

**HISTORICAL OVERVIEW:
UPPER SALMON FALLS TO LOWER SALMON FALLS**

Hagerman Fossil Beds National Monument, ID

By:

Dr. Todd Shallatt, Kathryn Baxter, Kelly Murphey, and Ron James

**Revised
December, 2000**

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INTRODUCTION

The overview of this region is best organized in five sequences as follows:

- (1) Pre-Archaic (ca. pre-7500 years B.P.); (2) Archaic (ca. 7500 B.P. to ca. 1500 B.P.),
- (3) Late (ca. 1500 B.P. to ca. A.D. 1650/348 B.P.), (4) and Proto-Historic (ca. A.D. 1650/348 B.P. to A.D. 1811/187 B.P.) and (5) the historic periods including: (a) Fur Trappers, Oregon Trail, Hydraulic Mining (A.D. 1811 to ca. A.D. 1879); (b) Homesteaders (A.D. 1880 to ca. A.D. 1927; and (c) Fossils, A.D. 1928 to A.D. 2000).

There is only scant information about American Indians for the latter two historic periods. Table 1 (page 4) offers some basic terms helpful to understanding the local archaeological sequence.

Pre-Archaic Period

The century when people first arrived in this area is still being researched.

A limited number and amount of excavation recoveries from rock shelters and caves, including a few scraps of bone, stone, and/or charcoal are oftentimes cited to support an age of 14 to 15 thousand years ago (Gruhn, 1961). Dates that old are certainly known elsewhere in the Americas (Grayson, 1993). However, lacking appreciable amounts of data, most regional archaeologists are more comfortable with evidence that dates from three to four thousand years younger (Butler, 1986; Aikens and Madsen, 1986; Cressman, 1986; *see also* Jennings, 1986). There are a number of recoveries of archaeological data from southern Idaho, eastern Oregon and western Utah that, taken cumulatively, easily can place native people in a variety of settings/lifezones between 10,000 and 11,000 years B.P. (*see* for a summary Grayson, 1993).

TABLE 1

DEFINITIONS OF KEY ARCHAEOLOGICAL TERMS

Blinds	hiding places used to ambush game animals
Bifacial	stone tools chipped on two sides
B.P.	before present, years ago
Campsites	short term living sites related to seasonal activities
Cairn burials	human grave covered with rock pile
Flute	long, narrow, shallow flake down the center
Foraging	hunting, gathering, and collecting food
Game Corrals	arrangements of rock/piles, rock walls, blinds, brush and branches to direct and then trap game
Linguistics	comparative study of languages
Lithics	stone tools, pieces of tools, flakes
Migration	movement of a people into a new area
Milling Apparatus	items used to grind/pound (usually plant) food
Petroglyphs	designs pecked into rock
Pictographs	paintings of animals, designs, people, etc.
Pianview	looking at something from an above view
Quarries	places where stone or/mineral is mined
Projectile Points	arrowheads, spear and dart tips
Rockshelters	area below an overhang, used like caves
Scrapers	stone, bone, or antler tools used to remove fat or fiber
Villages	collection of separate homesteads in one local unit

The climate between 11,500 B.P. and 7,500 B.P. seems to have been comparatively more moist and cooler than today (with a slight drying and warming trend throughout). As a result, it has proven difficult to predict where the archaeological evidence of that age might occur, and particularly where to find those remains that might exist at the "older" end of that time span. Many "ancient" remains seem to correlate to higher terraces, extinct bogs/marshes, ephemeral streams, small springs, and to now changed vegetation margins/zones. Those are not well understood in this area and, as a result, today's riverside landscape usually proves to be misleading when trying to predict the presence of ancient ambush or campsites.

The earliest recognized local evidence apparently comes via the Clovis culture, or at least a local variant of such. These people are best known for making several types of large "fluted" projectile points, known as Clovis points, and then by a variety of other, also often beautifully crafted stone (and bone) tools. The Clovis Culture has been well dated throughout North America at 11,000 to 11,500 years B.P. The most common food association for Clovis was mammoth. The Simon collection, one of the best known Clovis collections in America, was unearthed on Camas Prairie about 45 miles north of the Monument (Woods and Titmus, 1985).

The Clovis Culture's chronological successor, the Folsom Culture (and characteristic fluted point) is also thought to have had a strong preference for big game hunting (at 10,400 to 10,200 B.P.), especially the giant bison (*see* Butler, 1978, for a discussion of Clovis and Folsom in southern Idaho). Folsom materials are not yet a common find in this segment of the Snake River Plain.

Isolated Clovis spear points have already been found in the desert, 60 miles south of Hagerman Valley as well as 30 miles upstream, on an elevated river terrace near Twin Falls. Many more occur in private collections and need to have their place of discovery documented. Several isolated Folsom points have also been found in the desert to the south and others on river terraces located downstream, near the westernmost edge of the Snake River Plain (*see* Meatte, 1990 for a summary). The best evidence for either a Clovis or a Folsom occupation in the immediate vicinity comes from just a few miles upstream, where a classic Clovis point and other fluted and non-fluted points shown in Figure 1 (page 7) were among the stone and bone tools exposed near Crystal Springs during some construction work. It appears the terrace was once used as a temporary campsite by some late Clovis or early Folsom people (Murphey, 1985b; Titmus and Woods, 1991). Whether or not other high terraces in and near this study area have Clovis and/or Folsom material is certainly worthy of further exploration.

Interestingly, the span of time from Clovis to Folsom marks the approximate era that many of the megafauna species such as mastadont, ground sloths, horse and other species went extinct. Archaeological evidence does not exist to implicate humans as the cause of such extinctions, but they may have added to other environmental pressures.

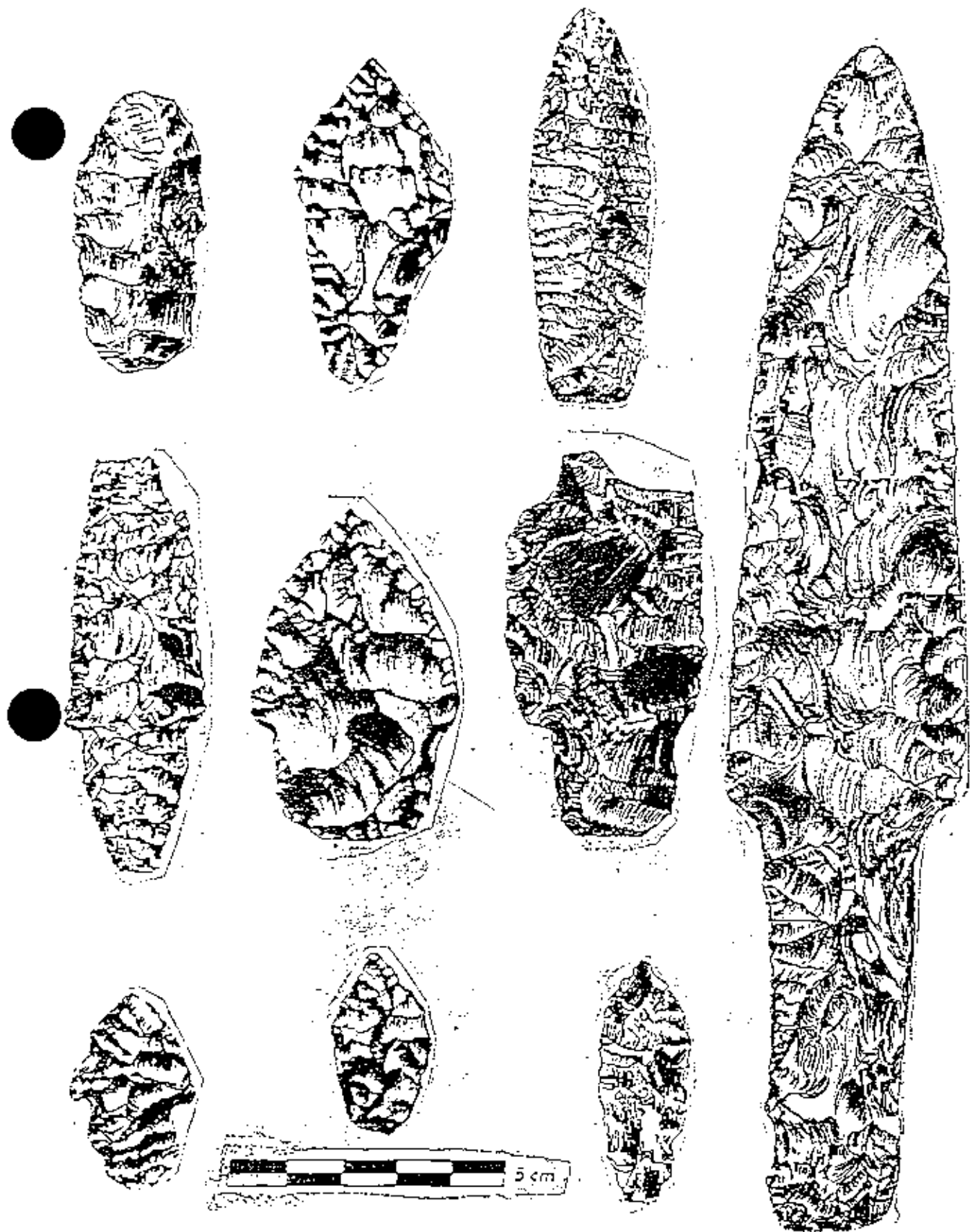
Far more common than Clovis and Folsom materials are early sites characterized by stemmed spear points. These styles may have first derived from the Clovis Culture. Alternatively, the Clovis/Folsom and stemmed spear manufacturers may represent two contemporary but independent cultural traditions (Bryan, 1980). People



1 Spear points recovered from the Crystal Springs site (A-D). The collection may represent a localized variant of the Clovis Culture. Top center is an example of a Folsom point.

using stemmed spear tips (and the various associated lanceolate point styles) shown in Figure 2 (page 9), inhabited small camp sites and/or re-tooling stations in great numbers in the high desert country located south of the Fossil Beds (Murphey, 1985a; Murphey, 1977a; Bowers and Savage, 1962). In addition, one extraordinary site has been found and reported just a few miles upstream. It involved a single (female) burial in the crest of a high terrace overlooking a small creek that nearby enters the Snake River. The burial was radiocarbon dated at 10,675 B.P. and was associated with a stemmed point, a needle or hairpin and the bone of a badger (Green, *et al.*, 1998). Skeletal analysis suggests this Paleo-Indian woman ate a lot of meat, a surprising amount of fish, and that both may have been regularly processed into some type of pemmican (Green, *et al.*, 1998).

Just east of Lower Salmon Falls, a few early stone tools were also recovered from the lowest excavation level of the Crutchfield archaeological site (Murphey and Crutchfield, 1985). Those items dated by obsidian hydration at 7,350 - 7100- B.P. One stemmed point site (10-TF-1318) has been recorded at the northern part of the Fossil Beds (*see* page 10). In addition, four isolated fragments of stemmed points have been collected at the head of a draw entering the valley north of the Monument and another classic stemmed point has been collected on the Monument. Cumulative, these materials might indicate hunting or scouting of big game, perhaps as that prey entered the river valley for water or shelter. It is not yet understood where these "hunters" may have camped in the vicinity of the Monument. In any case, the fact that there are so many stemmed point sites directly to the south warrants careful study for additional sites on the Monument.



2

Some of the major stemmed point styles found in the desert country south of the study unit. At least one stemmed point site (10-TF-1318) is known to occur within the Hagerman Fossil Beds boundaries and it has points comparable to the middle row (after Murphey 1985).

A PRE-ARCHAIC SITE : 10-T. F. -1318

A sparse 40 x 20 m. lithic scatter exposed along the edge of a small ridge-like terrace that extends toward the west side of Snake River . All lithic reduction stages are shown by local black ignimbrite and there are also a few flakes of silica and basalt . Also in evidence was a small cobble showing man - made scratches and then a reworked WINDUST point. The current evidence seems to have eroded out of a buried deposit . Test excavations are needed to get specific information .



A "far-flung similarity" between stemmed spear point styles is thought to be noticeable over much of the Great Basin and Columbia Plateau area between 10,500 and 9000 B.P. The influence of the Plateau apparently then begins to lessen by ca. 9000 and regional diversity is obvious by at least 7500 B.P. (Cressman, 1986). Subsequently, the chipped stone styles and features found in and around Hagerman Valley are those considered to represent Great Basin Archaic populations/people (Murphey and Crutchfield, 1985). The Archaic settlement and subsistence strategies seem to have been in response to a slightly warming climate and the economy was one oriented to the exploitation of a diverse food base, including the processing and storage of large amounts of seeds and other plant foods as noted on Table 2 (page 12) (Meattle, 1990).

Archaic Period

During the Archaic period, settlement patterns include rock shelters, open camps, and various task-specific sites. There is also a noticeable move toward winter sedentism in and near the river valleys, including the construction of thatched pit houses by at least 4,600 to 4,400 years ago (Green, 1993). Elaborate cemeteries occurred in association with masses of grave goods on the far western Snake River Plain between ca 5900 and 3400 B.P., but are not known as far east as the Hagerman Valley (Pavesic, 1985). Some of the caves found in the "lava beds" just south and east of Hagerman Valley indicate that by at least the mid-part of the Archaic Period people possessed a remarkably diverse tool kit (*see* Table 3, page 13), including chipped stone cutting, scraping, and piercing items, basketry, cordage, bone needles, antler ice picks and various ground stone tools (Gruhn, 1961; Hendrickson, 1997). The Archaic folk also

TABLE 2
SOME (LOCAL) PLANT FOODS¹

<u>PLANT</u>	<u>SHOSHONE FOOD USE(S)</u>
Arrowhead balsam root	seeds, roots, young leaves
Amaranth	seeds
Bentgrass	seeds
Big Blazing Star	seeds
Big Sagebrush	seeds
Bluegrass	seeds
Bulrush	roots, seeds
Broomrape	entire plant
Cactus	stems, fruit
Cattail	pollen, flowers, roots, stalks
Clover	seeds, plants, leaves
Chokecherry	fruits
Foxtail Barley	seeds
Ground cherry	seeds, fruit
Honeysuckle	fruits
Indian rice grass	seeds
Lambs Quarters	seeds
Milkweed	seeds
Needlegrass	seeds
Nettle	leaves, stems, roots
Nevada bluegrass	seeds
Onion	leaves, bulb
Peppergrass	seeds
Plantain	leaves
Pickleweed	seeds
Rose	fruit
Salt Grass	seeds
Sand dropseed	seeds
Sego Lilly	bulbs
Service Berry	fruit
Shadscale	seeds
Squirreltail	seeds
Sunflower	seeds
Thistle	stem, root
Tobacco	root
Wild Onion	root, leaves
Wild rye	seeds

¹Information from Steward (1938, 1941, 1943) and Simms (1985).

TABLE 3.

Tool Use Inference Chart Based on
Archaeological and Ethnographic Studies.

MATERIAL CULTURE¹
CATEGORIES

FUNCTIONS

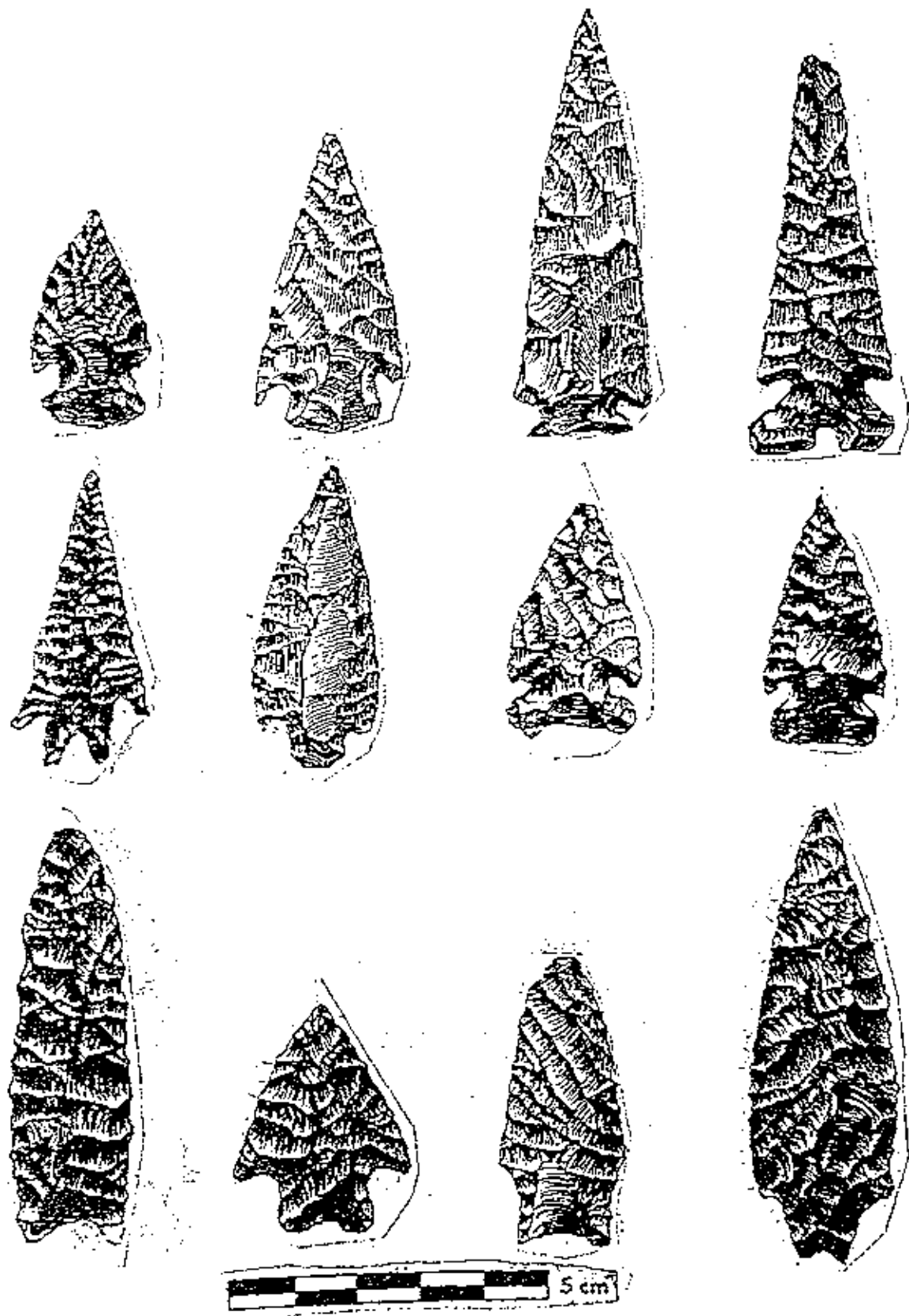
Basketry	Collecting, gathering (Stewart 1938:32-33)
Biface	Butchering and plant knife (Kelly 1932:81; Stewart 1938:33:32)
Blade-flake tool	Varied cutting (Lowie 1909:174)
Ceramic sherd(s)	Cooking-carrying vessel (Stewart 1938:1932, 44, 157)
Chopper	Bone/Wood cleavage (Stewart 1941:232, 262)
Drills, awls	Clothing manufacture (Spier and Sapir 1930:88) Basketry or cordage making
Flaker	Stone tool making (Malouf 1951:37)
Flakes	Tool manufacture and repair (Liljeblad 1957:19, 37, 88)
Hammerstone	Raw material and bone breakage (Stewart 1939, 1941; Malouf 1951:36)
Mortar, Pestle, Mano	Plant food preparation (Stewart 1938:32; 1941:287)
Nets	Rabbit, fish and fowl catching (Stewart 1938:38-39, 82-83, 167)
Pegs-n-Cordage	Trapping (Stewart 1941:229)
Projectile points	Hunting gear (Stewart 1938:35-36)
Roughouts, blanks, cores	Tool source (Spinden 1908:184)
Scraper	Hide working (Lowie 1924:227)
Shaft straightener	Hunting preparation (Stewart 1941:237, 290)

¹Material culture categories found on the Western Snake Region
(Ames 1982; Plew 1982; Murphey, 1985a; Meatte 1990).

successfully hunted mountain sheep, deer, bison, and elk with the aid of an ingenious spear thrower, the atlatl.

