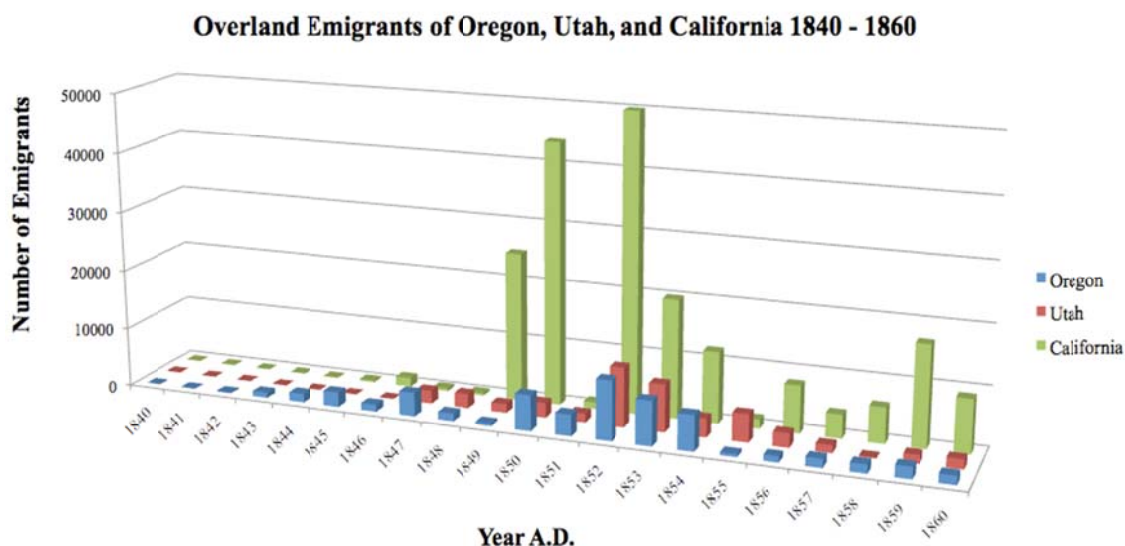


Figure 6.1 Emigrant Numbers and Destinations Comparison of emigrant estimates traveling to different western locations from Unruh (1982: Tab. 1, Tab. 2). Oregon numbers represent those that passed through the Western Plain en route to the Willamette Valley. Refer to *Figure 5.1* for corresponding routes.

Table 6.1 Emigrant Numbers and Destinations Estimated emigrant totals depicted in *Figure 6.1*.

Destination	Number of Emigrants
Oregon	53,062
Utah	42,862
California	200,335
Total	296,259

Table 6.2 Regional Comparisons Based on Unruh's (1982: Tab. 1, Tab. 2) estimates.

Regional Comparisons of Estimated Emigrant Totals 1840 - 1860	
Western Snake River Plain	53,062
Eastern Snake River Plain	200,000 +
Central Nevada	200,000
Great Plains	296,259

because it constrains the possible forms and magnitude of environmental changes that may have occurred.

Compared to trail segments leading through the Great Plains and to California, the emigrant traffic to Oregon was light (*Table 6.1* and *Table 6.2*). When viewing emigrant numbers that are more than four times greater than those that journeyed to Oregon via the Western Snake River Plain, one would expect staggered levels of environmental impact along the way. Any attempted comparisons between regions must acknowledge differences in emigrant traffic and how they translate to the degree of environmental change. Though ecological differences along the course of emigrant trails affect the capacity of an area to absorb alterations (e.g., tall grass prairie, mixed grass prairie, Great Basin Sagebrush) (see Sims and Risser 2000; West and Young 2000), differences between the sagebrush steppe and other environments are not such that they preclude comparisons concerning expected degrees of degradation from similar emigrant totals.

Neitzel (1998: 75-76) cites sources to support claims of environmental degradation, in contrast to Ericson (1994: 86). Madsen (1980: 27) provides the most specific information of Neitzel's (1998) three sources concerning the Snake River Plain. He states that woodlands were denuded and pastures were heavily grazed in the Portneuf-Snake River region of eastern Idaho. While this may have occurred, this claim explicitly refers to the eastern Snake River country and not the western. Because the Eastern Plain was the primary point of departure for California-bound emigrants from the Oregon Trail, it is likely that more than four times the number of Euro-Americans and accompanying livestock crossed through the Portneuf-Snake River region, compared to the Western Plain (Grant 1938: 83; Hutchison and Jones 1993: 82-83; Madsen 1980: 27, 1985: 5;

Stewart 1962: 134-135). Provided that the environment is similar across the Plain, the impact of heavier traffic in the eastern portion cannot be seen as analogous to what may have occurred in the west.

Malouf and Findlay (1986) is the second source used by Neitzel (1998) for support. It is an overview of Euro-American impacts in the Great Basin before 1870. It fails to even mention southwestern Idaho at the time of emigration, let alone southern Idaho in its entirety. The study instead highlights regions that experienced far heavier emigrant traffic, such as the Humboldt River Valley and the Humboldt Sink along the California Trail in central Nevada. Expectedly, Euro-American impacts within ecosystems less stable than the sagebrush steppe of the Plain (i.e., Great Basin Sagebrush regions) (West and Young 2000: 266) likely had a deleterious effect upon native cultures (Harper 1986: 60; Malouf and Findlay 1986: 507-508).

The final source used by Neitzel (1998) is West (1995: 13-50), which pertains to the Great Plains. Starting from frontier towns along the Missouri River (e.g., Independence, Council Bluffs), nearly 300,000 emigrants are estimated to have made their way West by 1860 through the Great Plains. Southwestern Idaho experienced far less emigrant traffic. Accounts claiming that the main route became as wide as ten common streets (West 1995: 30) in the region appear to have no equal in the Western Snake River Plain. This may have been due to the relatively low number of emigrants and physiographic restrictions found in particular stretches of the trail between Three Island Crossing and Boise that likely funneled emigrant traffic through areas of rough basaltic terrain (*Figure 6.2*; Webb 2009). For 1852, Unruh (1982: Tab. 2) estimated that over 70,000 emigrants crossed the Great Plains, a one-year total that is greater than two



Figure 6.2 Canyon Creek A well-preserved portion of the main trail between Boise and Three Island Crossing near Canyon Creek (Webb 2009). Note the deep swale and basaltic rocks cast aside forming the ridges. Most emigrant journals noted this section of rough and rocky passage (Meacham 1979a).

decades of emigration in southwestern Idaho.

Other modern commentaries that directly address native inhabitants of southwestern Idaho or include them with peoples of the Eastern Plain (e.g., Ericson 1994; Hutchison and Jones 1993; Liljeblad 1957, 1972; Madsen 1980, 1985) all struggle with or avoid trying to demonstrate environmental degradation and that native lifeways were undermined appreciably by emigrants. Most notable is the fact that Liljeblad (1957: 5, 50-51, 1972: 23, 29-30) remains silent on the issue. Instead, he states that emigrants were not always sensitive to native culture and that the real crisis for indigenous lifeways came with the discovery of gold in the 1860s. Conversely, Liljeblad explicitly states in

Fowler and Liljeblad (1986: 456) that indigenous populations during the time of emigration in central Nevada were adversely affected by the destruction of seed plants, overhunting of large game, denuding of fuel, and the blighting of water holes.

Furthermore, the relatively light emigrant traffic within the Western Snake River Plain was likely split between the main route of the Oregon Trail and the South Alternate (Meacham 1979b: 3; National Park Service 1999: 35). Separated by approximately 25 miles at its greatest distance, these two routes partitioned the body of emigrants passing through the Western Plain (*Figure 6.3*). This aspect of the emigration through the region further weakens expectations of environmental degradation by decreasing emigrant and livestock numbers that impacted local ecosystems. Ericson (1994: 86-87) states that conflicts in the Boise region over resources became an “undeclared war” in part due to the severe degradation caused by tens of thousands of emigrants that annually passed through the area during the 1850s. Unruh’s (1982: Tab. 1, Tab. 2) estimated numbers of emigrants who passed through the region falls far short of this statement

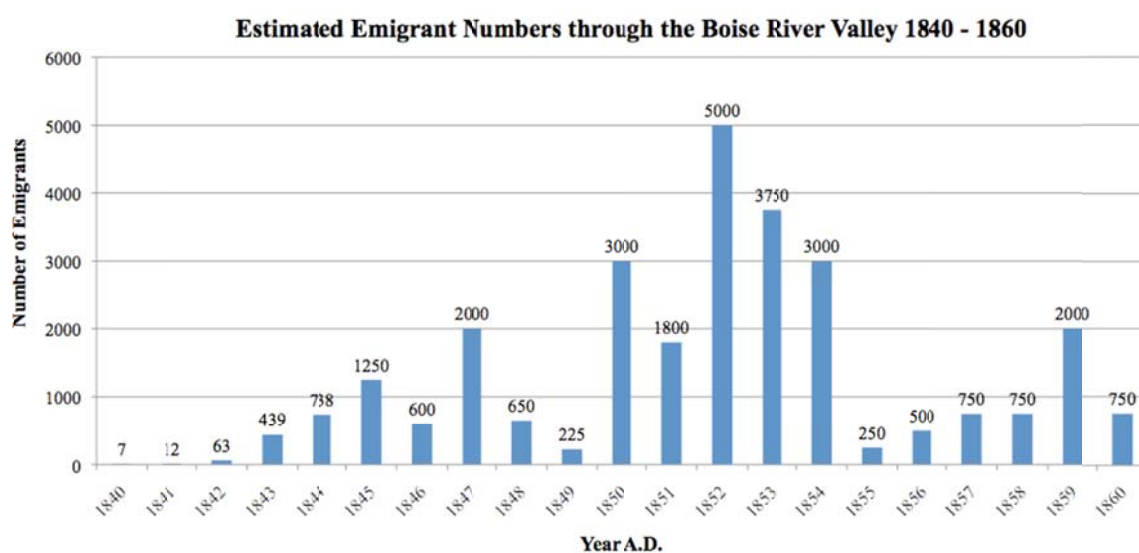


Figure 6.3 Emigrant Numbers in Boise Numbers are based on Unruh’s (1982: Tab. 1, Tab. 2) annual estimations for Oregon-bound emigrants. Estimated emigrant totals through the Boise River Valley assume that 50% of emigrants used the South Alternate.

(see *Figure 5.3*). Assuming half of the emigrants chose the South Alternate, *Figure 6.3* shows that such a statement cannot be upheld.

Expectations that assume emigrant contact adversely impacted the environment and native lifeways within southwestern Idaho are primarily founded upon non-analogous comparisons within western localities along emigrant trails that experienced greater Euro-American traffic. Overall, far fewer emigrants traversed the Western Snake River Plain in relation to other regions. Whatever environmental impacts resulted from emigration can be viewed quantitatively. This is crucial if the goal is to develop inferences concerning how local environments and native societies may have been affected.

Ecological Impacts

Now that emigration has been estimated in quantitative terms, potential forms of environmental degradation resulting from travelers along emigrant routes can be investigated. Neitzel (1998: 75-76) provides a springboard to address potential impacts originating from emigration prior to Euro-American settlement within the region:

Pastures were overgrazed, wood supplies depleted, and habitats destroyed. Biological invasions also occurred...Game animals were hunted out and affected by diseases hosted by domestic stock. And native vegetation was invaded by non-native weeds and plants inadvertently imported on the wagon trains.

All of the above occurred in one fashion or another but on a time scale that extends decades into settlement. These plausible yet unsubstantiated forms of damage during emigration can be placed in four intertwined categories: depopulation of game animals, overgrazed pasture, riparian deforestation, and invasion of exotic flora. By analyzing

Table 6.3 Impacts List of potential ecological impacts during Euro-American emigration that could have affected native inhabitants of southwestern Idaho

Impacts	Cause	Possible Results
Depopulation of game animals	- overhunting - Old World disease	- limited wild game for native inhabitants - altered habitats
Overgrazed pastureland	- overgrazing by livestock	- depleted native foodstuffs - reduction of pasture for horses - riparian alterations
Riparian deforestation	- search for fuel	- destruction of riverine habitat - limited fuels for fire in wintering locations
Exotic plants	- emigrant wagons - livestock	- altered ecosystem dynamics (i.e., grasslands, fire regimes)

ecological conditions of southern Idaho, native subsistence strategies, and the defining characteristics of emigration, it appears that broad-scale environmental degradation did not occur and that the negative effect upon native lifeways was minimal.

Depopulation of Game Animals

What activities by transitory emigrants could have had an impact on game animals that were important to native subsistence in southwestern Idaho? Hutchison and Jones (1993: 114-115) state;

The emigrants always supplemented their diet with any game they could successfully hunt along their routes. As time permitted, the emigrants also organized hunting parties which ventured some distance in search of fresh meat. The lack of game caused serious economic dislocation of various local Shoshone-Bannock groups [includes all southern Idaho populations].

This claim echoes that of Neitzel (1998: 76) by stating that overhunting impacted the

Western Plain. However, once again there appears to be no strong foundation for such claims pertaining to the region. By considering the number of emigrants, the location of the trail, season and speed of passage, the existence and perpetuation of the traditional exchange system, along with the hunting success of emigrants, it is unlikely that Euro-Americans overhunted game that was essential to native subsistence activities.

While Old World disease is cited as working in tandem with overhunting to decrease wild game populations (Neitzel 1998: 76), an in-depth discussion will not be undertaken for several reasons. First, it is speculative that disease afflicted wild game populations and reduced densities in southwestern Idaho during emigration. Even in other regions that experienced heavier traffic such as along the California Trail, Malouf and Findlay (1986: 507) say such traffic “may have” impacted local wildlife. Second, is it not possible that the horse had already transmitted similar diseases prior to emigration since it had likely been in the region for over 140 years? Lastly, the persistence of the cross-cultural system of exchange offers evidence that disease along with overhunting did not significantly decrease game densities and will be discussed later.

One of the issues concerning the matter is a lack of physical evidence that could be used to confirm or deny overhunting took place. Data pertaining to early historical population densities for individual species is nonexistent, aside from indicating whether a species was present or absent. Although an in-depth ecological overview and impact analysis of every game animal utilized by native inhabitants and emigrants alike is well beyond the scope of this paper, broad inferences can be made concerning the ecosystem in general.