Archaic hunters first tipped their spear shafts with stemmed and indented base points (named by archaeologists as the Pinto and Elko Eared/Gatecliff styles). Soon, those points were joined by the other classic Archaic point styles as shown on Figure 3, page 15 (by the earlier Humboldt styles, Elko corner-notched, and Northern side-notched). All have been recovered in a variety of contexts in Hagerman Valley and most have been found as isolated finds on the rim of the Monument. Archaic campsites not submerged by the Lower Salmon Falls reservoir appear to be uncommon on the Monument side of the river. One example is 10 T.F. 1034 (see page 16).

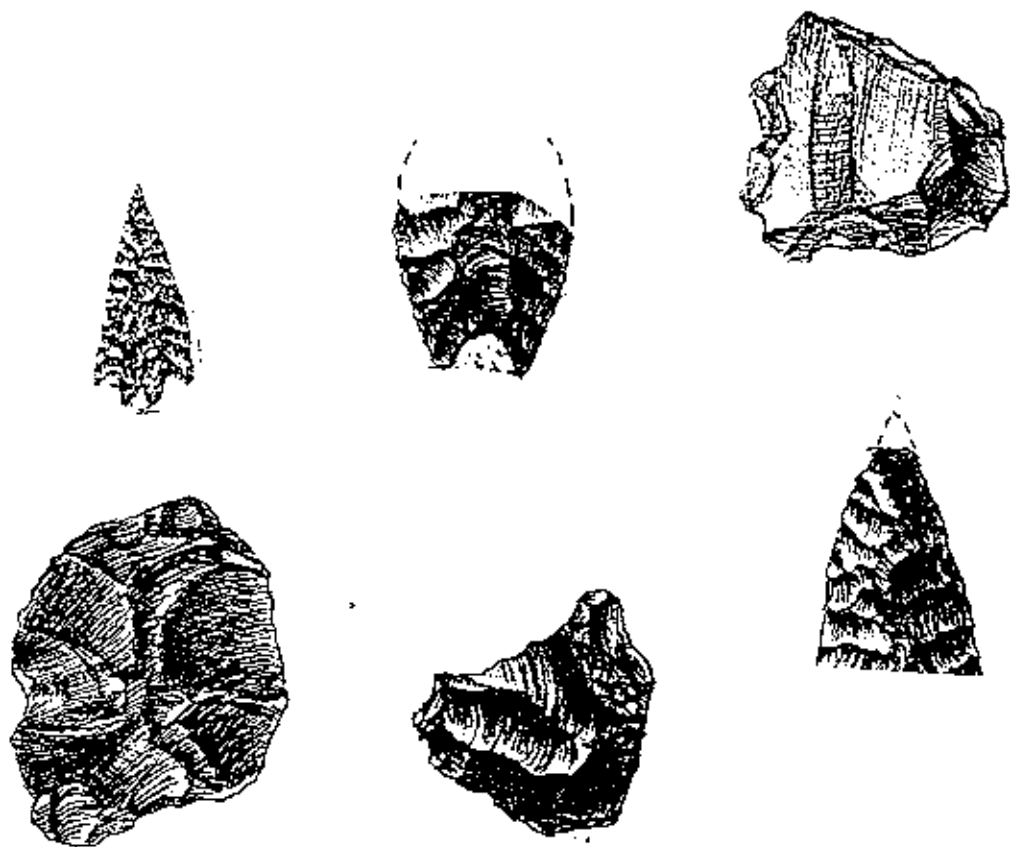
One of Idaho's first archaeologists quickly recognized some fundamental differences between Archaic Period settlement patterns and projectile point type frequencies reported on the north and south halves of the Snake River Plain (Swanson, 1972b). Much of that difference is now explained in terms of similar groups of people exploiting varied and changing food resource patterns, both area's foods perhaps reflecting the influence of climatic change. One fact from the initial premise still continues to ring very true however, there was definitely a much heavier Archaic Period use on the Snake River Valley's north bank/terraces than on the south bank/terraces in the area between Shoshone Falls and downstream through this vicinity, and to the Glenns Ferry vicinity (and perhaps further downstream) (see Swanson, Tuohy and Bryan, 1959; Ostrogorsky and Plew, 1979; Moe, Eckerle, and Knudson, 1980; Moe, Sappington and Eckerle, 1980; Butler and Murphey, 1982a, 1982b; Murphey and Crutchfield, 1985;



Archaic Period projectile points. Bottom row has a Humboldt and three Pinto points. Middle row has two Gatecliff points and then two large side-notched points. Top row shows Elko side-notched, corner-notched, and two varieties of Elko-eared points (Murphey 1985).

AN ARCHAIC PERIOD SITE : 10 -T. F . -1304

A small campsite on a ridge of land between an unnamed gully to the north and a large draw to the south . Cultural material includes firecracked rock , mussel shell , debitage , a few bits of a brown/tan ceramic , and two projectile points (Gatecliff and Humbolt) . This site may represent a single use .



Murphey, Freeman and Bowler, 1993). People were doing most of their camping on the north side of the river.

Two small creeks northeast of the Fossil Beds have already had small campsites with house floors excavated by archaeologists. Cuts made by construction work at some of the larger springs at the north end of the valley also seem to indicate pole and thatch houses being built in those settings during the Archaic (Murphey and Crutchfield, 1985; Pavesic and Meatte, 1980). In plan view, the excavated archaeological evidence of an Archaic Period house is a 4x3m to 3x3m depression, with post holes, and a floor excavated to only a 15 to 30 cm depth (Pavesic and Meatte, 1980; Murphey and Crutchfield, 1985). Some house floors exhibit hearths (and cache pits nearby) and some of the margins have a rather random scatter of rocks just outside the lip, either from activity related to the digging and clearing of the floor, or merely part of a soil banking around the rim. Other houses have a more deliberate placement of rocks "around the perimeter to anchor the superstructure: and/or its covering (see Aikens, Cole and Stuckenrath, 1977; Cressman, 1986). Circular-shaped pit houses appear to have been typical earlier, from 4660 to 1300 B.P. (Green, 1993). One possible example has been located on the Monument and needs test excavation. Two slightly more rectangular and slightly deeper houses are known to occur in isolated settings, near rapids, at or near the time that pole and thatch structures become increasingly popular from ca. 700 to ca. 1500 B.P. (Butler and Murphey, 1982; 1983; Green, 1993).

The two above-mentioned houses found isolated at Bancroft Rapids and at Kanaka Rapids were first interpreted in light of new people migrating into the area (Butler, 1986). Their setting is not unlike the southeast and northeast areas of the

Monument, and researchers should determine if comparable houses might be found in those places. Still, whether those houses and a variety of other material culture traits developed locally in response to unique factors of culture and ecology, or were brought in from elsewhere, actually remains very open to study. Perhaps no situation exemplifies this problem as well as rock art and its relationship to the Shoshone migration issue.

A study of petroglyphs and pictographs conducted along this segment of the Snake River (and in the desert just to the south) suggests that petroglyphs emerged associated with hunting blinds, about 3000 years ago or slightly earlier (Murphey, 1994). Recent archaeological data from central-to-eastern Idaho (Holmer, 1990) and from eastern Oregon (Aikens and Witherspoon, 1986) also suggest that the ancestors of the ethnographic Shoshoneans entered the area during the middle portion of the Archaic, about 3500 to 4000 years ago. This interpretation conflicts with earlier suggestions that Shoshoneans entered the general area 8000 years ago (Swanson, 1972a) or that they came into the region only about 1000 years ago (Lamb, 1958).

Some archaeologists see the Numic (or Shoshonean) expansion issue as also being tied to the demise of the Fremont. The Fremont culture had grown out of the end of the Archaic into a hunting and gathering society familiar with horticulture. The Fremonts' homeland was the western half of present day Utah. Some scholars, including the author, further believe the Fremont had an influence on the present study area, before they either became, were replaced, or were assimilated by various Shoshoneans in their homeland (Marwitt, 1986; Talbot & Wilde, 1989; Sims, 1990).

The presence of Fremont culture in and around the Hagerman Valley has been a matter of some debate (Butler various; Plew various). No discernible, long-term

Fremont occupation has ever been shown, although the presence of certain Fremont-like traits, including a specific fine-grained pottery style known as Intermountain Ware, a few classic Fremont pottery shards, some coiled basketry, stone balls, figurines, and certain arrow point styles have not been adequately explained either (see Butler, 1981, 1983).

A few pictographs and a lesser number of petroglyphs in the region, including a figure on Billingsley Creek and a mask motif with a shield-figure at Upper Salmon Falls clearly point at some sort of a relationship with the Fremont people (Murphey, 1994). Perhaps in that case, it was merely a trading relationship that was at its strongest just into the next period (see Murphey, 1994). At any rate, the "Fremont" situation is certainly not made any more clear by the fact that there is also some dry-wall masonry in the region and in Hagerman Valley (e.g., Murphey and Crutchfield, 1985). That masonry is probably Shoshone in origin but it may fall conspicuously within the time frame of the greatest era of westward expansion for Fremont Culture (Talbot and Wiide, 1989) and perhaps it also occurs at the time of the strongest presence of Fremont-like traits in this region (ca. 750-950B.P.) (Murphey, 1985a).

In general, the case for Fremont "visits" seems to have its best evidence just to the south and southeast of Hagerman Valley (see Murphey 1985a, 1991, 1994 for some Fremont-like evidence). So, if Fremont groups did come to the Hagerman Valley, at least to trade, then they presumably arrived on the Fossil Beds side of the river. Thus, south-side campsites of Fremont age need to be scrutinized with an eye for diagnostic Fremont materials. Materials of that age may also have relevance another major problem, salmon fishing and specifically when salmon became a principal part of the local food economy.

The absence of salmon remains and tackle during most of the Archaic is puzzling (Meatte, 1990). Salmon were plentiful enough to be taken in Hells Canyon by $7250 \pm 80 - 7190 \pm 135$ years ago and they were also apparently being used as some of the food base at Givens Hot Springs near Marsing by 4200 years ago (Meatte, 1990). Salmon are not documented until far later elsewhere in the region, however. For example, in the once salmon-rich Boise Valley, there is only a single excavated salmon bone (2090 ± 80 B.P.) and a net sinker ($1410 \pm$ B.P.) for one rich site (Webster, 1978), and then what may be fish spear tips and non-salmonoid bones at another (between 790 ± 100 and 1110 ± 90 B.P.) (Sappington, 1982). Thus, the regional evidence suggests people knew some about how to take fish by at least late in the Archaic Period. Heavy salmon fishing activity didn't apparently take hold until sometime later, however, and that date is from 970 ± 30 B.P. through 580 ± 180 B.P. at the Three Island Crossing site near Glenns Ferry (Gould and Plew, 1996).

Although exact seasonal identities for all the excavated sites could complicate the picture, the current archaeological evidence relating to the exploitation of salmon in and around Hagerman Valley seems to so far fit with what has been reported for Boise Valley. What appears to be one of the older sites with fish remains, 10-GG-273, produced only non-salmon fish bones, although milling items and mussel shell were also in evidence at ca. 1450-1250 B.P. (Butler and Murphey, 1983). A site with some of the best "salmon evidence" in the region, 10-GG-1, is located just a few miles below Lower Salmon Falls and its excavation produced only a few non-salmon fish bones, a variety of other animal bones, milling items, and a very large and apparently ever-increasing number of salmon remains starting in 1140 ± 120 B.P. and then continuing

into the Historic Period (Plew, 1981). Immediately across the river, a component at 10-TF-352 was thought to date slightly earlier at 1350-750 B.P. and it produced mostly salmon remains but also quite a few non-salmon fish remains in association with rabbit, deer, and possibly even seeds (Plew, 1981). A contemporary component on the lower end of Riley Creek, 10-TF-352, produced only one salmon bone, shell, milling items, some large and a variety of small animal remains (Pavesic and Meatte, 1980; Landis and Lothson, 1983). Another site similarly located on lower Billingsley Creek, 10-GG-191, included a few non-salmon and salmon bones in a 620 ± 80 B.P. assemblage that also produced milling implements and small and big game fauna (Murphey and Crutchfield, 1985). Thus, the inference might be that more intense salmon fishing grew out of a less focused use of fish sometime around 1000 years ago. When the fishing became a more important focus, the people arrived at Upper and Lower Salmon Falls in great numbers.

Archaeological site forms indicate that the majority of sites in the Monument adjacent to the Lower Salmon Falls Reservoir may date from near and after the end of the Archaic Period. This suggests that small sites have the potential to provide season of use, economic, and temporal data that is important to understanding how, when and why the vicinity of Upper and Lower Salmon Falls developed into a major fishing location. A research plan needs to be developed for this important work. When intensive fishing does start, people are apparently coming to the Hagerman Valley from both north and south, thus sites found on the bank of the Monument can probably help define that emergence. Currently, we only have Murphey's (1994) observation that the initial use of a major fishery on the north bank at Upper Salmon may have started after 1500-2000 B.P., with heavy use starting via Rose Spring and Eastgate bearing people (ca. 1500-1000

from 30 to 50 feet with considerable accuracy, however, the bow and arrow effectively doubled that range. This new technology dramatically increased the capability to select targets and successfully procure meat. It is archaeologically marked via the emergence of arrow points shown in Figure 4 (page 24), named Eastgate, Rosespring, Desert side-notched, Cottonwood, and Bliss (Holmer, 1986). An example of such sites on the Monument are HAFO 97-A5 and HAFO 93-1 (see page 25). Other hallmark characteristics of the Late Period are flower-pot-shaped pottery, cache/storage pits (some stone and stone slab lined), and numerous types of other tools and decorative items (see Plew, *et al.*, 1987; Murphey and Crutchfield, 1985). Pictographs and mostly petroglyph sites with a great number of panels and covering large site areas are occurring by the Late Period in the greater region to the north and distant west (Plew, 1980; Cinder, 1976).

There is not much rock art reported for Hagerman Valley or for the area to the south (Murphey, 1994). However, a large petroglyph site located just a few miles upstream from the Monument has been interpreted as marking a popular big game killing site (ca. 1258 B.P. - 808 B.P.) (Murphey, 1994). Also early in this period, rock alignments -- walls and blinds -- apparently start to occur on steep-sided peninsulas jutting out from the north canyon rim of Hagerman Valley (Murphey, Freeman and Bowler, 1991). No such alignments are reported for the south side, where an increased but still comparatively small use is at first made of the riverside upstream from Salmon Falls. Beginning sometime after ca. 1000 years ago and lasting to about the start of

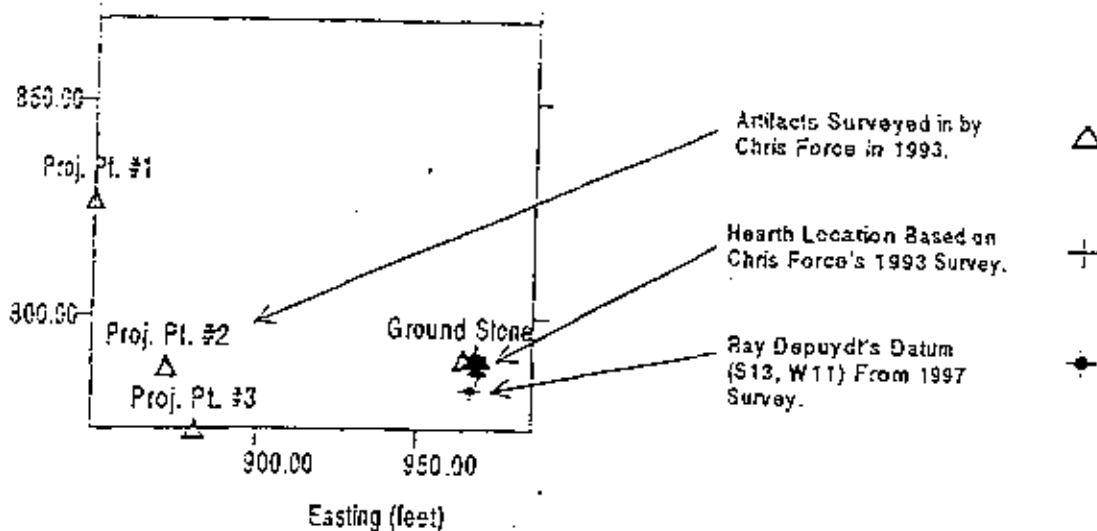


Fig. 4

Late Period bow and arrow points. Bottom row has two Eastgate points and two Rosespring points. Middle row has three General type and two Desert side-notched points. Top row has three Bliss points and then two Cottonwood points (Murphey 1985a, Murphey and Cutchfield 1985).