Since the number of emigrants passing through the Western Snake River Plain was fewer compared to that in other regions, there may have been a proportional reduction in hunting pressure placed upon those game populations encountered. In the case of southwestern Idaho, it appears that the degree of hunting pressure that existed within the Great Plains, along the California Trail, and in eastern Idaho cannot be demonstrated.

The location of the trail (i.e., main route, South Alternate, North Alternate), along with the season and speed of travel, put limitations upon the impact emigrants could have on certain wildlife. One species that can be used as an example is *Odocoileus heminous* (Mule deer), primarily due to its year-round availability to indigenous inhabitants and contemporary harvest data (Plew 2008: 17). Because of the likelihood that it was a highly ranked resource, its abrupt removal from the land could have significantly impacted native subsistence more so than other species (Murphy and Murphy 1960: 319, 321; Plew 2008: 136; Simms 1985).

Depicted in *Figure 5.2*, emigrants primarily passed through the region during August and September. Emigrants either utilized the main route or the South Alternate, both of which ran directly through the Western Snake River Plain but on different sides of the Snake River (see *Figure 1.1*). During this time of year Mule deer live in the cooler surrounding hills away from the open rangelands and in the winter return to the Snake River Plain (Ada Council of Governments 1973: 77-78; Larrison 1967: 129-130; Steward 1938: 36). This suggests a majority of Mule deer were not located in close proximity to the trail for hunting to occur. Based on emigrant journals, this author has yet to come across a single reference to the killing of a deer by an individual or an organized hunting

Table 6.4 Emigrant Hunting Emigrants that mention hunting for wild game or fishing were most often successful around the Boise region, likely due to the greater amount of biodiversity and population densities supported by the riparian ecosystem. Euro-American sources are Talbot (1931), Crawford (1924), Adams and Blank (1992), Akin (1989), Belshaw and Belshaw (2000) and Merrill (1988). Philip’s account is contained within Meacham (1979a).

Euro-American	Local Game Procured
1843 Talbot	Ducks – near Boise
1851 Crawford	Sage grouse, jackrabbits, and quail – near Boise
1852 Adams and Blank	18 Rabbits – near Boise
1852 Akin	Rabbits “plentiful” – unclear if hunted – near Boise
1853 George Belshaw	Catch “fish” – Boise River on two occasions
1854 Philip	Two rattlesnakes – west of Bruneau River
1864 Merrill	One antelope – near Black’s Creek Stage Station

party. Instead, other species characteristic of the Plain ecosystem during the season of emigrant passage were opportunistically taken in biological diverse regions such as the Boise area (*Table 6.4*). The absence of large game such as Mule deer in the Plain during this time of year corresponds with Steward’s (1938: 234) statement that within the region game was generally very scarce.

Even assuming that significant numbers of Mule deer were harvested by roving parties that ventured into the foothills, Mule deer populations can withstand significant hunting pressure and still maintain a healthy population. Annually, one-third of the population perishes but due to a yearling’s ability to mate, these deer have a high rate of productivity (Shackleton and Harestad 2003: 391). Harvest data collected by the Idaho Fish and Game (2008) between 2002 and 2007 in management zones that include the

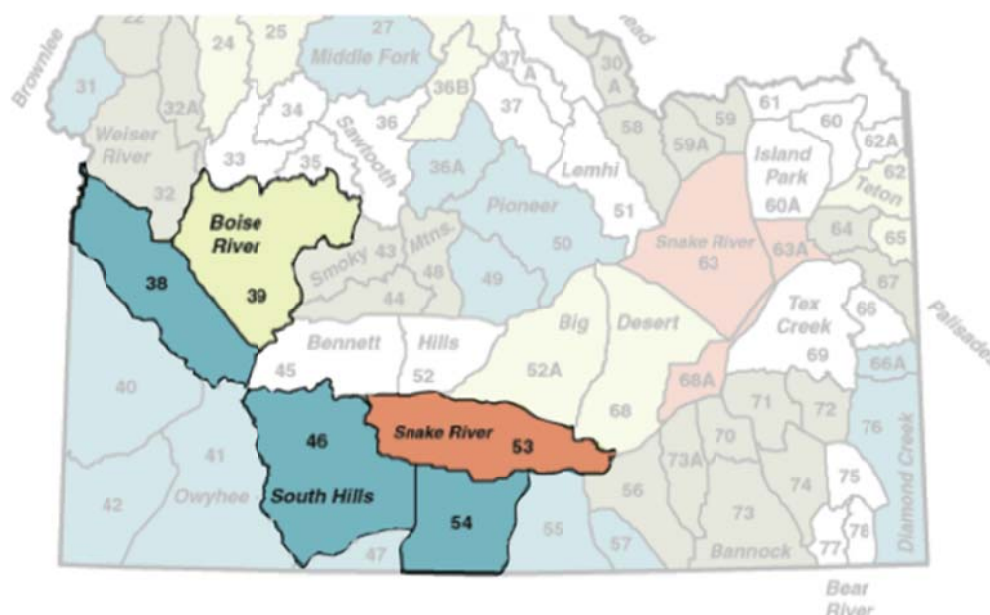


Figure 6.4 Mule Deer Hunting management zones with consistent Mule deer harvest data that includes the Oregon Trail in southwestern Idaho (Idaho Fish and Game 2008)

Western Snake River Plain and adjacent mountain regions had a total annual harvest under 4,000. This data illustrates that under modern day ecological conditions Mule deer populations withstand intensive harvesting but still annually regenerate. While sustainable annual harvests during the mid-19th century in the region could have been more or less depending on ecological conditions of the time, natural Mule deer population regeneration indicates that the species withstands continual and significant hunting pressures. This further suggests that Mule deer populations were not overhunted within the region and that native inhabitants were not adversely affected.

Concerning the speed of passage, Euro-Americans moved quickly through the region, rarely taking a day for rest. This put further limitations upon hunts that may have been conducted away from continually moving wagons. To the knowledge of this author, references to specifically designated hunting task groups from emigrant accounts that

emanated from the trail corridor to adjacent regions are unknown. While this does not preclude their occurrence, the failure of emigrant diarists to report such activities and the wildlife they could have procured is peculiar since they typically record events pertaining to the acquisition of wild food, whether through trade or hunting (e.g., Adams and Blank 1992; Akin 1989; Crawford 1924; Merrill 1988; Palmer 1999; Parrish 1988).

It is more likely that emigrants took game opportunistically as they encountered it or within a short distance from camp. Wild game obtained by emigrants in *Table 6.4* all appear to be a result of opportunistic encounters with resources and do not seem to be the result of planned forays. In the case of Merrill in 1864 (1988: 107), he says, “As we were driving along we saw several antelope at play about half a mile from the road, and two of our party succeeding in shooting one.”

Even if significant numbers of game were opportunistically obtained within trail corridors, it must be remembered that this ribbon of Euro-American passage represented only a fraction of the overall ecosystem of southwestern Idaho. Taking wildlife within this swath of land did not necessarily constitute a decrease of native resources across the entire region.