A LATE PERIOD SITE : HAFO 97-A5/ 93-1

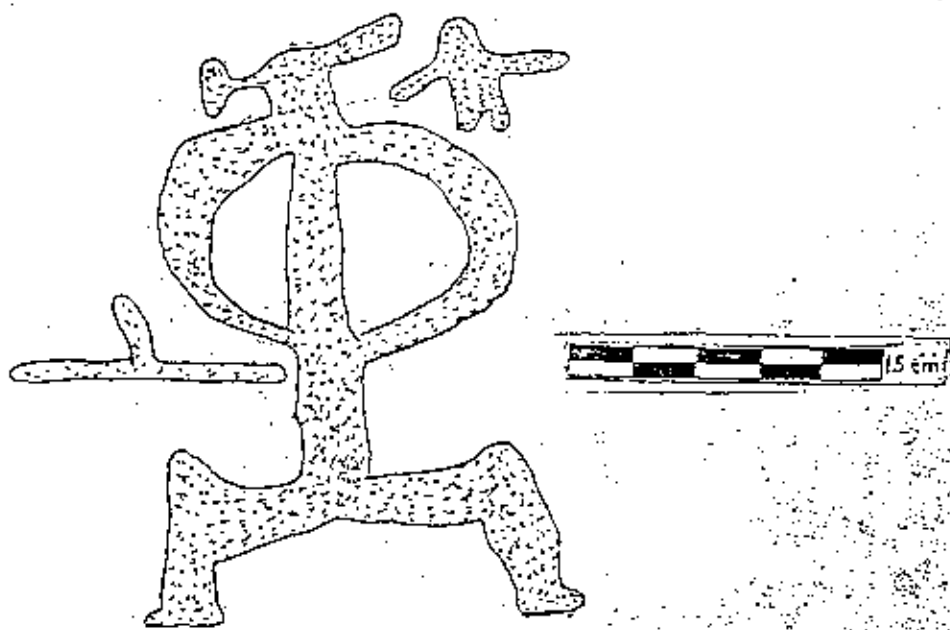
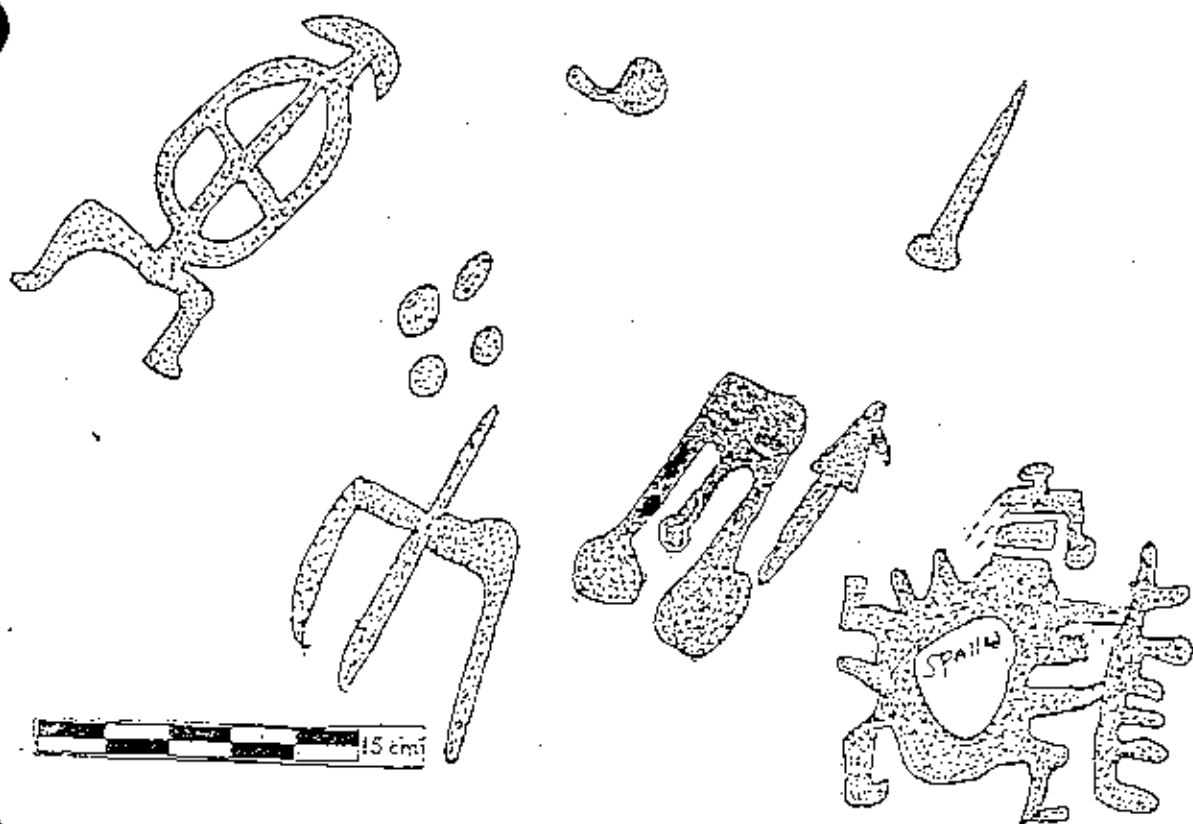
A small camp known as the Sand Dune SITE. This is a lithic and groundstone scatter located on the edge of a small dune field. Generalized location is up Yahoo Creek , about a mile from the downstream end of Upper Salmon Falls . Cultural material and features included a small hearth or storage pit , burnt bone , debitage , a possible bead , a Desert side-notched point , two Rosespring points , cobble manos and a metate . Current interpretation is the hunting of rodents and seed processing .



the Historic Period, use of falls and rapids for north-side fishing sites (*i.e.*, Upper and Lower Salmon Falls) may correspondingly increase as the south bank's site numbers again decrease or are at least minimal (Butler and Murphey, 1982a, 1982b, 1983; Murphey, Crutchfield, and Bowler, 1993; Murphey, 1997).

There is a single shield-figure petroglyph known for the northside of Lower Salmon Falls (Murphey, 1994). Another petroglyph site located on the north side of Upper Salmon Falls is thought to receive its first glyphs as shown in Figure 5 (page 27) sometime after ca. 2000-1500 B.P. and to then see re-use until just before the Historic Period. The Upper Salmon site involves ten carefully selected boulders, most spotted and some nearly covered with small, human-made pits. Several boulders also have shield-figure motifs and one has a natural vulva-shaped hole painted with ocher in addition to shield-figures and the pits. Great Basin ethnographic data seems to suggest that the site resulted from a Shoshone ritual related to bringing or celebrating a year's first run of salmon at this major spear fishing site (Murphy, 1997; see Lowie, 1909 for the historic fish celebrating ceremony).

For whatever underlying reason(s), including the possibilities of increasing populations or the use of alternate wintering sites away from the river valley, excavations elsewhere in this region and at the Crutchfield site seem to reveal a major shift toward pole and thatch house structures of less substantial design after about 1000 B.P. Most of those homes seem to be hut-like and comparatively small (3m²) after 700 B.P. (Green, 1993; Murphey and Crutchfield, 1985). Some other changes may also occur. For example, talus burials associated with projectile points from this period



5

Selected rock art panels from Upper Salmon Falls. The figures on the left and right of the upper panel and the large figure at the bottom are shield-figures. The top right two motifs are Fremont-like, while the others are more Shoshone-like (Murphey 1997).

have been reported and there are apparently some interments in small shelters also dating from this period (Bucy, 1971; Murphey and Crutchfield, 1985). Similar rockshelter interments have been reported elsewhere in the region, those dating from sometime between 1410 B.P. and ca. A.D. 1258 to ca. A.D. 758 B.P. (Webster, 1978; Gruhn, 1960). It is not yet investigated if the rim rock along the north Monument contains burials related to people using Lower Salmon Falls.

By 600 to 700 years ago, dentalium shell from the coast evidences this vicinity's participation in a vast trade network (Murphey and Crutchfield, 1985). The visiting of the major spear fisheries by people coming from the outlying region also seems to be demonstrated by a chemical test of Late Period obsidian items collected from the surface at Lower Salmon Falls. That sample included regional obsidian sources located at Brown's Bench, Camas Prairie, American Falls, Big Southern Butte (near Arco), and then also some from Paradise Valley, Nevada (Sappington, 1990). The neighboring Crutchfield site also evidences use of stone taken from the mountains located both north and south of Hagerman Valley by around 700 B.P. (Murphey and Crutchfield 1985:136). Such stone gathering and generalized subsistence trips taken to and from the south mountains should have often taken families along or near the Fossil Beds, as a major "ethnographic" era trail leading north-south along the rim of Salmon Falls Creek (Steward 1938:136).

Robert Lowie (1909, 1924) and Julian Steward (1938) gathered ethnographic information on this vicinity in the early 1900s and until the late 1930s asking native people what they had been told about the "old ways of doing things." These descriptions are our best look at the remnants of the older lifeways. Key to

interpreting the archaeological record of the Late Period and to some degree the Proto-Historic and Historic Periods is the concept of scholars using the ethnographic record, by way of analogy, as a comparative model for aboriginal lifeways and as a set point from which to trace cultural and material affiliations back in time (see Table 3, page 13, for an ethno-archaeological tool correlation). It is believed that the following ethnographic sketch has considerable potential for interpreting aspects of the Late Period and Historic Period archaeological sites in this study unit. For a cautionary discussion, read Gould and Plew (1996).

An Ethnographic Model

The ethnography of the Hagerman Valley involves a faction of the Snake River Shoshone (e.g. Steward, 1938). They referred to themselves as Neme or Nievi, meaning "we the people" (Murphy and Murphy, 1986). Talking of their past, the Snake River people also described themselves as being the Agaiduta (Akaitikka) (salmon eaters), and Pia Agaidika (big salmon eaters) (Steward and Wheeler-Voeglin, 1974).

According to ethnographers, the local Shoshone could select from hundreds of edible foods, including various insects, plants, mussels, and various bird, fish, and game meats (see Table 4, page 30). They learned to eat anything, but most of the time they didn't want to and didn't have to. In brief, it is important to understand that the local Shoshone had their favorite foods and they liked to camp in places where they could take significant amounts and/or combinations of them. Both the proponents and opponents of the Shoshonean migration theory agree that the so-called aboriginal

TABLE 4

Selected Food Resources
(Indicated by Local Archaeology)¹

<u>RESOURCE</u>	<u>RESOURCE</u>
Bighorn Sheep	Chinook Salmon
Deer	Sockeye Salmon
Bison	Steelhead Trout
Antelope	Rainbow Trout
Elk	Squawfish
Jack rabbits	Peanouth
Cottontail Rabbits	Beaver
Marmots	Ducks (various)
Gophers	Geese
Dogs/coyotes/foxes	Frog
Snakes	Mussels
Lizards	Hawk

¹Information from Pavesic and Meatte (1980), Plew (1981); Lothson and Virga (1983); and Murphey and Crutchfield (1985).

ethnographic lifeway differed from preceding periods in terms of resource emphasis and that subsistence practices emphasized seed collection, roots, fish, and perhaps less big game than the preceding adaptation (*see* Bettinger and Baumhoff, 1983 for an argument on the Numic spread as it related to resource use changes). Murphey and Crutchfield (1985) have suggested that the material element list of the ethnographic Hagerman Valley The Shoshone correlate best with archaeological evidence dating after 700 ± 80 B.P.

The local ethnographic-era houses included a slight range of diversity that was apparently related to the season of use, projected degree of use, difficulties in procuring timber, and the proposed duration of stay or reuse (*see* Steward, 1938). House depressions dating from and/or after the Late Period are known to occur on the islands located below Upper Salmon Falls. These show more variety in shape than is typically attributed to Shoshonean houses.

Just as their houses were not necessarily permanent, so were the local communities apparently marked by considerable flexibility in the comings and goings of families--to visit, to live with relatives, or just to find different or better food. Like all the other Shoshoneans, the Snake River Shoshone apparently followed a traditional "subsistence round," one in which they would move from food resource place to food resource zone in the proper season. The ethnographic Hagerman Valley people apparently preferred to seek their food in traditional ranges of 50 to 100 square miles, an up-elevation spectrum which extended from the river valley to the higher peaks of the mountains. They liked to winter in the river valley, or within six miles of such, but preferably at the prior so as to be near their winter food caches of salmon, plant foods, and insects (Steward, 1938). Most of the major encampments were situated on the north

side of the river (now Gooding County), so as to be near the best fishing places, and so as not to risk getting isolated by high water and thus also away from the "big move" to a "social gathering" at the root grounds of Camas Prairie that took place in late June or July (Steward, 1938; Blythe, 1938; Murphy and Murphy, 1960; Steward and Wheeler-Vogelin, 1974).

A camp could range from just a family-sized group up to no more than 20 to 35 individuals (Steward, 1938; Steward and Wheeler-Vogelin, 1975). When local economic conditions permitted, camps were sometimes consolidated into winter villages, the more popular locations of which follow (Steward, 1938; Murphy and Murphy, 1960):

Above the mouth of Salmon Falls Creek -- winter village below the Sinking Canyon

Salmon Falls Creek winter vilage near the mouth

Upper Salmon Falls

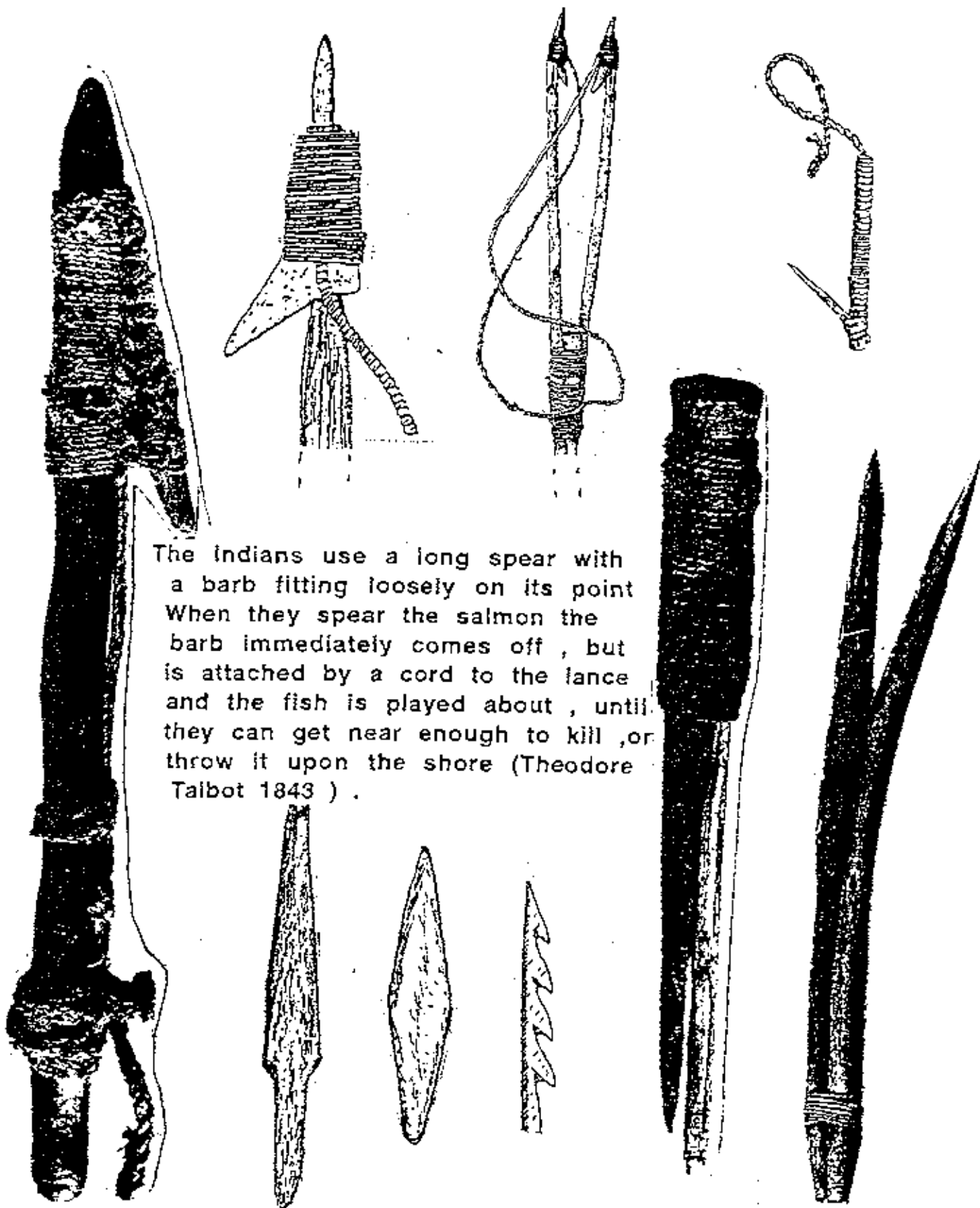
Lower Salmon Falls

Saihunupi winter village near the mouth of the Malad

Pazin:tunb winter village near the Bliss Bridge

Ototumb winter village near the Bliss Hill

Another movement of camps into a congregation so large as to resemble a village could happen when camps decided to group together with others under the loose direction of a knowledgeable headman to efficiently harvest fish (Steward, 1938). This could involve harvesting at one of the (early) spear fishing sites, such as those located at Upper or Lower Salmon Falls, using the tools shown in Figure 6 (page 33) but apparently more often it took place at one of the latter season weir, dam, or basket-trap Figure 6



The Indians use a long spear with a barb fitting loosely on its point. When they spear the salmon the barb immediately comes off, but is attached by a cord to the lance and the fish is played about, until they can get near enough to kill, or throw it upon the shore (Theodore Taibot 1843).

Fig. 6 Some Shoshone fish-taking technology. Bottom photos are of composite harpoon tips and an associated receiver. Middle are three bone tips found at UPPER SALMON FALLS. Top are two ethnographically referenced harpoons and a salmon gig (Shellbach 1967, Meatte 1983).

sites. These places needed considerably lower water levels to be productive, thus they were constructed and used later in the "fish" year (Gould and Plew, 1996).

Low water still allows our viewing of rock walls related to basket traps and weirs or dams at a number of places just up and downstream from Hagerman Valley. To date none have been recognized in the river or in the creeks of the Hagerman Valley proper.

Hagerman Valley groups apparently did not imply exclusive claims to or the defense of all the local resources, but neither did they accord each other free and equal use. For example, the early spear fisheries and lower water fisheries which required the construction and maintenance of weirs and scaffolding were apparently often restricted until the occupying people had filled their winter food caches (Steward, 1938; Murphy and Murphy, 1960; *see also* Talbot, 1931; Berreman, 1937). On the other hand, less productive fisheries were apparently readily shared.