Within the Western Snake River Plain, the social system of exchange established early during the 1840s seemed to continue even after the peak year of travel in 1852 (see *Table 5.1*). Emigrant-indigenous trading relationships persisted in ordinary fashion; Euro-American goods traded for fish (e.g., Belshaw and Belshaw 2000, Ebey 1997). Trading away a needed food source on the part of indigenous inhabitants seems counter-intuitive if serious economic irritations had occurred due to a lack of game they typically relied upon. Also, the creation and perpetuation of the cross-cultural trading system may

have resulted from a majority of emigrants not being able to successfully supplement their depleted provisions with hunting.

If Euro-Americans made a concerted effort to opportunistically hunt within the trail corridor or took forays into adjacent regions, there was no guarantee of success. Emigrants were not the hardened fur trappers of previous decades that professionally hunted but were primarily family-oriented farmers inexperienced with their firearms (Hutchison and Jones 1993: 97, 115; Unruh 1982: 63; Young and Sparks 1985: 22). A fur trapper by the name of Osborne Russell (1965: 5) said it well, “Altho the country abounded with game still it wanted experience to kill it.” A case in point was Russell’s first attempt to kill a buffalo in the Eastern Plain, which ended in failure after having fired 25 times at the animal.

Just because emigrants possessed firearms did not mean they resembled proficient hunters. West (1995: 54-55) argues against the myth that westward bound emigrants were solely responsible for the depletion of bison. Overall, they were inexpert bison predators. Most accounts of buffalo hunts on the Great Plains ended in mishaps resulting in no kills and often embarrassment. Furthermore, there are numerous accounts of emigrants accidentally shooting themselves, incidents that can likely be attributed to their unfamiliarity with such weaponry (Dary 2004: 136, 173-174; Hutchison and Jones 1993: 98, 115).

Essentially, there is no strong foundation for claims applying to the Western Snake River Plain concerning the overhunting of game by emigrants. Considering the number of emigrants, the location of the trail, season and speed of passage, the existence and perpetuation of the traditional exchange system, and emigrant hunting proficiency, it

seems extremely unlikely that emigrants were capable of affecting native subsistence by overhunting certain species that were important to aboriginal peoples.

Overgrazed Pastureland

Most of the Western Snake River Plain in late summer did not resemble the lush tallgrass prairie of the Great Plains Euro-Americans witnessed in the spring but rather a shrub-dominated steppe with a patchy distribution of desiccated perennial bunch grasses (Meacham 1979a: 7-18; Fremont 1970: 515-539; Sims and Risser 2000: 332-333; Vale 1975: 34; Yensen 1982: 1; Young and Sparks 1985: 19, 21, 25). As emigrants passed through the region, Euro-American livestock (i.e., cattle, horses, mules, sheep) grazed upon vegetation in river bottoms and uplands of the Western Plain. The questions are whether livestock overgrazed these pasturelands and in doing so negatively impacted native lifeways. Modern historical works assume that overgrazing was significant (e.g., Ericson 1994: 86; Hutchison and Jones 1993: 115; Neitzel 1998: 75). For example, Ericson (1994: 86) states;

Conflicts over resources and territory increased rapidly [1850s]. Shoshone-Bannock groups would return to traditional wintering places, such as the Fort Hall Bottoms and the Boise River Valley, and find their resources severely degraded by the passing of tens of thousands of emigrants and their hundreds of thousands of livestock.

Within this broad statement, it seems that environmental degradation was a consequence of overgrazing. Considering the reliance of the indigenous economy upon native grasses, the possible number of livestock, season of the transhumance event, ephemeral nature of Euro-American passage, and emigrant journals, it can be inferred that the region was not overgrazed and that indigenous subsistence activities were minimally impacted.

Two primary factors determined the importance of grasses within the native economy: first, the degree to which indigenous inhabitants relied upon them as a food source; and second, the level of dependence placed upon the horse in subsistence efforts. Unlike a majority of aboriginal Great Basin diets, grasses were of little dietary importance to indigenous populations within the Western Snake River Plain due to the availability of other highly ranked resources (i.e., tubers, fish, big game) (Murphy and Murphy 1986: 286-287; Steward 1938: 18-19, 232). Among the anthropological reconstructions of native economics within the region (e.g., Liljeblad 1957; Murphy and Murphy 1960; Plew 2008; Steward 1938), none portray the gathering of grasses as important to subsistence. Whatever the effect livestock grazing had on bunchgrass communities, it likely impacted a less than optimal food resource for native inhabitants.

Another means by which grazing of Euro-American livestock could have affected native subsistence efforts is depleting the amount of forage for their horses. This hinges on the level of dependence that native populations of the region placed upon the horse for resource procurement activities. Compared to the Shoshone-Bannock of the Eastern Plain and the Nez Perce to the north, fewer individuals in southwestern Idaho used the horse due to ecological restrictions, their minimal participation in equestrian buffalo hunts, and an adherence to traditional subsistence activities that were pursued on foot (Liljeblad 1957: 40-41, 56, 82, 1972: 4, 17; Murphy and Murphy 1960: 319; Steward 1938: 165-167). Generally, the limited reliance upon the horse for subsistence efforts likely mitigated any adverse impacts the grazing of Euro-American livestock had within their corridor of passage.

The number of livestock (i.e., oxen, cattle, horses, mules, sheep) brought through the Western Snake River Plain by emigrants is truly unknown. Furthermore, it has not been determined when an environmental threshold would have been crossed. The reliability of high-end livestock estimates that may unintentionally assume the emigration was quantitatively uniform across the Plain have not been tested (e.g., Ericson 1994: 86; Yensen 1982: 13). Yensen (1982: 13) states;

It is no exaggeration to say that the perennial grasses within several miles to either side of the Oregon Trail routes must have been severely injured by the time of peak emigration. Ten thousand wagons a year would mean, by the most conservative possible estimate, 60,000 head of horses, cattle, and mules, and there were without doubt many times that number...A more realistic estimate is 250,000 head of livestock crossing the Snake River Plain each year during the years of peak emigration.

Even during the apex of emigration in 1852, which is estimated at 10,000 people (Unruh 1982: Tab. 2), there was likely never a season with 10,000 wagons crossing the Western Plain. Anything but an intensive investigation that sifts through the voluminous, fragmentary and contradictory historical information (e.g., early Oregon censuses, newspaper reports, emigrant accounts, fort registers) concerning total livestock numbers that passed through the region cannot yield substantive estimates.