While it cannot be doubted that there were seasonal and even periodic shortages in the Hagerman area's fish runs (for an archaeological discussion *see* Gould and Plew, 1996), overall it must have been a reasonably good life for a Great Basin people (*see* Steward, 1938). To that end, Shoshone kinsmen from the south sometimes came to the valley to trade, socialize, and fish. Among those groups known to visit Upper and/or Lower Salmon Falls were the Humboldt Shoshone communities known as Twoqivi yuyugi (Root Jelly Eaters), Tossawi (White Knives); Wongagadu yuyugi (Pine Sitters) and Kiuyiduka (Bitterroot Eaters), all of whom visited the headwaters of the Bruneau and Salmon Falls Creek as part of their seasonal round (Steward, 1938; Harris,

1938). Other visitors included the Grouse Creek and Goose Creek aggregations known as Tukad Ka (Pine Nut Eaters) and/or the Tutwanair (Below or Beyond People).

One of the most obvious research problems associated with "visiting Shoshone" is comparable to that posed earlier for the possible Fremont traders. If the southern visitors came to the river early in the fishing season, then the archaeological record might evidence temporary camps established on the Fossil Beds side of the river to wait out high water and/or to fish less productive spots while "polite arrangements" with the resident locals were worked out (Steward, 1938; Harris, 1938).

During an exceptional year, it may have been possible for a given Shoshone family to survive comfortably in Hagerman Valley for nine months or more of the subsistence year (*see* Murphey and Crutchfield, 1985; Steward, 1970). It is not clearly referenced how and in what seasons most of the other resources of this valley, for example the creeks, marshes, and grasslands might fit into a heavy/growing use of the Snake's salmon resource. It further seems logical that like salmon, other native fish should have also been available to such skilled fishermen as the local Shoshone and, as listed earlier, archaeology seems to find such use in specific seasons of the year (*see* Steward, 1938). Big game was also critical for protein, tools, clothes (*see* Steward, 1938). Deer could be ambushed in the desert to the south of the Fossil Beds (Steward, 1938) and winter storms might have occasionally brought large herds of mountain sheep, antelope, and possibly even bison and elk right down to the bluff rim. Small animals like rabbits and marmots presented various trappings and encounter hunting opportunities, as did waterfowl and other game birds.

All of the above listings have been archaeologically recovered from Late Period archaeological deposits of Hagerman Valley (Pavesic and Meatte, 1980; Plew, 1981; Murphey and Crutchfield, 1985). Some of the hardest evidence to recover is the supposed gathering and collecting of seeds, roots, leaves, berries and also insects, eggs, larvae, reptiles, and mussels (*see* Steward, 1938; 1941; 1970). At this writing, no biological examination of the residue left on milling items or search for other such data (*i.e.*, coprolites) has ever been undertaken in the valley. That is key data. The "gathereds and collecteds" were reportedly often a principal focus for the Snake River Shoshone while people waited for the first anadromous fish to arrive (Steward, 1938).

It is clearly the exploitation of salmon, however, that is fundamental to a more exact delineation of the date and extent of the aboriginal ethnographic pattern. At least historically, the technology reportedly included spears, harpoons, jigging hooks, hand nets, dams, weirs, and basket traps (Steward, 1938). Such a varied technology obviously developed and continued to develop over time, thus there should be an archaeological sequence of its appearance, experimentation and expansion. To date, archaeological excavation has produced little in this light, although relic collections from Upper and Lower Salmon Falls apparently do show considerable variety in fishing harpoons and fish spear tips (Murphey, 1997).

The first few fish available to local Shoshone were the steelhead that came in March or April, then in May and continuing until June there were runs of Chinook, and finally, a big run of Chinook usually came in September and October (Steward, 1938). If the first of the runs seemed poor, groups and families might start "up-country" or up or down river.

Typically most Hagerman Valley Shoshone families went away from the river valley at mid-summer anyway (Steward, 1938; Murphy and Murphy, 1960). Most would return in time for the fall fish runs, bringing with them raw material for tools and also food taken from the up-country, all of which should show up in the local archaeological records.

The meat of large animals could be boiled in baskets or in clay pots, dried in strips or broiled. Smaller animals were roasted whole in fires or earth ovens, dried, and sometimes even dried and pulverized on metate. Small animal bones and fish bones were sometimes ground and added to soup or flour. Many of the fish were eaten fresh, others went into gruel, and others were air dried and then stored in grass-lined cache pits for future use (Steward 1940, 1941). Likewise, the vegetable foods could be eaten raw, boiled, poached or dried, and sometimes they were ground into a flour for cakes that might also include ground bone, fish meat, reptile meat and even insects (Steward, 1940, 1941; Lijebblad, 1957; Walker, 1971; Irvine, 1897). Table 5 (page 38) shows some plants probably used by the local Shoshone for food and/or medicine. Figure 7 (page 39 shows another view of some classic Shoshone items of cultural material.

TABLE 5
SHOSHONE MEDICINAL PLANTS¹

Aster	boiled root, eaten to facilitate urination
Burdock	young roots, ground into a salve for burns
Cattail	root mixed with fat for a salve
Chokecherry	inner bark, tea for diarrhea
Columbine	root, ground into a bite poultice
Cow Parsnip	root, ground into diabetes/T.B. tea
Curly dock	roots mashed and put on sores
Juniper	needles, burned for bad dreams
Milkweed	roots mashed for cuts; juice for warts
Mullein	leaves burned to relieve lung congestion
Nettle	roots and leaves, tea for diarrhea
Onion	tea for colds, coughs, frostbite
Plantain	leaves mashed, for hemorrhages/dressing
Rabbit brush	leaves dried, gum and tea for colds
Rose	hips dried, tea for measles and colds
Sagebrush	whole plant boiled for fever tea
Service berry	inner bark ground, diluted into eye wash
Sour dock	roots mashed, poultice for swelling
Sunflower	root boiled, tea drunk for physic/emetic
Willow	burned and ashes applied to sore eyes
Yarrow	tea for indigestion; mash on sores
Yellow Evening Primrose	love potion

¹Information taken from Steward (1938, 1941, 1943).

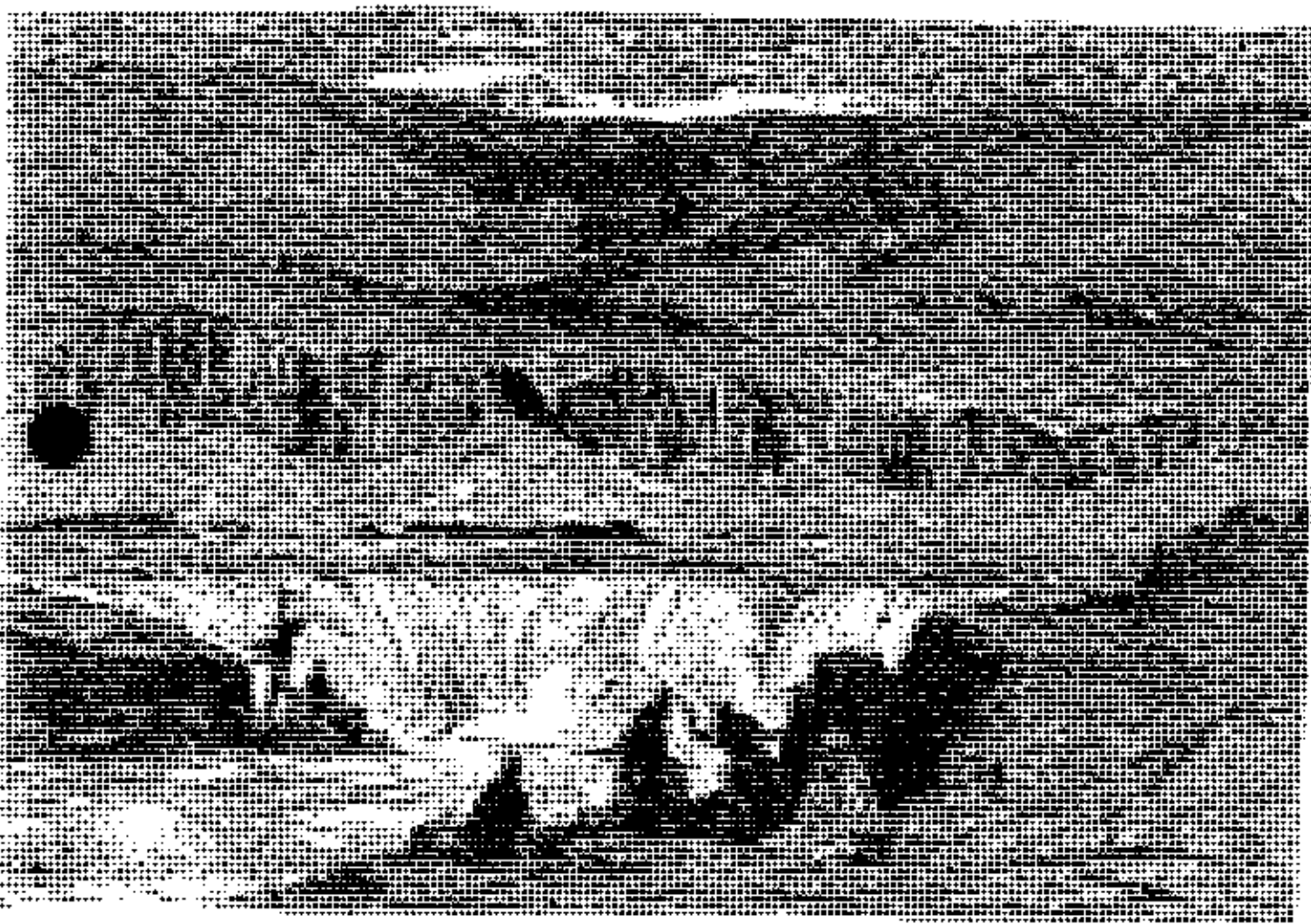
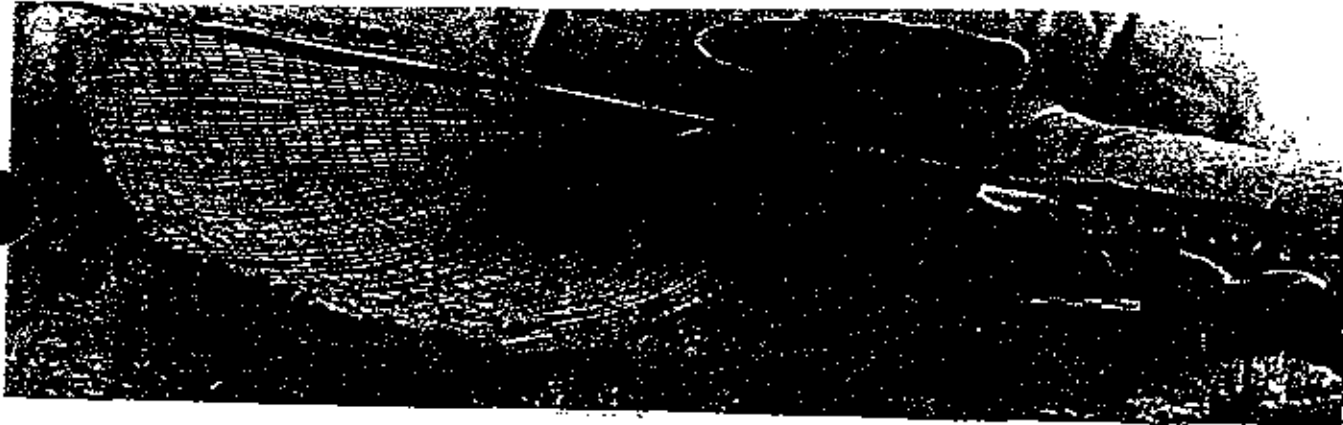


Fig. 7 Some typical elements of Shoshone material culture : winnowing basket , phragmites composite arrow , flower pot - shaped pottery , mano / mettate . Below is an 1872 sketch of Shoshone spearing fish at Salmon Falls .

Proto-History

In this vicinity, the Proto-Historic Period specifically involves the various events and impacts associated with the spread of equestrian (horse) culture into this portion of the greater region. It is at least theoretically possible that archaeology related to the appearance, affect, and spread of equestrian culture exists in this study area.

With the arrival of the horse, presumably from the Spanish Conquistador stock, sometime between A.D. 1650 and A.D. 1700, the Shoshone bands living to the east of Hagerman Valley, and specifically those based on the eastern fringe of the eastern Snake River Plains reportedly expanded their settlement/subsistence possibilities to include joining their Eastern Shoshone Kinsmen in Bison hunting (and raiding) on the Northern Plains. Around 1700 A.D. a group of about 600 Northern Paiute from the area of western Idaho/eastern Oregon joined the newly horsed Shoshone. In just a matter of years mounted bands from the east were probably visiting relatives at the fisheries of Hagerman Valley. The Shoshone/Bannock horsemen were often shadowed by their enemies and specifically by the Blackfoot who, in addition to adding further strain on this area's food animal resources, probably also captured some of the pedestrian locals for slaves (Murphey, n.d.).

By the mid-A.D. 1750s, the inability to find a good trading partner for firearms had placed the mounted Shoshone at a serious disadvantage, as their enemies had been able to amass a great deal of fire power (*see* McGinnis, 1990). The years between A.D. 1750 and the start of the Historic Period at A.D. 1811 also brought the mounted Shoshone into conflict with some of the Plateau groups located north and west of the Snake River Plains (Lowie, 1909; Anastasio, 1975).

There is a good possibility that visiting Shoshone and Shoshone/Bannock equestrians controlled some of the peripheral salmon fisheries in this area by A.D. 1800 (Murphy and Murphy, 1960). In addition, marriage alliances and old friendships should have seen families of horsemen visiting their pedestrian friends. Documentation comes from fur trapper journals that will be discussed in the next section of this report.

Elsewhere in the region, pictographs, cremation burials and tepee rings date to this era (Murphey, 1994; Murphey, n.d.). The best local archaeological evidence has so far come from the Bliss site. There has also been an unfortunate amount of relic collection at sites relating to the historic Native American use of this valley, however, what specifically of that material is really Proto-Historic in age is hard to distinguish.

Sites closest to Upper and Lower Salmon Falls are thought to have the best chance of producing Proto-Historic evidence, as noted on the following page (43). The Monument needs to have a archeological research plan developed to answer some of the remaining questions about the American Indian culture and its development and change over time. Perhaps the Monument sites near the falls will provide the details needed to better understand the degree of significance of the salmon fisheries. Most of these sites are likely now submerged by the Lower Salmon Falls Reservoir, necessitating and underwater survey. In addition, an ethnographic study focused on the Fossil Beds needs to be undertaken.

SOME POSSIBLE PROTO-HISTORIC SITES

1. Historic residents mention the location of an Indian horse corral located up a draw east of Salmon Falls (see Murphey 1977b:16).

2. Burials and also cremation burial remains associated with Proto-Historic and/or Historic materials have been apparently found and looted from the rock shelters and in cracks located just back from the canyon rim. Most burials were reportedly located in the lands just east of and slightly northeast of Lower Salmon Falls (Murphey and Crutchfield 1985:81, 117-119; Murphey 1994:16).

3. A great deal of Historic/Proto-Historic cultural material was once surface collected on the flats located just northwest of Lower Salmon Falls (personal communication, Dick Cook, 1985).

4. A major equestrian trail runs parallel, roughly southeast to northwest, along or near the west boundary of the monument (Steward 1938:36, Fig. 10).

5. Vardis Fisher (1937:168) mentions a cave with equestrian pictographs near the mouth of the Malad. That site has never been relocated. The painting was thought to reflect an equestrian battle.

HISTORIC PERIOD - THE FUR TRAPPERS

Fur trappers and mountain men lifted the veil of mystery from the regions Far West and the Hagerman Valley provided a conspicuous setting for many important incidents that were part of the quest for empire in the Pacific Northwest during the early days of exploration and fur trapping when the first attempts were being made to establish a westward route to the Pacific coast. The Hagerman Valley was part of the world of the Pacific Northwest, a world that was to experience massive changes during the nineteenth century. The regional history of the Hagerman Valley becomes all the more compelling and more relevant when the complex aspects of the cultural exchanges taking place during the first half of the nineteenth century are examined with this perspective in mind. The impact that the fur trade had on the indigenous cultures has yet to be fully evaluated. It is evident, however, that various native cultures met, interacted, and changed as a result. These dynamics have existed throughout history but the impacts of the Euro-Americans on the American Indians living along the Snake River in the Hagerman Valley at that time would forever change their cultures.

In marked contrast to the more forbidding aspects of the surrounding Snake River Plain, the Hagerman Valley supported several riverbank encampments of native people who are prominent in the early historic accounts. In addition to the previously noted identification as the *Agaiduka* (salmon eaters) and *Pia agaiduka* (big salmon eaters), they also used *Ko'a agaiduka* (trap salmon eaters). They would become known by names the Euro-Americans assigned to them: the Shoshone, Bannock, and Paine (Steward 1938:165: 231-234; Steward and Voegelin 1974:14).

When the first EuroAmerican fur trappers explored the Snake River Plain beginning in the early 1800s, they chronicled scenes of traditional Native American lifeways concerning styles of habitation, the taking of salmon, and trading activities even as they began to modify the region's cultural landscape. The annual salmon runs brought hundreds of Indians to the Upper and Lower Salmon Falls where a combination of both natural and man-made obstacles made fish vulnerable to capture. "This wonderful fish was to the tribes . . . what the buffalo was to those on the Plains" (Murphey, 1997; Steward, 1938; Crittenden, 1954).

The Snake River natives had, over a millennia, developed a finely honed way of life; during the early 1800s, their way of life began undergoing unimagined transformations as the Canadian and American trappers entered the Snake Country. The vicinity of Upper Salmon Falls and the Hagerman Valley provided the setting for some of the earliest, most vivid and detailed descriptions of Indian life on the Snake River Plain. An invaluable and enduring legacy provided to posterity by the Hagerman Valley is the body of ethnographic descriptions recorded by the various British and American visitors to the area before it was irrevocably changed by subsequent conquest and settlement.

The Snake River Plain was seen as a vital trade corridor linking the Missouri with the long sought after River of the West, the mythic Northwest Passage, and the markets of China. Alexander MacKenzie, in his influential account of the first transcontinental crossing, *Voyages through the continent of North America*, wrote that "Whatever road one follows, on leaving the shores of the Atlantic Ocean, one must join the Columbia in order to reach the Pacific Ocean; this river is the line of communication which Nature has traced between the two seas . . ." (Rollins, 1935).

In fulfilling the dream of crossing North America, the strategic value of the Snake River Plain lay in the fact that it occupied the only feasible passageway between South Pass and the Columbia River (DeVoto; Rollins; Utley). The Hagerman Valley, including the vicinity of the Fossil Beds was squarely situated on MacKenzie's "line of communication which Nature has traced". Between the years 1811 and 1843, the Hagerman Valley was crisscrossed by many of the most celebrated trappers and mountain men of the fur trade era; Wilson Price Hunt, Donald Mackenzie, John Reed, Alexander Ross, Peter Skene Ogden, Jedediah Smith, Captain Bonneville, Kit Carson, and John Fremont all became familiar with the area's striking features such as the Salmon Falls and the myriad springs and creeks of the Hagerman Valley.

The favorable natural environment of the Hagerman Valley had provided a diversity of faunal and floral resources conducive to human settlement, simple geography and historical imperatives made it part of an avenue that permitted the United States' continental expansion. The fur trade was everywhere in the West, it was dynamic, ruthless, and the competition was often cutthroat in nature. The voracious appetite of the fur trade required "a stone age economy that meant a vast new market-beaver as common as dirt and the untouched Farther On to keep supplying it" (DeVoto, 1952).

These first adventurers were also agents of empire, rivals in a great game of intrigue, trying constantly to take the advantages that would give either Britain or America possession of a vast monopoly over the Pacific Northwest. "The progress of discovery", wrote former-Astorian and retired fur trapper Alexander Ross, "contributes not a little to the enlightenment of mankind; for mercantile interest stimulates curiosity and adventure, and combines with them to enlarge the circle of knowledge. To the spirit

of enterprise . . . civilized nations owe not only wealth and territorial acquisitions, but also their acquaintances with the earth and its production" (Ross, 1986).

In 1798, Alexander MacKenzie of the Montreal based Northwest Company became the first EuroAmerican to cross the North American continent north of the Rio Grande. MacKenzie failed in his efforts to trace the course of the Columbia, instead he wound up following the Peace and Bella Coola Rivers to the coast. Nevertheless, MacKenzie's epic feat of exploration gave the British a strong claim to the Northwest that needed to be followed up with the establishment of trading posts. Fired by visions of a trans-continental British dominated fur empire, MacKenzie wrote an account of his incredible adventures and discoveries in a book entitled *Voyages through the Continent of North America*, published in 1801. In his book, MacKenzie also advocated a British civil and military establishment at Nootka on Vancouver Island with a "subordinate" post on the Columbia. MacKenzie's heroic feat of exploration and his passionate arguments failed to win appreciable support among the British leadership which was becoming increasingly preoccupied with the Napoleonic Wars on the European continent. *Voyages* was, however, avidly read by Thomas Jefferson who passed it along to Meriwether Lewis who carried a copy to the Pacific coast during the Lewis and Clark Expedition (DeVoto, 1947; Ambrose, 1996; Lavender, 1956). But it was John Jacob Astor, more than Jefferson or MacKenzie, who came the closest to actually creating the vast trade network articulated by MacKenzie. Astor had made an immense fortune in the Great Lakes fur trade, dealing with the two British-Canadian fur giants, the Hudson's Bay Company and the North West Company. Astor recognized the portentous nature of MacKenzie's exploration and, realizing that if he did not act

immediately, the Northwest Company's drive to the Pacific could very well result in the British achieving total control of the vast resources of North America's Northwest.

Astor's grand scheme to further expand his fur empire was comprehensive in scope and bold in design. The plan's goal was to occupy and trap the Columbia River and Rocky Mountains; the logistics were staggering, involving land and sea transportation routes in order to connect the Great Lakes with the Northwest, Russia, and China. Astor formed the Pacific Fur Company with his own money and with a group of Canadian and American partners embarked on the first endeavor to establish a fur trading post at the mouth of the Columbia by sea and land (Ross, 1986). St. Louis merchant Wilson Price Hunt, a partner in Astor's Pacific Fur Company, was appointed by John Jacob Astor to lead the overland expedition while in September, 1810, Astor's ship, the *Tonguin*, sailed with men and supplies on an eventful and contentious voyage around the Horn, and via Hawaii, to the mouth of the Columbia, arriving in March 1811. At approximately the same time that the sea-borne Astorians were beginning to construct Fort Astoria at the Columbia's mouth, the overland expedition led by Hunt and assisted by Donald McKenzie, Ramsay Crooks, and John Reed left St. Louis for the Arikara Villages on the Missouri with a party numbering sixty-five people. The Overland Astorians consisted of French-Canadian voyageurs, American hunters, interpreter Pierre Dorion, Jr., son of the Lewis and Clark interpreter Old Dorion, and Dorion's pregnant Iowa Indian wife and two children (Rollins, 1935; Ross, 1986; Ronda, 1990; Utley, 1997).

Hunt kept a journal throughout the course of expedition and it was later used as a source by Washington Irving for the writing of *Astoria*. Unfortunately, Hunt's journal has since disappeared; all that remains is an English version of a poor French

translation entitled *Nouvelles Annales* (Brandon 1982:62; Rollins 1935:281-308).

Hunt's account, thus preserved in *Nouvelles Annales* and as recounted by Irving, describes a harrowing journey that was seemingly cursed with misfortune at almost every turn.

Originally, Hunt had planned to follow a course similar to the one taken by Lewis and Clark six years previously, but after meeting up with three veteran trappers, John Hoback, Jacob Reznor, and Edward Robinson, who had been with Andrew Henry at the forks of the Missouri the year before, Hunt's course was significantly altered. Hoback, Reznor, and Robinson alerted Hunt to the dangers of trying to travel through the territory of the hostile Blackfeet and advised that the Astorians leave the Missouri at the Arikara villages, obtain horses, and cross the Rockies to the south towards the headwaters of the Yellowstone. In July, the Hunt party left the Arikara village and the Missouri River with all their baggage packed on eighty-two horses. Now guided by Hoback, Reznor, and Robinson, the Overland Astorians traveled westward to a tributary of the Powder River in order to hunt buffalo and gather an adequate supply of meat. From there they crossed through Crow tribal territory in the vicinity of Wind River; then southwest to the Green River where the Three Tetons or Pilot Knobs marked the location of the headwaters of the Columbia's principal tributary—the Snake River. It was here that the three former Henry men suggested moving on to Henry's fort located on the Snake's north branch (Irving, 1967; Ronda, 1990; Uteley, 1997). Hunt detached four trappers to start hunting beaver and the Astorians, now guided by Shoshones, struggled on through the labyrinth-like wilderness of the Snake River's south branch which the American trappers named the Mad River (Ronda, 1990). At some point during this phase of the

trek, the Astorians entered present day Idaho; Hunt's party crossed over to the Henry's Fork of the Snake River and found the abandoned cabins and corrals built the year before by Henry's men (Irving, 1967; Ronda, 1990; Utley, 1997). Here they saw a stream approximately one hundred yards wide, with a strong, westward current and, not realizing that it was a branch of the unnavigable river Hunt's voyageurs had just recently labeled as 'Mad', decided to "pursue our journey by water" (Hunt quoted in Rollins, 1933). Hunt, believing that he had found a safe and practical access to the Columbia, had the voyageurs start felling cottonwoods for canoes while another detachment of trappers, including Hoback, Reznor, Robinson, and Martin Cass were sent off into the wilderness to trap.

On the 19th of October, Hunt left the horses with two Shoshone Indians that had recently attached themselves to the expedition and the Overland Astorians, now numbering 55, consisting primarily of the French-Canadian voyageurs and including Madame Dorion and her two children, climbed into fifteen canoes and pushed off into the current of the Snake River (Rollins, 1935). All of the party's hopes were staked on the conjecture that the broad and placid waters of the Snake River would take them to Fort Astoria at the mouth of the Columbia. It was a decision that, commented James P. Ronda, "put the Astorians on a collision course with suffering and death" (Ronda, 1990).

Hunt's canoe borne party made fast and steady progress during the first days on the river but as they progressed down the Snake, the river began to alternate between being a smooth, fast "highway to the Columbia" and a treacherous, terrifying course which courted disaster. Near the mouth of Raft River, the Astorians saw Indians fishing along the riverbank. When Hunt went ashore and attempted to meet with them,

the terrified Shoshone fled at the sight of the strangers; Hunt was able to trade knives for fish with one Shoshone, but "his fear was so great that I could not persuade him to indicate by signs the route I ought to take" (Hunt quoted in Rollins, 1935).

Unaware of the rapids and canyons still ahead of them, the Astorians proceeded down the Snake in their cottonwood canoes. Disaster struck with sudden fury when, as Hunt tersely described, "On the 28th [October], our journey was less fortunate. After passing several rapids, we came to the entrance of a canyon. Mr. Crooks's canoe was upset, one of his men drowned, many goods were lost" (Hunt quoted in Rollins, 1935). Near the present location of the Milner Dam where the Snake begins its tumultuous descent into a spectacular canyon, the canoe carrying Ramsay Crooks struck a boulder, smashing the canoe and drowning Antoine Clappine who was one of the expedition's most experienced voyageurs. Hunt and his party found themselves stranded in a basaltic canyon, along a terrifying stretch of the Snake River that the awe-struck Scottish Astorians gave the Celtic appellation "Caldron Linn". Lost and bewildered, Hunt and clerk John Reed spent the next several days desperately scouting the Snake River Canyon, only to find that the unmerciful river continued its' course through a deep canyon that prohibited further travel by canoe. By now it was November and they had only enough food for five days, and as Irving described the ordeal "to linger in the vague hope of relief . . . would be to run the risk of perishing with hunger. Besides, the winter was rapidly advancing, and they had a long journey to make through an unknown country . . . they were yet, in fact, a thousand miles from Astoria, but fore and around them was vague and conjectural, and wore an aspect calculated to inspire despondency" (Irving 1967 ed.:256). Hunt decided the party must break up into smaller groups and try to walk

out, staking their hopes on finding Indians willing to trade for food and horses. After caching their supply of trade goods, the Astorians broke up into three groups; Donald MacKenzie marched north with four men, Hunt led twenty-two, including the Dorion family, along the north, or right, bank of the Snake, while Ramsay Crooks took a second group of twenty along the south, or left, bank (Brandon, 1972; Ronda, 1990; Irving, 1967; Hunt quoted in Rollins, 1935).

On November 9, they set out for Astoria, with Hunt and Crooks following parallel courses along the Snake River Canyon. The next day, while Crook's party likely traversed the Fossil Beds as they followed the left bank of the Snake, Hunt's party found a trail leading down to the river where they met two Shoshones. These were the first Indians Hunt had encountered since Raft River. One of the Shoshone had a knife they had received from one of the other Astorian parties. Hunt wrote that "one of them led us by a path that took us away from the river. We crossed a prairie, and arrived at a camp of his tribe", the location of which Rollins believed to be in the vicinity of Hagerman (Hunt quoted in Rollins, 1935). The camp that Hunt visited was fairly populous for a winter encampment, with a number of dwellings or lodges shaped like "haystacks"; Their habitations were very comfortable: each had its own pile of wormwood at the door for fuel, and within was abundance of salmon, some fresh, but the greater part cured. About their dwellings were immense quantities of the heads and skins of salmon, the best part of which had been cured, and hidden in the ground" (Irving, 1967). Hunt's brief account of this first encounter with a band of Shoshone living on the north side of the Snake River in November of 1811 is the earliest historic and ethnographic account of the Hagerman Valley:

"The women fled so precipitately that they had not time to take with them such of their children as could not walk. They had covered them with straw. When I lifted it to look at them, the poor little creatures were terror-stricken. The men trembled with fear as though I had been a ferocious animal. They gave us a small quantity of dried fish which we found very good, and sold us a dog. One of these Indians went with us. We were soon back at the river. It was bordered by their tents. We halted

nearby. Some fifty men came to see us. They were very civil and extremely obliging. The river, as on the previous day, was intersected by rapids. On the 12th, I visited some huts at which was a large quantity of salmon. These huts are of straw, are shaped like ricks of grain, and are warm and comfortable. We saw, at the door, large heaps of sagebrush which serves as fuel. I bought two dogs. We ate one of them for breakfast. These Indians had good robes of bison skin, which, so they told me, they obtained in exchange for their salmon. On leaving them, we marched some distance from the river and crossed a small stream [the Malad River]. We saw mountains to the north" (Hunt quoted in Rollins, 1935).

Just as Nez Perce generosity helped preserve the Lewis and Clark expedition on the Wieppe Prairie in 1805, the Shoshone camped on the north bank of the Snake River in the Hagerman Valley provided Hunt's Overland Astorians with food and provisions in a country that was otherwise destitute of game (Rollins, 1935; Ross, 1986; Ambrose, 1996). Some of the Shoshone bands on the north side of the Snake River were apparently more prosperous than the bands living on the southern bank; the Shoshone had garments made from buffalo and reported seeing some horses which were a form of wealth that had to be vigilantly protected from roving war parties. Hunt had no opportunity to trade for horses because their protective and wary owners "took great pains to keep them out of our way" (Rollins, 1935). Hunt had more success in getting food while traveling the Snake River's north bank than Crooks party which were on the south side; when Hunt and Crooks met up near the present location of Homestead, Oregon, Crook and his twenty companions were on the verge of starvation, having subsisted for the last nine days on "one beaver, a dog, a few wild cherries, and some old moccasins sole . . ." (Crooks quoted in Brandon, 1972).

The Overland Astorians persevered, suffering much as they crossed the Snake River Plain and followed the Snake River into upper Hells Canyon. Before the ordeal was over, the Snake would claim another of the Canadian voyageurs, and Madame Dorion gave birth to a baby which died a few days later. Hunt's party arrived at Astoria on February 15, 1812 while the emaciated Crooks party appeared several weeks later. The Overland Astorians were responsible for tracing the first route between the Snake River and the Columbia that would later become the southern Idaho

section of the Oregon Trail.

Scottish born Robert Stuart, who had gone to Astoria by sea on the *Tonquin*, made an even more significant contribution to exploring what would become the Oregon Trail than did Hunt. In June 1812, Stuart and five fellow Astorians left Fort Astoria and embarked on an eastward trek to carry dispatches back to Astor in New York. Stuart kept a journal which documented the overland journey of what Alexander Ross called "This little, bold, and courageous party" (Ross, 1986). Stuart's narrative is replete with detailed descriptions concerning the Indian tribes, plants, and animals of the Far West. His journal which was edited and annotated by Philip Ashton Rollins is considered one of the most important primary source documents to come out of the period of early Western exploration.

From Astoria to the Snake River, Stuart traveled the same route in reverse that Hunt had used. Stuart and party passed through the vicinity of the Hagerman Valley and Lower Salmon Falls during the latter days of August, a time of year that Stuart described as "the prime of the fishing season in this Country" (Rollins, 1935). These midsummer salmon runs were capable of temporarily supporting fairly large tribal gatherings in the Hagerman Valley and the Astorians had the incredible opportunity to witness the Shoshone harvesting salmon during a mid-summer run. The description Stuart left us is of inestimable value since he reported seeing "about 100 lodges of Shoshones busily occupied in Killing & drying Fish-" near Lower Salmon Falls (Rollins, 1935). Stuart's account is all the more evocative and poignant now that the spectacle of a salmon run on the Snake River has, like the once vast herds of Plains buffalo, vanished. The salmon were to the Indians at Salmon Falls what the buffalo was to the Sioux. Salmon Falls was an established and ancient Native American fishing settlement when Stuart visited in 1812 (Chittenden 1954 ed.: 834). Stuart described in considerable ethnographic detail some of the methods and tools used by aboriginal fishermen to harvest the salmon:

"The Fish begin to jump soon after sunrise when the Indians in great numbers with their spears swim in, to near the centre of the Falls, where some placing themselves on Rocks & others to their middle in Water, darts on all sides assail the Salmon, who struggling to ascend, and perhaps exhausted with repeated efforts, become an easy prey-With the greatest facility prodigious quantities are slaughtered daily and it must have been from this place that the dead & wounded came which we saw picked up by the starving wretches below: am completely at a loss to conceive why these [poor] creatures do not prefer mingling with their own nation at this immense fishing place (where a few hours exertion would produce more than a months labour in their own way); rather than depend on the uncertainty of a Fish ascending close along shore or catching a part of what few make their escape wounded From these Falls. Their spears are a small straight piece of Elks Horn, out of which the pith is dug, deep enough to receive the end of a very long willow pole & on the point an artificial beard is made fast by a preparation of Twine and Gum ... one Salmon in particular leaped . . . from the commencement of the foam at the foot of the pitch clear over all the Cascade which must in my opinion have been upwards of 30 feet" (Rollins, 1935).

Stuart and his men traded with the Indians at Lower Salmon Falls and then recommenced their journey up the river and onto the hilly uplands overlooking the Upper Salmon Falls, possibly referring to the Fossil Beds. From this vantage point, Stuart could see the Upper Salmon Falls which he described as "considerable rapids" (Rollins, 1935). As they left the vicinity of Salmon Falls Creek, bound upstream for Hunt's caches, Stuart was joined by "Two Indians, their Squaws & one child" who had five horses. These five Indians were also headed eastward and wanted to accompany Stuart's party, perhaps seeking protection from any Blackfeet war parties that might attempt to steal their horses. Four days later, Stuart and his party were at Caldron Linn and located the nine caches that Hunt had left; six of the caches had been opened but the three remaining caches still contained dry goods, ammunition, and traps which the Astorians took (Rollins 1935:111-113).

The remainder of Stuart's crossing was fraught with peril and difficulty; the Crow stole their horses, and they almost starved to death near Jackson's Hole. But on the way out of Jackson's Hole, they chose to follow an Indian trail to the west of the mountains, instead of following Hunt's trail which was to the north. This route led to Stuart's accidental discovery of South Pass on October 23, 1812 (Goetzmann,

1966). The consequences of Stuart's discovery would be momentous; South Pass was the ideal passageway for wagons to cross through the Rocky Mountains and would become "the hub of transpiration in the Far West" (Utley, 1997; Merk, 1978). Stuart's discovery of South Pass was kept a company secret for years afterward by Astor; it would be Jedediah Smith's 1824 rediscovery of the gap offering an easy crossing of the Rockies that made the public first aware of "a passage by which loaded waggons can . . . reach the navigable waters of the Columbia River" (quoted in Utley, 1997).