Some estimates fall between 1 and 1.5 million animals as crossing the West approximately over a 20-year period (e.g., Madsen 1980: 27; Stewart 1962: 319; Unruh 1982: 334). If it is assumed that 2 million head of stock crossed the continent via the network of trails at an equal amount per individual, this value can be used to develop a predictive model. According to Unruh's (1982: Tab. 1, Tab. 2) estimated numbers of emigrants, only 18% (53,062 of 296,259) of overlanders traveled to Oregon. Based on this, it can be calculated that over a 20-year period about 360,000 head of stock crossed

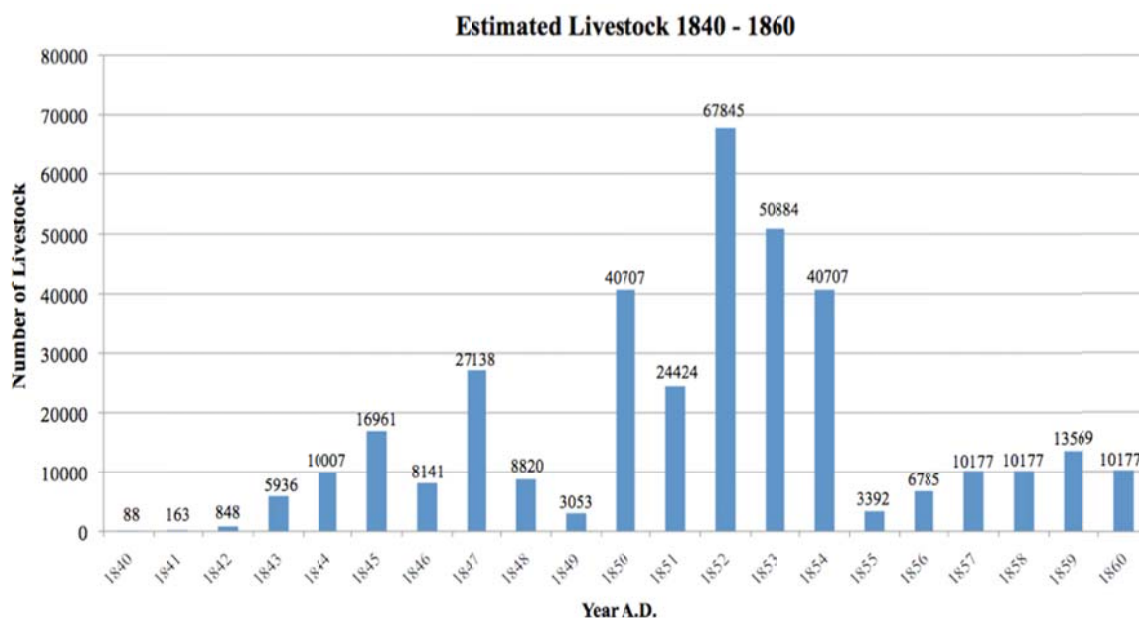


Figure 6.5 Livestock Estimated numbers of livestock that passed through the Western Snake River Plain assuming 2 million head of livestock crossed the continent during the overland emigration between 1840 and 1860. Numbers are also result of the assumption that livestock were equally distributed between every emigrant.

the Western Plain.

Figure 6.5 shows that with these assumptions not a single year approaches Yensen's (1982: 13) estimate of 250,000 livestock during peak years. Additionally, whatever the actual number of livestock, the impact would have been further reduced because of use of both the main route and the South Alternate (Meacham 1979b: 3; National Park Service 1999: 35). The 360,000 animals derived from the predictive model when tested by future research may prove to be a high-end estimate itself.

One historical record of interest concerning this issue is the Oregon State-Washington Territory census of 1860 that tallied total population of cattle at 182,282 (Kingston 1923: 184-185). While this value is only an approximation that fails to include horses, mules, and sheep, cattle seem to have made up the majority of stock animals herded by emigrants (e.g., Barry 1972: 1084; Munkres 2003: 309). Thus with the

addition of even 100,000 animals, the value still falls short of the estimated 360,000. This record also does not take into account how many of those cattle resulted from propagation while already in Oregon. Thus the number of cattle driven through the Western Snake River Plain during the antebellum years may have been significantly less than what the census initially suggests.

Regardless of the number of livestock, the timing of the seasonal transhumance event further suggests that Euro-American grazing activities did not denude the landscape of perennial grasses, deleteriously impacting native lifeways. A majority of the migratory population crossed through the Western Plain in late summer and early fall during August and September (see *Figure 5.2*). At this time perennial bunchgrasses rapidly desiccate and become dormant, providing poor forage for livestock (Yensen 1982: 10).

Perennial grasses of the Plain and other sagebrush steppe communities must grow, flower, and set seed between spring and mid-summer as a result of the narrow temporal window that provides adequate soil moisture levels and favorable temperatures (West and Young 2000: 262; Young and Sparks 1985: 33-34). By the time emigrant livestock had the opportunity to graze upon the pastures of the Western Plain, they had already reproduced, ensuring that progeny would grow the next season. However, if emigrants and their livestock had passed during the spring as they did in the Great Plains, this annual grazing would have caused high plant mortality and prevented perennials from rebuilding carbohydrate reserves, limiting their ability to produce new seeds and plants (West and Young 2000: 264; Young and Sparks 1985: 34). Thus, ecologically it might be argued that the timing of emigrants did not have a serious impact on vegetational

resources used by native grazers (i.e., the horse) that were important to some of the indigenous inhabitants.

The duration of the emigration in the form of an aggregated body and as individual families or groups further reduced the impact upon the land. Because the majority of emigrants passed through the region in two months, grasses were subject to intensive herbivory for only a limited period on an annual basis. This contrasts with the traditional and destructive method of season-long (i.e., continual) grazing that accompanied settlement across the West (Burkhardt 1996: 13). On the scale of the individual wagon or caravan, the period of time most emigrants took to traverse the Western Plain created another restriction. Due to their daily westward progression and since they infrequently took a day of rest while passing through the region, their ability to travel perpendicularly to the trail corridor in search for pasture was limited.

The cumulative result of a limited number of emigrants, the season of travel, and the duration of passage may explain why diaries ranging from the early 1840s to after the peak period of emigration in 1852 make very similar comments about the nature and availability of grasses in the region (e.g., Adams and Blank 1992; Akin 1989; Belshaw and Belshaw 2000; Ebey 1997; Fremont 1970; Ketcham et al. 1961; Meacham 1979a, 1979b; Palmer 1999). Euro-American accounts describe the main route as containing large patches of dried bunchgrass, rarely stating that the region had no available forage. Along this route, the Boise region is said to have rich grasses even after the heaviest year of travel. Conversely, the earliest descriptions of the South Alternate describe it as being barren, a point emigrants recorded year after year. The impression left by diarists throughout the Western Plain is that there was not a pattern of annual ecological

disturbance concerning the normal propagation and range of grasses, thus suggesting that overgrazing likely did not occur even during the peak years of travel.

Claims by historians that overgrazing occurred in the Western Plain prior to settlement may not be supported when critically evaluated. Considering the reliance of the indigenous economy upon grasses, the possible number of emigrant livestock, the season of transhumance, the duration of Euro-American passage, and emigrant accounts, it can be deduced that the region was likely not overgrazed. If this was the case, then the indigenous economy was minimally impacted by the presence of stock.

Riparian Deforestation

Throughout the West and especially in regions characterized by dry intervals, riparian ecosystems are ecotonal areas with disproportionately high productivity and biodiversity in relation to adjacent uplands (Belsky et al. 1999: 422; Kauffman and Krueger 1984: 430; Lohman 2004: 74). Anthropogenic disturbances such as deforestation within these important interchanges between aquatic and terrestrial habitats can lead to disruptions in the ability of a river to perform fundamental ecosystem services (Ehrhart and Hansen 2004: 88-89; Kauffman and Krueger 1984: 430; Sweeney et al. 2004: 14132).

Neitzel's (1998: 75) comment that "wood supplies [were] depleted and habitats destroyed" implies another form of environmental degradation, riparian deforestation. While emigrants would have been expected to seek out combustible fuel for warmth and cooking, is it possible that they were able to significantly impact riverine habitats that were important to indigenous lifeways? By examining the ephemeral passage of emigrants, physiographic restrictions, and documentary evidence, it appears that prior to

settlement, riparian deforestation minimally impacted crucial riverine ecosystems throughout the Western Snake River Plain.