What the Astorians saw of Indian life in the Hagerman Valley was a less than pristine, aboriginal culture. By the early 1750s Blackfoot firepower had pushed as many as 3000 to 4000 equestrian Northern Shoshone and Bannock back onto the Snake River Plain (Madsen, 1980). Many of these mounted Shoshone and Bannock visited the fisheries of the Middle Snake and in the process, brought their enemies with them as well. The few horses seen by Hunt and Stuart may have belonged to Shoshone or Bannocks visiting local Shoshone who were relatives, or the animals may have been gifts. According to anthropologist Julian Steward, the Salmon Falls Shoshone did not begin to adopt horses on any extensive scale until the mid-1840s (Steward, 1938).

Little did the Indians camped at Salmon Falls realize how rapidly their world would change. In addition to the threat of being killed or enslaved because of their kinship with the mounted Shoshone and Bannock, the Salmon Falls Shoshone were confronted with a serious depletion of their food resources. For example, the herds of horses brought in by the visiting Bannocks and Northern and Eastern Shoshone would have grazed on the grasses that were an essential element of the local Shoshone diet (Murphey, 1998; personal communication). It has long been stated that the Hagerman Valley fishermen continued to live without horses until the mid-A.D. 1840s. They were reportedly quite content with their old, traditional life style (Steward, 1938).

Meanwhile, Astor's fur emporium on the Columbia-Fort Astoria, was dogged by a series of disasters. After depositing men and supplies at the mouth of

the Columbia, Astor's ship, the *Touquin*, sailed north to Vancouver Island to trade with the coastal tribes. While anchored off of Vancouver Island, the entire crew was massacred and the ship blown up. (Ross, 1986; Irving, 1967). A few months later, war broke out between Britain and the United States. Fearing a British naval assault, Astor's partners sold Astoria to the British-Canadian North West Company. Since many of the Astorians were Scottish or Canadian, most simply switched sides and went back to work as "Nor Westers". The new owners of the post changed the name to Fort George and assumed what amounted to virtual British control of the Northwest, but the founding of Astoria as an American outpost would continue to provide the United States with a strong claim to the Oregon Country (Ross, 1986; Irving, 1967; Ronda, 1990; Newman, 1987).

The North West Company launched the first of a series of Snake Brigades that systematically began trapping the tributaries of the Snake River. For a time between the years 1815 and 1821, "Nor Westers" pushed deep into the Snake River Plain and beyond to the Rocky Mountains, dominating all of the land west of the Rockies and north of the Great Salt Lake (Goetzmann, 1966). Donald McKenzie, the massive 300 pound former Astorian that Alexander Ross called "Perpetual Motion, led the first expedition into the Snake Country in 1818 for the Northwest Company (Ross, 1961). The first Snake Expedition consisted of fifty-five Iroquois, Abenaki, Hawaiian, and French-Canadians, equipped with one hundred and ninety-five horses, and three hundred beaver traps (Ross, 1961; Goetzmann, 1966; Lavender, 1956). For the better part of three years, McKenzie sent trapping parties throughout the country between the Snake and the Green rivers. MacKenzie passed through the Hagerman Valley in 1818 and may have trapped in the vicinity during 1819 (Murphey, Freeman, and Bowler, 1993). The killings of three of McKenzie's Hawaiian trappers in what is now southwest Idaho is what gave the river there the name Owyhee which was then the spelling for Hawaii (Ross, 1961). His most notable accomplishment was revolutionizing the Northwest fur trade and he certainly ranks as one of the periods most important explorers.

By the time of MacKenzie's arrival in southern Idaho in 1818, the Indians on the Snake River Plain were experiencing serious threats to traditional food resources while simultaneously finding themselves living in a combination war zone and trade thoroughfare. MacKenzie was forced to broker a peace agreement between various factions of Shoshone, Bannock, and Nez Perce before he could set his traps in the Snake Country (Ross). Meanwhile, Blackfoot war parties roamed south-central Idaho at will. From these early encounters, Native Americans and the trappers became intertwined in a complex pattern of exchange. From the Indians, the fur trappers received guidance, food and horses. The impact that access to the white mans' manufactured goods had on Indians was staggering. The Indians found that the whites had much that was useful. Trade goods such as metal awls, fishhooks, knives, cloth, beads, bells, buttons, and brass rings were very much in demand by the Indians. Firearms and tobacco were also avidly sought by the Indians (Ross, 1961; White, 1993). In the final analysis, it is not known to what extent such trading proved to be genuinely advantageous for the Salmon Falls Shoshone. Access to trade goods came with a steep price; increased exposure to predatory foes, loss of food resources, and disruption of the traditional seasonal rounds.

The Snake Brigades made the Hagerman Valley a focal point for the dramatic cultural changes and the diffusion of cultural traits and materials that irrevocably altered the Indian way of life. Several examples of such trade goods were among the items looted by relic diggers from burial sites located near the east side of Lower Salmon Falls (Murphey, Freeman, and Bowler, 1993). Many of those burials may have been the result of epidemics caused by the various diseases introduced by EuroAmericans (Thwaites, 1905). The white-mans' diseases had actually preceded even Lewis and Clark by a hundred years. Measles, whooping cough, smallpox, tuberculosis, and diphtheria ravaged Missouri River village tribes and epidemics also swept through the Spanish settlements in California and the Russian outposts in Alaska. Former Idaho state archaeologist Tom Green has estimated that half of North America's indigenous

population died of European diseases before any Europeans saw them (Dietrich, 1995). Indian populations living in constant and close contact with one another such as the communal fishing camps in the Hagerman Valley would have been especially vulnerable to the new diseases introduced by the early fur trappers (Keyser 1989).

Between 1818 and 1845, the United States and Britain made several attempts, each time without success, to negotiate a partition of the Oregon Country; during this time of uncertainty, a convention of joint occupation was agreed upon. Under the terms of joint occupation, the Oregon Country was open to traders and settlers of both countries. Since the powerful North West Company had purchased Astoria, it was in possession of the Columbia. In 1821, the North West Company and the even more powerful Hudson's Bay Company merged in order to end a trade war. The newly combined fur trade conglomerate kept the name and charter of the Hudson's Bay Company and received from the British government a monopoly over all British trade in the Oregon Country. In 1824, HBC reorganized its Columbia Department. The headquarters of the Columbia were moved from Fort George, formerly Astoria, and moved inland to a location deemed more strategic on the north side of Columbia near the confluence of the Willamette. The new base was named Fort Vancouver and its new chief factor was Dr. John McLoughlin, a man who would dominate the affairs of the Oregon Country for the next two decades (Merk, 1978; Utley, 1997).

The Hudson's Bay Company also changed the way the Snake Country Expeditions were conducted, making the brigades an instrument of geopolitics as well as economic gain. Realizing that increasing American intrusions posed a genuine threat to continued British occupation of the Oregon Country between the forty-ninth parallel and the Columbia River, HBC governor George Simpson ordered that the Snake country be stripped of beaver. "The more we impoverish the country" reasoned Simpson, "the less likelihood is there of our being assailed by opposition" (Utley, 1997). Between 1822 and 1824, three HBC brigades were sent into the Snake country: from Flathead Post in what is

now northeast Montana. Michel Bourdon led the 1822 expedition and Finian McDonald led the 1823 Snake Brigade. Former Astorian and Nor-Wester, Alexander Ross was given command of the third Snake Brigade. Ross kept a journal and later wrote vivid accounts of his adventures in the Oregon Country which were published in the 1840s. It is because of Ross that we now have detailed and useful firsthand descriptions of the Snake Country.

Ross's contribution to the early history of southern Idaho and the Snake River Country is impressive. Ross's brigade trapped the lower end of the Hagerman twice in 1824 (Murphey, Freeman, and Bowler, 1993). It was Ross who named the Malad River at the northern end of Hagerman Valley after most of his fur brigade were taken ill while camped along the stream from eating beaver that had eaten water hemlock (Ross, 1956). Ross was the first EuroAmerican to cross the divide between the sources of the Big Wood and Salmon rivers and first to explore the Wood River Valley (Ross, 1956). Alexander Ross also recorded an observation concerning the impact that the fur trade and the horse culture were having on the tribes, he wrote that in 1824 while in the vicinity of the Camas Prairie, a Shoshone (or possibly a Bannock) told him that "We can never venture in the open plains for fear of the Blackfeet and Piegans, and for that reason never keep horses. Six of our people were killed last summer. Were we to live in large bands, we should easily be discovered" (Ross, 1956).

It was at this time that William H. Ashley's men began canvassing the Far West; the Ashley men were the free American trappers who would become the legendary "mountain men". One of Ashley's men was Jedediah Smith who, in October 1824, met up with Ross's Snake Brigade and proceeded to follow him back to the Flathead Post. In essence, Ross inadvertently provided Smith with a guided tour of the HBC's Rocky Mountain domain (Ross, 1956; Utey, 1997; Goetzmann, 1966). Ross was replaced by the ruthless Peter Skene Ogden who led the Snake Brigades for the next six years (Goetzmann, 1966).

Smith's incursion into the British dominated Snake country marked the beginning of a relentless American campaign that would eventually drive the British from the Snake and Columbia rivers (Goetzmann, 1966). While exploring the northern Great Basin for the mythical Buenaventura River during the spring of 1826, Smith crossed the barren Salt Flats of Utah, entered what is now eastern Nevada, but starvation drove Smith to follow Salmon Falls Creek north to the Snake River. Because Smith's own account of his movements during this time have been lost, tracing his shadowy route becomes speculative. Ogden found out about Smith's whereabouts from the Indians, his journal states that on May 21, at Salmon Falls Creek, he was told by the Snakes "that about a month since a party of Americans about 30 in number had descended this Stream on their return from Salt Lake without Beaver" (Morgan 1953). Smith, like many trappers and explorers before and after, perhaps sought food and rest at or near Lower Salmon Falls, a location that already had a reputation as an oasis. After crossing the Snake below the Lower Salmon Falls, Smith headed north to the Boise River, then went on to the Payette before retracing his route back to the Boise and then east to the Big Wood and over to the Big Lost River and on towards the Cache Valley (Morgan 1953).

Smith's rival, Peter Skene Ogden hated the Snake Country; "a more gloomy country I never yet saw" is how he once described it in his. For six long years, Ogden led the Hudson's Bay Company Snake Brigade with courage and skill. No other trapper, mountain man, or explorer saw as much of the Oregon Country and the Great Basin as Ogden did (Goetzmann, 1966). During the course of his six years in the Snake Country, Ogden passed through the Hagerman Valley on at least two occasions. Like Stuart and Ross, Ogden was an astute and keen observer and the journal recording his second expedition is one of the great accounts of western exploration (the journal from Ogden's first Snake Expedition is another of the West's great missing documents).

One entry in Ogden's journals records the migration of various bands of Shoshone during March of 1826; Ogden's brigade had been trapping near Raft River

and were visited by some Shoshone. Ogden wrote, "The Snake camp began to move about sunrise and continued passing till night; not less than 400 heads, nearly double that number of horses, with buffalo meat. This camp is bound to Sickly River [Malad] for roots and salmon. In the fall they will return to winter in the buffalo plain. Ogden described also the difficulty trying to trade with the Shoshone bands that always seemed to be on the move, he wrote in 1826 that "with the Snakes, you must take them by surprise; take their property ere they have time to secure it, and recompense them for it. By any other means, you cannot obtain anything from them, so averse are they to trade provisions, nor do I blame them in such a wretched country; . . . They are surrounded on all sides by enemies; are at peace with Flatheads and Nez Perce, but have the Crows, the Utas [Utes], the Saskatchewan tribes to guard against" (Ogden Journal).

The American trappers were more opportunistic than the British, constantly searching for more economic possibilities than hunting beaver. With the American trappers came others who were interested in expanding the economic parameters of the West. The most notable of these was New England ice merchant Nathaniel Wyeth who attempted to carry out a mercantile scheme on a scale as grand as Astor's has been in 1811. Wyeth wanted to supply the merchandise for the annual Rocky Mountain rendezvous, carry the catch of pelts to the mouth of the Columbia, and put the year's harvest of furs on ships, along with salmon taken from the Columbia, and sail the products directly to markets in China and the eastern United States. Wyeth accompanied veteran mountain men on his first journey westward in 1832. During this sojourn, Wyeth visited a Shoshone encampment near Salmon Falls. In the journal entry dated August 30, Wyeth wrote that "from these Indians I procured fresh salmon spawn which was very encouraging as we are nearly out of provisions and the country would afford us scanty subsistence" (Wyeth quoted in *Sources*, 1899).

Wyeth returned to the West in 1834 with a caravan loaded with supplies and merchandise for the annual Rocky Mountain Fur Company rendezvous. But

William Sublette reached the rendezvous site first and late-arriving Wyeth was able to dispose of only a small portion of his merchandise (Utley, 1997). Whereupon Wyeth moved on westward to the valley of the Snake and located a site to build a trading post near the mouth of the Portneuf. On August 4, Wyeth completed construction of Fort Hall (Russell, 1965). In a counter move, Hudson's Bay built a rival trading post, Fort Boise, on the mouth of the Boise River (Bancroft, n.d.). The building of Forts Hall and Boise symbolized the momentous changes the decade of the 1830s brought to the Snake River Plain. Both Fort Hall and Fort Boise became famous and important trading posts on the emigrant trails. In 1837, Wyeth sold Fort Hall to the Hudson's Bay Company. Even though Wyeth's Oregon venture ended in failure, Wyeth significantly influenced the direction of the American westward movement. In Bancroft's assessment, "it was [Wyeth] who, more directly than any other man, marked the way for the ox-teams which were so shortly to bring the Americanized civilization . . . across the roadless continent" (Bancroft, n.d.).

Two of the West's most notable military explorers, Captain E. T. Bonneville and Lt. John Fremont, were agents of continental expansion. Both were sent to the Far West to carry out systematic reconnaissances, both were associated with the fur trade, and the expeditions of each were thoroughly and accurately documented. Bonneville spent the years 1831 to 1835 in the West on a leave of absence, ostensibly as a private fur trapper but in actuality a semiofficial spy who traversed the central and northern Rockies and the Oregon all the while ascertaining the courses of the principal rivers, the location of the Indian tribes, and disposition the Hudson's Bay Company operations in Oregon, and the Mexicans south of the 42nd parallel (Gilbert, 1983; Utley, 1997). Bonneville's journal has since been lost, but Washington Irving used Bonneville's account as the basis for his 1837 book, *The Adventures of Captain Bonneville*. Irving's book is largely based on the journals of Bonneville and Nathaniel Wyeth, as a result is ranked as one of the most authentic accounts of the fur trade.

Irving includes what may be Bonneville's verbatim description of Salmon Falls which he called "the Fishing Falls" where ". . . the whole stream pitched in one cascade above forty feet in height, with a thundering sound, casting up a volume of spray that hung in the air like a silver mist. These are called by some the Fishing Falls, as the salmon are taken here in immense quantities." Irving's reliance on Bonneville's journal is virtually verbatim, the accuracy of the Bonneville's observations exemplified in an unsurpassed and evocative portrait of the Snake River Shoshone:

{Their} dress consisted of a mantle about four feet square, formed of strips of rabbit skin sewed together; this they hung over their shoulders, in the ordinary Indian mode of wearing the blanket. Their weapons were bows and arrows; the latter tipped with obsidian, which abounds in the neighborhood. Their huts were shaped like haystacks, and constructed of branches of willow covered with long grass, so as to be warm and comfortable. Occasionally, they were surrounded by small enclosures of wormwood, about three feet high, which gave them a cottage-like appearance. Three or four of these tenements were occasionally grouped together in some wild and striking situation . . . sometimes they were in sufficient number to form a small hamlet. From the people, Captain Bonneville's party frequently purchased salmon . . . This seemed to be their prime article of food; but they were extremely anxious to get buffalo meat in exchange" (Irving, 1961).

Bonneville provided the government with critical information about the Hudson's Bay Company's Oregon outposts as well as recommendations about what course of action the United States should take in order to take possession of the Oregon country. He was, as well, one of the first explorers to disseminate the empirical knowledge of the Far West that was familiar to the mountain men to the American mainstream.

Like Bonneville, John C. Fremont was an army engineer who was sent West and also had his subsequent adventures well publicized. Fremont became one of the prominent explorers of the American West in the 19th century, leading five expeditions between 1842 and 1853 (Viola, 1987). Known as the "Pathfinder", Fremont was actually the "Great Publicist" who lured settlers west with his vivid reports, maps, and narratives of the routes to Oregon and California. More than any explorer before, it was Fremont who vociferously extolled the ease of taking wagons across the Rockies via

South Pass without "toilsome ascents" and claimed that it was no more difficult than the "ascent of the Capitol hill from the avenue at Washington" (Unruh, 1993). It was Fremont who coined the term "Great Basin" and who unapologetically advocated American expansion; his passion and vision was comparable to that of Alexander MacKenzie's (Utley, 1997).

On his second expedition, in 1843, Fremont was to reconnoiter South Pass and map its' connection with the trails leading into Oregon. During this epic expedition, Fremont explored the Great Salt Lake, traversed the Oregon Trail to Fort Vancouver, ventured on into southeast Oregon and northwest Nevada, crossed the Sierra Nevada range and wintered with John Sutter, toured various California towns, and returned to the Rockies by a southerly route. Fremont's second expedition, it should be pointed out, did not represent the vanguard of discovery. The fur trappers had covered these routes already and, by 1843, the migration to Oregon by westering families had already begun. The real significance of Fremont's achievements, particularly those of the second expedition, was in the mind of the American public. Fremont symbolized the romance and adventure and he articulated the excitement of exploring new lands while also reporting on the seeming unlimited new economic opportunities awaiting those bold enough to follow in the Pathfinder's footsteps. Fremont was a genius at creating symbols and using them to stimulate the public imagination. Fremont's stirring images of the West fired the imagination of the American public (Gilbert, 1983).

Fremont led a contingent of thirty-nine men, most were French-Canadian but the party included cartographer Charles Preuss and mountain men Kit Carson, Thomas "Broken Hand" Fitzpatrick, and Alexis Godey (Utley, 1997). Preuss served as the expedition's scientist; he mapped the topography of the entire route, collected plant and mineral specimens, and sketched scenes depicting the landscapes, including one of Thousand Springs entitled "Outlet of Subterranean River" (Vioia, 1987; Preuss, 1958). Fremont's official report and Preuss's diary form the basis for two

accounts documenting this important survey. Fremont's expedition occurred at a time when the fur trade had already lost its profitability; many mountain men were looking for new opportunities. Fremont helped make Kit Carson one of the West's most celebrated frontiersmen. Fremont's written report and Preuss's extraordinary maps were published in 1845 as official government documents; they provided to the public unsurpassed and detailed information on the West. Preuss's map was large and detailed, depicting the West from the Mississippi to the Pacific in seven sections and it would become an indispensable guide showing emigrants how to get to Oregon and California.