Before discussing how timber in riparian settings might have been impacted, the nature of riverine habitats needs to be examined. Like the surrounding uplands, riparian ecosystems throughout the Snake River Plain are not homogenous ecological units. For example, in 1845 Palmer (1999: 98) noted that “There is not much timber along the stream, but great quantities of brush” in reference to the Boise River just east of Ft. Boise. This statement takes on additional weight since 1845 was early in the emigration period and before the years of heavy traffic. However, further upstream along the Boise River, Palmer (1999: 98) and other emigrants (e.g., Belshaw and Belshaw 2000: 39; Ebey 1997: 157; Merrill 1988: 108) recorded their first glimpse of the Boise region as being lined by significant timber. A point of interest that emerges is that historically timber along some watercourses was not necessarily continuous for long distances. Furthermore, the fact that many emigrants excitedly recorded what they observed at Bonneville Point is a statement itself about the lack of trees throughout the Snake River Plain. The limited distribution of trees created two conditions. First, since they were a small part of the sagebrush-steppe community, any impact placed upon them by emigrants could have been significant. Conversely, since riparian tree distribution was restricted, opportunities for emigrants to encounter groves and to impact them were circumscribed.

The goal of emigrants was to pass through the region as quickly as possible. Given their priorities, the chief interest was not to fall trees to build structures or clear land for agriculture. Instead they needed a quick and obtainable fuel source that would



Figure 6.6 Bonneville Point View just west of Bonneville Point facing the Boise River Valley (Webb 2009). This point is where emigrants first observed the Boise River and the timber that lined it. The red line depicts the swale of the Oregon Trail.

last for a number of hours, not days or weeks. The optimality of felling and chopping a tree of moderate diameter with an axe is counter-intuitive when there were other easier sources of fuel available, such as shrubs that took far less physical exertion to procure. Although trees may have been available at various locations, it does not mean they were used, considering that emigrants moved quickly through the region.

Physiographic restrictions further circumscribed the likelihood that emigrants frequently harvested trees. Due to the layout of the Western Plain and the location of emigrant trails (whether on the north or south side of the Snake River), tributaries generally run perpendicular to the routes traveled (*Figure 6.7*). Since emigrants rarely

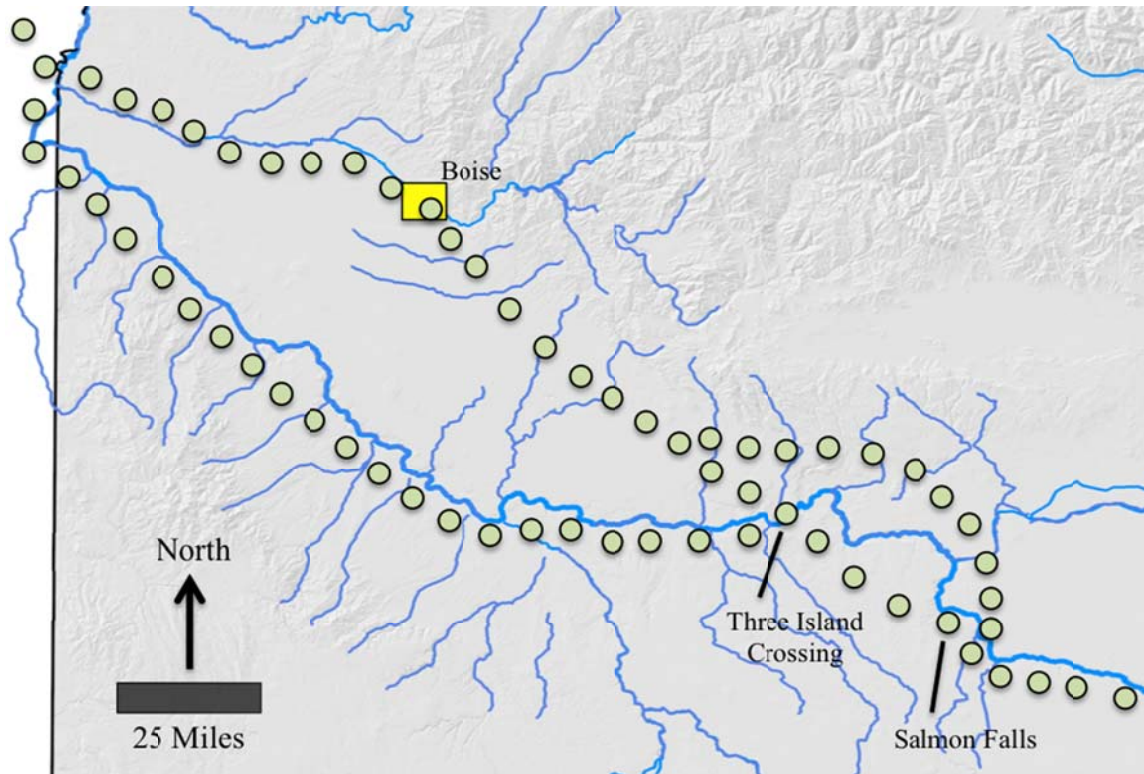


Figure 6.7 Streams and Emigrants Tributaries throughout the Western Snake River Plain in relation to emigrant trails. Aside from the Snake and Boise Rivers, the routes of emigrant passage generally run perpendicular to waterways.

paralleled waterways that fed the Snake River, their impact occurred only within areas of intersection and the abutting regions. This minimization of contact points along the length of a tributary also decreased the probability that they would even encounter a significant growth of trees. The primary exception to this is the South Alternate. While tributaries still ran perpendicular to the wagon route, emigrants stayed relatively close to the Snake River until they left the Western Snake River Plain. However, Euro-Americans during the entire duration of emigration prior to settlement emphasize the nature of the route as being dry and barren of even grass, which suggests that heavily wooded areas were rare (Meacham 1979b: 3-19).

Lastly, at the time when settlement began, there is evidence from the new town of Boise that even after 20 plus years of emigration, trees still lined the riverbank. Merrill

(1988: 108), an emigrant of 1864, viewed the east side of the valley from Bonneville Point. He stated, “Considerable timber exists along the banks of the river.” Dating from the same year, *Figure 6.8* along the river near the city site of Boise clearly displays emigrants amid grass, shrubs, and many sizeable cottonwoods and willows (Hartman 1989: 7). Another early photo directly above Boise City (*Figure 6.9*) shows men logging large cottonwoods that dominate the bank of the river (Hartman 1989: 33). Such evidence confirms that riparian deforestation did not occur along the Boise River. It also supports the possibility that removal of trees along other tributaries was likely not a priority of Oregon Trail emigrants.

Euro-Americans relied upon resources provided within the landscape for fuel to stay warm and cook as they passed through the region. However, due to the transitory nature of their passage, physiographic restrictions, and historical records, there appears to



Figure 6.8 Boise River Emigrants along the Boise River in 1864 (Hartman 1989: 7)



Figure 6.9 Logging Cottonwood logging along the Boise River, year unknown (Hartman 1989: 33).

be evidence indicating that in the Western Snake River Plain, minimal riparian deforestation occurred that can be attributed to Oregon Trail emigrants. Overall, the impact emigrants had upon riparian ecosystems likely did little to undermine native subsistence or to spur cross-cultural tensions.

Exotic Plants

The floral landscape of the Snake River Plain as seen today has undergone major alterations since the 19th century due primarily to human activities (Harper 1986: 63). Noticeable invasive species include aggressive Eurasian annuals such as *Bromus tectorum* (cheatgrass), *Taeniatherum caput-medusae* (medusahead), and *Salsola iberica* (Russian thistle) (Yensen 1981; Young 1992). As a result of their propagation, patterns of secondary succession have been altered, carrying capacity of rangelands have been reduced, soil erosion has increased, and fire regimes have been altered (Knapp 1996: 38,

45-46, 49; Miller et al. 1999: 274; Yensen 1981: 177, 179-181; West and Young 2000: 264; Young 1992: 250).

The question is when did these transformations begin and can they be attributed to Oregon Trail emigrants? Neitzel (1998: 76) states, “Native vegetation was invaded by non-native weeds and plants inadvertently imported on the wagon trains” prior to settlement. This has been considered one form of environmental degradation that affected native inhabitants of southwestern Idaho. By considering the conditions and timing of the invasion of exotic flora in the intermountain West and abutting areas, this proposal can be tested. It appears that introduced plants gained a foothold in the local and regional ecology well after the peak of the Oregon Trail emigration; thus, the impact to the environment and consequently to the local native populations would have been minimal.

One condition by which exotic annuals were able to establish themselves is directly connected to permanent Euro-American settlement. Agro-pastoralist practices such as overgrazing, intentional burning, and cultivation weakened native plant communities (Knapp 1996: 43-44; Shinn 1980: 419; Yensen 1981: 177, 181). With an estimated 85% reduction of indigenous perennial grasses occurring between 1880 and 1910, annuals that thrive in disturbed environments quickly established themselves (Knapp 1996: 45; Miller et al. 1999: 273; Yensen 1981: 177).

A second condition linked to the introduction of exotic flora was an ecological infrastructure of dispersal. Distribution of exotic species was facilitated through a combination of characteristics indicative of sedentary agro-pastoralists and a transportation network spanning the continent. Because of this, early points of

colonization were roads, irrigation canals, ditches, agricultural fields, construction sites, and railroad right-of-ways. None of these, except for the emigrant “roads” themselves, were present in southwestern Idaho prior to settlement (Mack 1981: 152; Knapp 1996: 44; Yensen 1981).

Along with anthropogenic modifications of the land and an infrastructure of dissemination, evidence from the mid-1880s indicates the emergence of exotic flora (i.e., cheatgrass, medusahead, Russian thistle) several decades after the peak of emigration (Mack 1981: 182; Yensen 1981; Young 1992: 246). Based on historic documentation, the dates when non-native flora began to aggressively invade the intermountain West and adjacent regions do not coincide with emigrant traffic prior to settlement in southwestern Idaho.

Bromus tectorum (cheatgrass) was first recorded in the interior Pacific Northwest in British Columbia in 1889 and in Provo during 1894 (Mack 1981: 152). Since both areas were non-coastal wheat growing regions, it is likely that introduction came through contaminated grain (Mack 1981: 152). The first evidence of cheatgrass in southern Idaho comes from a photo in southern Ada County in 1898 where it can be seen growing beneath sagebrush (Yensen 1981: 180). Around the same time it was documented as growing along the railroad line between Glens Ferry and King Hill (Yensen 1981: 180).

Taeniatherum caput-medusae (medusahead) first appeared in the United States in the Umpqua Valley of southwestern Oregon in 1884 (Miller et al. 1999: 272). The first collection of medusahead in Idaho was in 1944 near Payette, but there were reports of it in the Mountain Home area as early as 1930 (Young 1992: 246).

Salsola iberica (Russian thistle) entered the West just prior to 1900 and was first recognized in the Snake River Plain along a railroad embankment in eastern Idaho in 1890 (Yensen 1981: 177-178). Ironically, this is the same plant known as the tumbleweed from cowboy folklore, although it was not present in the West during their era (Yensen 1981: 177).

This overview of the chronology of invasive weeds within the intermountain West and surrounding regions considers the circumstances and timing of their initial colonization and rapid spread. It implies two conditions: first, exotic flora had little if any impact upon the environment during the years prior to Euro-American settlement in southwestern Idaho; and second, exotic flora did not negatively affect indigenous inhabitants during this time. While the Snake River Plain has been greatly impacted by non-native flora, it appears this transformation of the vegetational landscape was not a result of the Oregon Trail emigration.

Numerous forms of environmental degradation are attributed to emigrants prior to settlement within the region. This vision of degradation for the most part is primarily predicated upon expectations and not founded upon documented evidence. The paucity of evidence should lead to concern regarding the reliability of such conclusions. Instead, inferences should be based on what can be documented about ecological conditions of southern Idaho, native adaptations, and the defining characteristics of emigration as compared to Euro-American settlement in the region. Evidence suggests that broad-scale environmental degradation did not occur and that adverse effects upon native subsistence and lifeways were minimal.

Historical Perspective

After critically examining both the quantitative nature of the emigration and the numerous forms of potential ecological impacts, there is reason to doubt that the current historical view of the period can be substantiated. There is not much support for the contention that prior to settlement, emigrants only had an adverse effect upon the environment and native lifeways within southwestern Idaho. Aside from applying a double standard to past cross-cultural interactions, the traditional historical perspective has also failed to consider the adaptability of hunter-gatherers as indicated by the archaeological record and the phases of Euro-American influence. Because of this, it is further posited that historical claims pertaining to the period of emigration lack veracity.

Historical studies (i.e., Ericson 1994; Liljeblad 1957, 1972; Neitzel 1998; Wells 1980) attempting to portray the history of Euro-American influence within southwestern Idaho have unintentionally created a double standard concerning periods of direct cross-cultural interactions. The primary example are the different ways in which the periods of the fur trade and emigration are regarded. The period of emigration is seen as having a deleterious impact upon the natural environment and indigenous inhabitants based on speculative evidence. Conversely, it is well known that beaver were extirpated within the region as a result of the fur trade by 1840 (Ogden 1950, 1971), but this period is not viewed negatively.

Beaver play important roles in riparian ecosystems, such as augmenting biodiversity, and removal of these populations has numerous adverse repercussions (Allred 1980; Belsky et al. 1999: 428; Germanoski and Miller 2004: 117; Ohmart 1996: 253). Is the removal of a species not to be considered environmental degradation? The

fur trade is considered a “cultural golden period” for native societies (Liljeblad 1972: 20-21; Wells 1980: 23-25), while the period of emigration is viewed as undermining native lifeways even though the potential forms of environmental degradation cannot be substantiated.

The idea that the fur trade was materially advantageous to native inhabitants illustrates an important point about how a double standard has been applied to the presence of Euro-Americans in the Snake River Plain. In the case of the fur trade, it appears that from the perspective of historical researchers it was permissible to nearly extirpate a species as long as there was some apparent and tangible benefit to the indigenous society. In contrast, when interpreting the period of emigration, the notion of spending environmental capital to obtain greater benefits for aboriginal groups is forgotten. If previous studies had viewed emigration in terms of costs versus benefits for native populations as they clearly do for the fur trade, their perspective on this period might be different.