Fremont's report includes a vivid description of the Salmon Falls while Section VI of Preuss's topographical map clearly delineates the location of Fishing Falls 1300 miles from Westport Landing. Fremont's enchanting description of the Hageman and Thousand Springs area as "a melancholy and strange-looking country-one of fracture, and violence, and fire" and the Fishing Falls which he thought was "the most beautiful and picturesque fall I had seen on the river" would provide many Americans with many of their first impressions of the West. The expedition camped a mile below Fishing Falls on October 2, 1843 and Fremont recorded that the weather that day was calm and clear with a sunset temperature of 74 degrees. Fremont had the opportunity to see firsthand the Shoshone encampments at Upper Salmon Falls. He wrote that the several lodges of Shoshone living at the falls were poor and only "slightly provided with winter clothing" although with temperatures in the 70s it is unlikely winter clothing would have been much in evidence. The Shoshone were quite numerous, "strung along the river at every little rapid where fish are to be caught, and the cry *haggai, haggai* (fish), was constantly heard whenever we passed near their huts, or met them in the road"(Fremont's Report, 1845). During his brief idyll at the Salmon Falls, Fremont noted that the Shoshone:

"appeared to be unusually gay savages, fond of laughter, and their

apparent good nature and merry character, struck me as being entirely different from the Indians we had been accustomed to see. From several who visited our camp in the evening we purchased, in exchange for goods, dried salmon. At this season, they are not very fat, but we are easily pleased. The Indians made us comprehend that when the salmon come up the river in the spring, they are so abundant that they merely throw in their spears at random, certain of bringing out a fish" (Fremont's Report, 1845).

What Fremont described was a lively and bucolic scene along the Snake at Fishing Falls with peaceful Indians paddling about in boats made of rushes and laughing around their campfires. It must have been extremely reassuring for the reader who was contemplating an overland trek that, according to Fremont, for mere pieces of clothing, the traveler would be able to obtain enough food from the ancient fishery to carry them to Oregon (Fremont, 1845).

Fremont's cartographer, German-born Charles Preuss kept a diary that was discovered in 1954; Preuss's account offers an interesting contrast to Fremont's version; while Fremont was often grandiose and theatrical, Preuss was grouchy and terse. When Fremont brought along on the second expedition a twelve-pound brass cannon for no other reason than its symbolic value, Preuss complained "If we had only left that ridiculous thing at home" (Preuss, 1958). For Preuss, the Snake River Plain was "terrible", the weather cold and windy, "the road rocky". Fremont's "gay savages" are in Preuss's diary "miserable", "insolent", and "arrogant". One sometimes wonders if the two men are actually describing the same place but even the usually taciturn Preuss is impressed by the wondrous and exotic scenery of the Hagerman Valley;

"Yesterday we passed the Fishing Falls. Now we can purchase salmon to our heart's content" He goes to write that "One hears nothing but the word *hagai, fish*" . . . This Snake River is interesting, I must confess, no matter how awful the country around it may be. The most beautiful little waterfalls, twenty to forty feet high. Then steep, volcanic, rocky shores along which one can travel for days without being able to find a place to get down to the stream . . . The whole thing looks like a volcanic gap which the river chose for its bed. The waters which come from the mountains disappear in the lava or the rocky plain and come out again on

the bank of the river" (Preuss, 1958).

The former mountain men who guided Fremont, Kit Carson and Tom Fitzpatrick were important to the success of Fremont's expeditions. In the end, when the streams were trapped out and the price of pelts at record low, it was the geographic knowledge shared by the trappers with the agents and boosters of manifest destiny that ensured that the American nation would in fact spread from Atlantic to Pacific coasts.

The publication of Fremont's report in 1845 represents the beginning of the era which would culminate in the fulfillment of America's "manifest destiny". The great American migration to Oregon would begin in the early 1840s and many ancient Indian camp sites and fishing camps so vividly evoked in the writings of Irving and Fremont were to become emigrant rest stops. Oregon overlanders would rely extensively on assistance and trade from the Shoshone at Salmon Falls just as Hunt's 1811 Overland Astorians, Wyeth in 1832, and Fremont had done. Historian Elliot West's description of the frontier as "a place of accommodation and exchange", a shifting and unstable "zone of exchange and mutual influence" is certainly applicable to the Hagerman Valley during the years of early fur trade era (West, 1994). "Zones of exchange" such as the Hagerman Valley were critical during the early years of contact, for it was within these designated areas that Euro-Americans and Native Americans depended upon each other for articles of trade, lived together, learned to speak to each other, ate each other's cooking, and engaged in mercantile exchanges. But in the end, the Native American people would lose their autonomy as their subsistence based culture was undercut by the overwhelming currents of Euro-American westward migration and a growing market economy (Cronon and White, 1986).

The late Don Crabtree once described an intriguing piece of archaeological evidence showing how Euro-American manufactured goods penetrated and changed the culture of the native peoples at Salmon Falls. At a site near Upper Salmon Falls, Crabtree found various metal artifacts of Indian manufacture. The artifacts

found by Crabtree included four completed metal projectile points, a broken "aboriginally made metal knife", a small punch-like object, and an assortment of "bangles in various stages of fabrication". Oregon bound pioneers evidently traded the scrap iron to the Indians for salmon or simply discarded it after repairing their wagons. The iron, perhaps the parts of barrel hoops and wheel rims, was very much desired by the Indians, but for different reasons than what the Euro-Americans used the metal for. Metal projectile points were far preferable to those made from obsidian. A metal point could be reused over and over again. According to Crabtree's analysis of the iron artifacts, the Indians ingeniously thinned the iron by a fire-heated process and utilized traditional stone anvils and hammerstones to pound the iron into the desired shapes. Crabtree also speculated that the changeover from stone to metal was "probably very rapid since no living Indian informant in Idaho recalls the manufacture of flaked stone tools". This may have been "the beginning of the end of native flint knapping about 1850 A.D." (Crabtree, 1968). The iron artifacts found near the Upper Salmon Falls illustrates a much deeper theme: Not only was flint knapping coming to an end, so too was the Indians' way of life. The Indians were becoming more dependent on the culture of the white-man and "their world would be another world filled with other people whose mouths would speak other words, whose sleep would be eased or troubled with other dreams, whose prayers would be offered up to other gods" (Frazier, 1997).

According to the 1863 Soda Springs Treaty, the various bands of Shoshone, Bannock, and Paiute claimed as their lands the country from Salmon Falls, east to the Wind River Mountains (Madsen, 1996). But as the Indians lost more and more of their lands, the boundaries were constantly changed. Today, the boundaries of the reservations at Duck Valley and Fort Hall are far removed from ancient fisheries and camp sites of the Salmon Falls. These people are now a small minority in their former homeland. The historic and ethnographic descriptions of the Shoshone recorded during the fur trade period preserved information of incalculable value. These accounts help

archaeologists begin to understand how artifacts were utilized. With so many unanswered questions regarding the past lifeways of native people, it is imperative that archaeological research continue to investigate sites preserved on the Hagerman Fossil Beds Monument.

HISTORIC PERIOD - OREGON TRAIL

Above rapids thick with salmon at mile 1,367 of the 2,170-mile journey from Independence, Missouri, to Oregon City, Oregon, the trail humped over a bluff. Oxen struggled in the sandy soil of fossil-rich flood deposits. Jesse A. Applegate walked. "In getting away from this place we had a narrow escape," wrote Applegate in *Recollections of My Boyhood* (1914). Age six in 1843, he tugged at his mother's side in a train of 875 pioneers and twice that number of livestock—the largest caravan yet to follow the Oregon Trail. Dark cliffs that rose above the Snake River downriver from Upper Salmon Falls startled the Missouri farm boy. "We had to follow the Devil's Backbone," Applegate recollected. "It is a very narrow ridge with a gorge a thousand feet deep on the left hand and a sheer precipice on the right." No child who could toddle or walk was allowed to cross in a wagon. Between iron-hooped wheels and certain disaster were barely inches to spare.

"Strait is the gate and narrow is the way which leadeth unto life," wrote Applegate in 1914, near death and quoting from Scripture. "Wide is the gate and broad is the way that leadeth to destruction. But this Devil's Backbone was worse than either, for it was both narrow and crooked, and it was hard to tell where it might lead to (Applegate, 1990)."

Often the road beyond Hagerman led to a West of graver hazards; it led, in Applegate's recollections, to a swollen ford of the Snake at Three Islands, a scaffold-like tomb of hanging corpses near Fort Boise, a near-fatal fall under a wagon wheel in Oregon's Malheur desert, a rock-and-spear-throwing brawl with Indian youths outside Fort Walla Walla, an early snowfall in the Blue Mountains, and then calamity at The Dalles of the Columbia where a skiff disappeared in a whirlpool, killing three. Shrouded in lore and idealization, the trail led also to myth. Oregon in the 1840s was national wish fulfillment. God's Country. A window on the Pacific. A pastoral Eden beyond the Indian country where righteous yeomen staked claim to the fertile Northwest. "Oregon," said *The Alton Telegraph*, "would contribute to our national honor (Atwood, 1907)." It would "connect the North with the South, and the East with the West, so firmly that nothing but the power of Omnipotence could separate them or prevent the United States from becoming the leading nation of the world." First, however, Americans would have to drive "an entering wedge (Atwood, 1907)" through the Snake River's lava landscape. Why go to Oregon? asked John Quincy Adams. "To make the wilderness blossom as the rose, to establish laws, to increase, multiply, and subdue the earth which we are commanded to do by the first behest of God Almighty (Kelley, 1990)."

The imagery demonized Idaho. Where the August heat left little forage for livestock and the buffalo had been hunted to near extinction, the Snake cut vertical chasms through a waste of ghoulish place names: *Gate of Death* (renamed Massacre Rocks), *Caldron Linn* (the river's "boiling, seething cauldron" that killed the trapper in 1811), *Devil's Scuttle Hole* (the 35-miles of rapids above Twin Falls), *Rattlesnake Creek* (near Mountain Home), *Malad Gorge* (north of Hagerman where the French-named *Riviere Malades*, or "sick river," entered the Snake). The not-yet Magic Valley seemed sinister, even satanic. "How old man Vulcan has played Havoc here," said mapmaker Charles Preuss (Guddle, 1958).

Never mind that the ghouls were mostly imagined. And never mind that the drop from Hagerman's Devil's Backbone—about 400 feet—was less than half what farm boy Jesse Applegate recollected. Fear was a rite of passage on Idaho's road to Canaan. Applegate's mother, Elizabeth Miller, hid a pistol in her apron. Her terror of the desert was genuine whether the dangers were real or not.

Children of Israel

And yet they came, streaming toward Oregon sunsets. By 1846, at least 5,000 settlers had reached Oregon's Willamette Valley via the Snake-Columbia basin. Others abandoned the Snake at Raft River (100 miles or so before reaching the Devil's Backbone) where the trail branched south toward the promise of California.

Estimates vary. Historian Aubrey Haines of the National Park Service counted 43,264 Oregon-bound emigrants, 1841-1863. Historian John D. Unruh, Jr., greatly enlarged the estimate by factoring in the many thousands who arrived via detours and cutoffs. From 1840 to 1860, according to Unruh's numbers, 253,397 reached the Shoshone country via South Pass and Fort Hall. Billowing west in one of history's most impulsive migrations, an estimated 300,000 reached the Pacific by wagon before cannons bombarded Fort Sumter. Murder, massacre, and massive flooding in the early 1860s only suspended the wagon migration. Even after 1869, when a golden spike at Promontory Point, Utah, completed a rail connection between California and Missouri, the old Snake-Columbia road freighted most of the Oregon traffic. Not until the Oregon Short Line's 1884 bridge over the Snake above Huntington did rails supercede trails (Haines, 1981).

America's destiny was manifest in those hordes hurtling westward. So said Francis Parkman, the wealthy adventurer who, in 1846, traveled as far as Nebraska and published a popular book that gave the migration its name. "The Indians will soon be abased by whiskey and overawed by military posts," wrote Parkman in *The*

Oregon Trail (1849). Wild and noble and caught in the great invasion like the buffalo on which they depended, the natives seemed dumbfounded and doomed. The Oglala, for example, "were [not] in the slightest degree modified by their contact with civilization. They know nothing of the power and real character of the white men, and their children would scream in terror when they saw me." White men know even less of the red. Gawking emigrants were "tall, awkward men in brown homespun [and] women with cadaverous faces." Children lost in the woods were "totally out of their element, bewildered and amazed (Parkman, 1982)."

The Oregon Trail spawned a folk genre of memoirs and guidebooks, of Currier & Ives prints and bar-room murals, of prairie schooners breasting amber grasslands. Not until Frederick Jackson Turner, however, did the trail swell to mythic importance as a highway of national identity. "The frontier," wrote Turner in an 1893 address to the American Historical Association, "was the most rapid and effective line of Americanization." The Old West had "consolidated" national culture with enduring characteristics, namely, "that practical, inventive turn of mind, quick to find expedients; that masterful grasp of material things, lacking in the artistic but powerful to effect great ends; that restless, nervous energy; that dominant individualism, working for good and for evil, and withal that buoyancy and exuberance which comes with freedom (Turner, 1972)." The Oregon Trail—for Turner an idea more than a highway—was a vital stage of a sweeping process that year after year had replenished America's virtue and strength.

Historians ever since have searched for America's center on the frontier's moving edge. Taking a cue from Turner, who compared "the progress from savage conditions" to Darwin's theory of evolution, the WWI-era historian T.C. Elliott claimed that the Americans who settled Oregon were simply "the fittest to survive (Elliott, 1912)." Likewise in 1929 the historian Agnes Laut called the emigrants "Children of Israel," their trail a "racial highway (Laut, 1929)." Superior breeding.

again, was the engine of civilization in the Federal Writers' Project 1939 Oregon Trail guide: "The biological genes transmitting the characteristics that drained Europe of much of its vitality and made the United States an empire extending from coast to coast have not been bred out (Mattes, 1973)." Territorial conquest, a biological imperative, was inevitable and therefore right.

Oregon or the Grave

Across the wide Missouri and up the Platte to the Colorado Rockies, then south to the Texas Panhandle through trials of heat, thirst, desertion, theft, near mutiny, and near starvation, Major Stephen Long, in 1820, led the scientific wing of the army's Yellowstone expedition to the psychological edge of American civilization. "In regards to this section of country," wrote Long, an engineer from rainy New England, "we do not hesitate in giving the opinion that it is almost wholly unfit for cultivation, and of course uninhabitable by a people depending upon agriculture for their subsistence (James, 1823)." Printed across Long's first map was "GREAT DESERT" which became "GREAT AMERICAN DESERT" in Henry Tanner's popular *Atlas* of 1823 (Tanner).

Westerners paid little attention. Already a vanguard of backwoods trappers had scoured the beaver-rich canyonlands of the Snake-Columbia basin. In 1826 the *St. Louis Enquirer* maintained that wagons could reach Oregon without meeting "any obstruction deserving the name of a MOUNTAIN." The rosy assessment was confirmed in Jedediah Smith's 1830 report to Secretary of War John Eaton: families with wagons and cattle could follow the Snake to a fine country for farming. Two years later, when the French-American soldier and fur-trader Benjamin Bonneville took wagons over the continental divide into future Wyoming, expansionists rejoiced. American evangelists, stirred by frontier reports from the Presbyterian missionary Samuel Parker in 1835, claimed the road across the lava desert had been "excavated by the finger of God." On that desert passage were obstacles more political than physical. The United States and

canyons where, said Farnham, "our ears are yet saluted by the howl of the wolf." Soon the travelers heard human "howling." An encampment of Bannocks, apparently, were "mourning for the loss of some of their friends that had been killed in battle (Beal and Welles, 1959)." Three suspended their grief long enough to point the dragoons toward Fort Boise. There in the dying days of the fur trade the Peorians feasted on ducks, bacon, surgeon, buffalo, elk, turnips, cabbage, and pickled beets at the table of the fort's famous factor, the French-Canadian Francois Payette (Farnham, 1841).

By 1840, some 500 Americans occupied maybe 100 farms in and around the Willamette Valley. In 1841, legendary hunter Tom "Broken Hand" Fitzpatrick led John Bidwell and his Western Emigration Society--the first bona-fide wagon train. U.S. Topographical Engineer John C. Frémont marched west the following May with Hawkin rifles, barometers and transits, pack mules, kettles and blankets for Indian tribute, a stout crew of French trappers, six thermometers, an inflatable rubber raft, a soft-spoken scout named Kit Carson, and the red-faced German who became one of America's most celebrated cartographers, Charles Preuss. Two days ahead of Frémont was Indian agent Elijah White with his emigrant company of more than 100 children, women, and men in 30 amphibious wagons (Goetzmann, 1966).

In 1842 the British well understood that the push through the lava desert was more than a peasant migration. Strategic intelligence in the guise of scientific reconnaissance--a tactic predating Lewis and Clark and continuing in the work of highly placed army savants such as Long, Frémont, Zebulon Pike, William H. Emory, Howard Stansbury, Andrew A. Humphreys, and Gouverneur K. Warren--ran counter to the myth of the West as the process through which Americans shed the schooled culture of seaboard civilization. Government science preceded the wagon migration. Already in 1841 the U.S. Exploring Expedition had grounded the *U.S.S. Peacock* in the crashing surf at the mouth of the Columbia River. It was a fortuitous embarrassment for American imperialism. Demonstrating the uselessness of the Columbia as a gateway to Asia, the

wreck of the *Peacock* turned the attention of Congress north to safe harbor in Puget Sound (Goetzmann, 1966).

Congress, meanwhile, stirred West Coast colonization with offers of farmland. Two decades before the Homestead Act of 1862 sent farmers flooding west, the Senate, in 1843, pledged 640 acres of Oregon Country to each male pioneer. Although the proposal died in the House, it stoked expansionist fire. Democrat James K. Polk turned the 1844 Presidential election into a referendum on annexation or, if necessary, brute conquest. Challenging the British to "Fifty-four forty or fight," a demand for every inch of disputed terrain from California to Alaska, Polk defeated moderate Henry Clay. Two years later a British-American compromise at the 49th parallel made the United States continental. Ratified by the Senate on July 17, 1846, the Oregon treaty gave Americans its deepwater port (future Seattle) and relinquished to the British the wilds above Puget Sound (Richardson, 1905).