In light of little actual information suggesting that significant environmental degradation actually occurred and that relations of exchange disintegrated, the migration interval could instead be seen as a continuation or transformation of functional interdependence. Liljeblad (1972: 21) states that by 1840 native inhabitants of Idaho came to depend on Euro-American goods. While it is doubtful that natives were truly dependent on trade goods, the emigration certainly offered an opportunity to continue the social relations of exchange. Furthermore, the passage of emigrants created a seasonal resource like any other within southwestern Idaho. Both parties were often able to interchange resources of minimal worth to the seller but of great worth to the buyer. It is

likely that indigenous inhabitants could also salvage discarded goods and materials from the annual migration at practically no cost. Whatever adverse environmental impacts occurred as a result of emigration, the costs would have likely been outweighed by benefits to native societies, much as they are believed to have been during the fur trade.

Within the historical perspective, there is also a limited view concerning the adaptability of hunter-gatherer economics. There appears to be some uncertainty as to what conditions might result in the collapse of the indigenous economy. It cannot be assumed that because emigrants were present that the native economy deteriorated. The almost complete absence of Euro-American settlements during the phase of emigration greatly limited the degree of disruptive economic forces acting upon such lifeways.

The archaeological record of the Late Archaic and Protohistoric can be used to infer that prehistoric hunter-gatherers were highly mobile foragers who practiced broad-spectrum subsistence activities. There is minimal direct archaeological evidence for reliance upon anadromous fish. This is contrary to the traditional ethnographic-historical view of collectors focused on the bulk procurement and storage of such fish. While there is clear documentation that at the time of emigration some groups took part in intensive salmonid acquisition, this was likely one variation of subsistence strategies employed by groups within southwestern Idaho. The impact emigrants had upon small highly mobile foraging groups was likely negligible. The subsistence strategy of indigenous populations would have been flexible enough to overcome a reduction of resources within the routes of emigration.

Even within the ethnographic-historic model is a socio-economic system that was highly flexible and adaptive to variation within the environment. The 140 years that

preceded the commencement of overlanders passing through the Western Plain was an interval that further demonstrates the adaptability of indigenous lifeways to facets of Euro-American culture. Through a series of socio-economic alterations, foremost being the acquisition of the horse and the indirect introduction to the market economy, native inhabitants continually adjusted their *modus operandi*. There appears to be little evidence to suggest that this hunter-gatherer adaptation suddenly became unable to respond to the presence of emigrants.

Historians concede that trade between native populations and emigrants continued into the phase of emigration (Beal and Wells 1959: 218-219; Hutchison and Jones 1993: 114; Unruh 1982: 118, 125). Instead of bartering beaver pelts for Euro-American goods (Liljeblad 1957: 48; Ogden 1950, 1971; Ross 1956; Wells 1980: 24; Work 1971), indigenous trading activities accommodated the different requirements of emigrants. For example, labor (e.g., assistance provided at river crossings) and needed food items (i.e., dried and smoked salmon) were exchanged for a wide array of products (Hutchison and Jones 1993: 114; Neitzel 1998: 71; Palmer 1999: 93-94; Unruh 1982: 118, 125; Wood 1926: 200). Since local inhabitants were able to use food as currency even through the busiest years of travel (e.g., Akin 1989: 47, 49; Belshaw and Belshaw 2000: 110; Ebey 1997: 159, 164), this indicates there was still a potential surplus beyond minimal subsistence levels despite any degree of putative environmental degradation. Instead of a people suffering the consequences of an economic depression due to environmental degradation, indigenous inhabitants were the ones supplying hungry emigrants, not the other way around (see *Table 5.1*). It must be recognized that indigenous groups were not helpless when it came to emigration but likely opportunistically adapted to this form of

Euro-American contact. This interaction supplied desired goods for the indigenous population without the negative consequences of land-use conflicts resulting from later settlement.

The traditional historical perspective is another important factor that has established the outlook of the period of emigration as being a time that was both destructive to the environment of southwestern Idaho and native lifeways. Considering that it applies a double standard to past cross-cultural interactions and fails to consider the breadth of hunter-gatherer adaptability as indicated by the archaeological record and phases of Euro-American contact, it is further posited that traditional historical claims lack veracity.

This discussion has attempted to examine the questions of whether Euro-American emigrants adversely impacted the environment of southwestern Idaho and in doing so undermined native lifeways. After considering numerous factors that include the nature of emigration, the possible ecological impacts resulting from emigrants, and the traditional historical perspective, it can be proposed that environmental degradation was far less than what has been maintained by previous studies. As a result, native lifeways within southwestern Idaho were minimally affected.

CHAPTER SEVEN: CONCLUSION

The results of increasing Euro-American influence upon indigenous populations within southwestern Idaho prior to settlement were cultural and socio-economic modifications. Each period of contact leading up to Euro-American settlement presented novel circumstances within the environment, which indigenous groups were able to incorporate into evolving traditional strategies. In this manner, emigrants of the mid-19th century exerted forces on native populations that they had not previously encountered.

The period of emigration (1840-1862) has been viewed by historians as adversely affecting native lifeways based largely on claims of environmental degradation. An analysis of available information (i.e., historical research, primary historical material, ethnographic-historical works, archaeological data) pertinent to this issue, coupled with an environmental-anthropological perspective, challenges this conclusion.

Due to the narrow temporal window in which events occurred, information pertaining to the natural setting, native lifeways, and the periods of indirect and direct Euro-American contact were employed to create a contextual framework. Inferences were then generated that examined assertions of environmental degradation and subsequent disruptions in native lifeways. The resulting discussion of the nature of emigration, the possible ecological impacts stemming from emigrants, and the traditional historical perspective all suggest that claims of previous studies cannot be substantiated.

First, interregional comparisons made by historians to prove environmental degradation occurred in the Western Snake River Plain are non-analogous due to quantitative dissimilarities in the nature of emigration. Second, the forms of environmental degradation propounded by historians are predicated upon expectations, not documented evidence. The result is that broad-scale degradation of the environment by emigrants likely did not occur and that native subsistence strategies were minimally affected. Lastly, the traditional historical perspective, which gave rise to the degradation narrative, fails to consistently observe the history of cross-cultural interaction within the region and to consider the breadth of hunter-gatherer adaptability as indicated by the archaeological record and the phases of Euro-American influence within the region. Altogether, the negative effect upon both the environment and native lifeways was likely far less than that contended by the current historical paradigm. Conditions of mutual interdependence that had developed in the fur trade further evolved during emigration. This adaptive response came to an end when land-use conflicts originated between Euro-American agro-pastoralist settlers and local hunter-gatherer groups.

The anthropological significance of this study is twofold. First, it acts as an example of the relationship between the biophysical environment and humanity. This interaction is reflected in the diversity of human decisions that constitute evolving socio-economic systems within a continually changing environment. The transforming environment, however, is partially a result of activities from the socio-economic system itself. Second, this study investigated conditions that promote relationships of cooperation and conflict between groups with different adaptive strategies. Cross-cultural interaction within southwestern Idaho between groups of Euro-Americans and

local aboriginal inhabitants provide examples of how, why, and when cooperation can exist or breakdown within a shared environmental matrix.

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