By 1846—a "year of decision," said historian Bernard DeVoto, a zealous time of "manifest destiny" when the Mormons left for Salt Lake and General Zachary Taylor decapitated northern Mexico—the overland trails were rutted and thronged. Six-thousand thirty-four emigrants crowded toward Oregon and California on July 17, 1850, the peak day of the migration. James Wilkins, Missourian, noted "a great many [wagon] companies continually in sight." White-topped schooners dotted empty Nebraska "like a string of beads (Hill, 1994)."

Fury and Astonishing Splendor

A braid more than a trail, the road to empire looped, sidetracked, and frayed through a tangle of byways and cutoffs. "Here we are upon a sage plain with roads running in every direction," wrote Julius Merrill, Boise-bound and short-cutting

through the Camas Prairie in 1864. "We are at a loss which [road] to take (ID Dept. of Transportation and Tourism, 1990)."

A trace of the 19th century route onto a 20th century map shows 492 miles across the barrens of Idaho via Three Island Crossing. Those unwilling or unable to cross that dangerous ford could detour 505 miles via the mesa lands of Idaho's Owyhee desert. In 1852 a ferry at Thousand Springs opened the Rock Creek or North Alternate Route that bypassed the Devil's Backbone via Malad Gorge. Steep and stony in any direction, Idaho was tough going—"the most tortuous road I could ever imagine," said emigrant Ester McMillan in 1852 (Faneslow, 1992). Idaho was elsewhere an "ash heap" and its serpentine river was "mad (Eide, 1972)." For an emigrant to enjoy the ordeal, said one, "a man must be able to endure heat like a Salamander, mud and water like a muskrat, dust like a toad, and labor like a jackass. He must learn to eat with his unwashed fingers, drink out of the same vessel with his mules, sleep on the ground when it rains, and share his blanket with vermin, and have patience with muskeroes, who don't know any difference between the face of a man and the face of a mule, but dash without ceremony from one into the other. He must cease to think, except to where he may find grass and water and a good camping place. It is hardship without glory, to be sick without a home, to die and be buried like a dog (Paden, 1943)."

For many, the eighty-some miles from Caldron Linn to Three Islands (Murtaugh to Glens Ferry) were the most difficult leg of the trip. "Hideous world, fearful roads, all grass poisoned, every day one to three head of cattle dying," wrote William Keil in 1855 (Bek, 1953). The wind-blown Idaho silt now famous for growing potatoes (geologists call it loess) could blind in the heat of August. "The dust," said emigrant Jane Gould from the middle Snake in the summer of '62, "was even worse than Indians, storms, or winds or mosquitoes, or even wood ticks. Dust . . . if I could just have a bath (Finnegan, 1993)."

The excessive dust was a good indication that the cattle-invaded steppeland was an ecosystem in shock. No longer a flowering diversity of bitterroot, goldenweed, balsam, clover, rye, wild onion, and camas, the palouse had surrendered to sage. As noxious weeds such as cheatgrass and Russian thistle (tumbleweed) displaced more edible species, nature, said emigrant Overton Johnson, was "wrecked and ruined (U.S., B.L.M., 1989)." Another witness to desolation was the twenty-one-year-old Ohio man who later returned, eastbound on the eve of his 98th birthday, to make the case for preserving segments of trail. "When the Snake River was reached," said Ezra Meeker, recalling the 1850s, "the heat again became oppressive, the dust stifling, and the thirst almost maddening. In some places we could see the water of the Snake winding through the lava gorges; but we could not reach it, as the river ran in the inaccessible depths of the canyon (Meeker, 1931)." The desert "scarcely afforded sustenance," said Cyrus Shepard (Holmes, 1984). It was "burnt rocks . . . damned bad dust . . . horned toads, rattlesnakes and the damned Snake Indians" (McComas, 1954). Five decades before Twin Falls boosters imagined "fertile soil . . . beautiful scenery . . . [a] climate equal to Italy's best . . . a new Garden of Eden," Basil Longworth of Ohio saw only "a remarkably strange place (Parish, 1943)."

Remarkably strange, surely, but wondrous to tastemakers like Washington Irving who rediscovered the pastoral West as mysterious and sublime. "It is a land," wrote Irving in 1837, "where no man permanently resides; a vast, uninhabited solitude with precipitous cliffs and yawning ravines, looking like the ruins of a world; vast desert tracts that must ever defy cultivation and interpose dreary and thirsty wilds between the habitation of man (Fisher, 1937)." It was a land so beguiling, moreover, that many thousands of the Oregon-bound suspended the race against starvation and snowfall to stand, spellbound, on the brink of impossible chasms in the mist of plunging cascades. Farham of Peoria, a visitor to Twin Falls in 1839, heard the boom of its crashing water from at least three miles away. Today but a trickle of its former grandeur, its water

diverted upstream by plumbing for agriculture. Twin Falls of the Middle Snake once sheeted in a double torrent around a massive rock. An 1880 lithograph shows a native with raised spear sentry-like at the foot of a roaring Niagara. Taller but more remote was the future tourist attraction four miles downstream. Shoshone Falls—called Canadian Falls until the U.S. Army expunged the reference to America's rival—fell 212 feet into a hollow amphitheater where a whirl of the Bonneville Flood left a ruin of fractured basalt. Known to trappers and traders but inaccessible by emigrant wagon, Shoshone Falls remained outside the geography of American science until U.S. Geologist Clarence King took a photographer to Idaho in 1868. King reported "a strange, savage scene: a monotony of pale-blue sky, olive and gray stretches of desert, frowning walls of jetty lava, deep beryl-green of river-stretches, reflecting, here and there, the intense solemnity of the cliffs, and in the centre a dazzling sheet of foam (Franzwa, 1972)."

Emigrants turned from the brink as if, said King, "from a frightful glimpse of the Inferno (King, 1870)," but soon the vision had vanished and the stillness of sagebrush reigned. At trail mile 1327 a willow-matted ravine called Rock Creek provided the first accessible water since the emigrants left Caldron Linn. Here in 1864 outfitter John Bascom built a lava rock stage station on the future Kelton Road. Bascom soon added a general store with a sod-roofed cellar and squarish Old West verandah—now the oldest building in southcentral Idaho. Here also was the saloon where a grocery clerk cut down outlaw Bill Dowdle in one of Idaho's famous shootouts. A nearby cave held the first jail in Twin Falls County until a federal statute made it illegal to keep prisoners underground (Derig, 1996).

One mile upriver from Upper Salmon Falls was "a picturesque spot of singular beauty (Fremont's Journal)." Bursting like broken plumbing in the canyon's northern wall were two crystalline springs that rushed together and fell 160 feet onto rocks whitened by saline. Blue water hugged vertical cliffs like a flowing apron. At 58° F, the blue spring water measured seven degrees warmer than the river's silvery snowmelt.

Nearby on a slope dense with cane and poison nettles, the engineer collected shells "of small crustacea" said to be evidence of a freshwater sink in the neighboring highlands. Frémont was essentially right: Crystal Springs, as it came to be called, was snow-fed through a sink of the Lost River in the lava beds north of Fort Hall (Frémont, 1849). Crystal Springs, said an emigrant in '53, was "large enough to turn machinery." Thousand Springs, said another, had "mill sites enough for the whole state of Illinois (Cramer, 1992)."

Emigrant impressions were generally mixed and less scientific. Guidebook author William H. Winter saw Thousand Springs from a distance and imagined "banks of snow resting on the cliffs." Longworth of Ohio described "a most pleasing and sublime spectacle." Jason Lee praised the divine: tumbling springs, icy white, ran with "impetuous fury and astonishing splendor down the rugged banks. . . . How astonishing are the works of God (Brosnan, 1932)."

Coping with the Catastrophic

The Snake River Shoshone-Bannock-Paiute, need it be said, were not peaceful or warlike or feeble or fat, but human and idiosyncratic. Ethnically diverse and a mix of many cultures, they responded to the wagon invasion in contradictory ways. Some resisted. Some accommodated. Some died in the crossfire or fled. Never, however, were they unconditionally defeated. To reduce their history to "one horror after another endured by the reds at the hands of the whites" (Farb, 1979) would be to slight the leverage of armed resistance, converting the marauding savage to the passive victim in an exchange of stereotypes. To say that "the progress of the white settlers meant the death of the Indians" (James Henretta et. al. *America's History* 1991) would be to forget some 9,000 Idaho-Nevada Sho-Bans who remain ethnically independent enough to be

counted by the U.S. Census. To flatly declare that "Native Americans were exterminated" (James Kirby Martin, et. al. *America and Its People* 1987) would be to deny the Indian the most pervasively human of frontier characteristics—the capacity to cope (Farb, 1971).

Marauding savage and passive victim coexisted in the mythology of the road that conquered the West. In 1843, for example, the dour German who traveled with Frémont thought the bounty of Thousand Springs made the natives too complacent for Christ. "Wealth," wrote Preuss of the salmon eaters, "makes them insolent and arrogant, as it does the Sioux (Cramer, 1992)." For George Catlin, however, the lords of the far west prairie were incapable of insolence. A lawyer-turned-artist who visited the western Shoshone in 1855, Catlin saw behind Indian eyes "a beautiful blank upon which anything could be written." Indians "had no business hours to attend or professions to learn." They had "no notes in the bank or other debts to pay—no taxes, no tithes, no rent. Why, then, should Christian man bother to convert and conquer? Because romantics like Catlin knew all things wild would perish, and also because even an artist could see the Great American Desert was richer than once imagined (McCracken, 1959).

Nowhere were the prisms of misunderstanding more culturally distorted than in the barter for goods and services so vital to the Oregon Trail. Major Osborne Cross of the U.S. Regiment of Mounted Riflemen pondered the "degenerate" state of primitive man after trading at Salmon Falls. Why had the salmon eaters haggled so doggedly for "an old tin cup, partly without a bottom." And why were two rifle cartridges worth more than a woolen blanket? Perhaps these people barter for sport or, said Cross, "simply to gratify their fancy (Cramer, 1992)." Shirts were especially

valuable. "Father took the shirt off his back in exchange for a big fish," Clarence Bagley remembered (Cramer, 1992). Metal fishhooks were another popular item. On August 21, 1851, an emigrant bartered a hook for a monstrous fish "as long as a wagon b[e]d." It was enough fish "to make us wish never to see any more." Often the market was glutted. "Dull sale," Cecilia Adams remarked after Indians tried for a second day to unload a basket of glistening salmon (Webber, 1992).

The market pitched and fell in a rudderless commerce without the ballast of a shared legal tradition or a common ethical code. What legality governed ownership and access to prairie resources? Was it stealing to gather wood? To forage and hunt? Indeed it was, said Chief Washakie of the Wind River Shoshone. "This country," the chief reminded his people, "was once covered with buffalo, elk, deer and antelope, and we had plenty to eat, and also robes for bedding, and to make lodges." Born in Sacajawea's Village a year before Lewis and Clark, he had hunted come of age on buffalo hunts at the base of the Grand Tetons during an era of unprecedented prosperity for Plains Indians suddenly enriched by the horse. "But now," he protested in 1855, "since the white man has made a road across our land, and has killed off our game, we are hungry. . . . Our women and children cry for food and we have no food to give them (Trenholm and Carley, 1964)." Where the historian Turner lauded that frontier process, Washakie saw devastation: the cattle grazing that crushed edible roots and seeds so vital to Shoshone subsistence, the gold hysteria that stripped forests and pockmarked the hills, releasing mudslides. More ruinous still were the sportsmen and trophy hunters. Twenty-five million buffalo had roamed west of the Mississippi before horses and

firearms. In 1883 a museum expedition searched the plains for a healthy specimen. Less than 200 remained (Billington, 1971).

Emigrants of good conscious denounced the barbarous slaughter. Should a horse go missing, however, Indians were condemned. In 1851 a pioneer lost a horse, suspected theft, crouched behind a rock where Shoshone were lancing salmon, and shot an Indian dead. Nearby at Rock Creek that same year an emigrant company arrived to find Sho-Bans peacefully camped. The wagon master blasted a shotgun while his men charged cavalry-style. The next day a war party shot three emigrants, killing one (Unruh, 1979).

Arrogant treatment continued because the risk of retribution was small. Historian John Unruh has shown that the danger of Indian ambush has been greatly exaggerated, that more Indians than whites died in these confrontations, and that red-on-white violence accounted for less than four percent of emigrant deaths. Murder, indeed, was rare, but raids on livestock were common near Salmon Falls. Historian Donald Shannon's chronology of "Snake country massacres" shows nineteen attacks on emigrant trains before 1863. Ten erupted within 100 miles of the Devil's Backbone. Idaho, moreover, was the killing ground of the trail's most sensational carnage. Of the very few "non-mythical trail tragedies" large enough to make Unruh's selective list of "real massacres," the two most horrific involved Shoshone-Pautes who allegedly fished and pastured in the Hagerman Valley (Unruh, 1979).

Said Col. George Wright, the Oregon District commander at Fort Vancouver, "those [Indians] who are more hostile are near Salmon Falls (Shannon, 1993)."

Horse trading gone bad may have been the spark that ignited the first confrontation lopsided enough to deserve Snake country "massacre" status. On August 19, 1854, about 30 miles north of the Devil's Backbone where Goodale's cutoff dissected the Camas Prairie, eleven Sho-Bans approached a wagon train, demanded horses, and opened fire. Three emigrants died. Survivors said the attackers were "Winnestah Snakes" (mounted Shoshone) from Salmon Falls. Historians speculate that the attack was connected to an altercation of the previous day in which wagon master Alexander Ward of Lexington, Missouri, had tracked horses to a Sho-Ban camp near the future City of Boise. Ward and his men retrieved the horses, presumably at gunpoint. By midday on August 20, a war party of thirty or more had overtaken Ward as his five-wagon detachment crossed the Boise Valley near the future farm town of Middleton. A warrior jumped on a horse. Guns blazed. Thirty Indians charged. Two days later the rescuers found among blackened wagons the widely scattered remains of nineteen pioneers. The wife of the wagon master had been ravaged with a hot poker. Three children were missing and another three, a newsman reported, "had doubtless been burnt alive, and the mother forced to witness it (Oregon Statesman, 1854)." Outraged editorialists called for an "everlasting treaty" of genocidal retribution. Sixty-five federal troops arrived the following spring, corralled about 200 Indians, tried and convicted four, shot one, and at nightfall on July 18, 1855, noosed the remaining three to a gallows at the massacre site (Bird, 1934). Soldiers cut down the bodies at daybreak. The gallows, however, remained.

Idaho's second "massacre" began in late August 1860 when a one-eyed white man and two Indian companions tracked a forty-four emigrant train from

Rock Creek to Salmon Falls. Wagon master Elijah Utter (or "Otter" as historians have misspelled it) suspected the rough-looking three were spies. "We bought some dried salmon of them and hurried away," said Emeline Trimble, the daughter of Utter's new wife. Age 13 in 1860, she had already lost her father to typhoid fever and the middle finger of her left hand to an accident with an axe. While riding in her stepfather's wagon, she had also lost part of an eye to a flying nail, but she was observant: the white man, apparently the leader, had a torn white hat, a thick stubble on his upper lip, and long hair pulled over his bad eye. His face was brown with war paint. One night the sinister trio "came to our wagon and pretended to be glad to see us." The pioneers consulted and "thought the safest way would be to kill them, but [we] hardly dared do so for fear of being found out by the Indians." Instead the wagon train fled via the Devil's Backbone. Seven days later, again with an axe, Trimble would fend off the one-eyed man and other attackers, escaping through the cover of sagebrush. "I often wish we had done as our better judgement had told us and killed them," wrote Trimble in *Left by the Indians* (1892), her account of the gruesome event (Shannon, 1993).

The attack began about 10 a.m. on September 9, 1860, at mile 1450 on the South Alternate Route in the slabbed and terraced barrens of future Owyhee County, an Indian horseman in breechcloth and feathered headdress led 100 braves against eight encircled wagons. Arrows tore canvas. Bullets and firebrands rained intermittently for thirty hours as emigrants dug in behind a breastwork of trail supplies. Charles Utter of Wisconsin, a towheaded lad of twelve or thirteen and an excellent marksman, killed five charging attackers as fast as he could reload. The wagon circle held until an hour before dusk on the second day when four of the defenders— all ex-

soldiers who had fallen in with the Uters, promising protection for food—galloped toward the western mountains with emigrant horses and guns. Twenty overlanders and perhaps thirty Indians died or were mortally wounded in two days of withering combat. Three of the four deserters later fell in a mountain ambush. Eighteen pioneers escaped.

Colonel Wright's 1860 report from the Oregon country had already boasted "complete success in the protection of the immigration route." Now Wright thought he was fighting a phantom. "We have no fixed objective," Wright wrote on October 11, 1860. "We pursue an invisible foe, without a home or anything tangible to strike at (Shannon, 1993)." The best the army could do was dispatch a 100-troop relief force from Walla Walla. Second Lieutenant Marcus A. Reno—later martyred with General George Armstrong Custer at Little Bighorn—led 40 dragoons to Farewell Bend near Huntington, Oregon, where the young officer discovered six of the eighteen who had escaped five weeks before. Reno found them "gleaming in the moonlight, dead, stripped, and mutilated (Dent, 1860)." Closer to the original massacre site were twelve others who had survived mostly on moss and the flesh of four dead emigrant children. Frostbitten and muttering blankly after forty-five days of exposure, the living were "raving mad (Crum, 1994)."

The Salmon Falls Massacre (so named in 1860 by survivor Joseph Myers; also called the Sinker Creek Massacre and the Otter-Van Orman Massacre) erupted six days and seventy-nine trail miles west of the Devil's Backbone in a desert too remote for a more accurate place name. Twenty-two months elapsed before Abraham Lincoln's army could properly search for the marauders and the four children allegedly kidnapped. At last in August 1862 the First Oregon Cavalry reached what Lt. Col.

Rueben F. Maury called "the principle haunt of the Snake Indians." Here at Salmon Falls, according to an army informant, a council of chiefs had recently divided over whether or not to make war on emigrant trains. But the Oregonians found no war council, only an encampment of impoverished natives too "miserable" to attack. Searching from Bruneau Canyon to Twin Falls in the summer of '63, the cavalry "collected" about forty Shoshone who "had no arms and a very small number of Indian ponies," and who "expressed great desire for peace and a willingness to do anything or go anywhere they might be directed." Maury insisted that "something should be done" with these fishing people lest they be "punished for the depredations of the roaming and more enterprising bands (Maury, 1902)."

An American soldier of another sort was meanwhile too impatient for distinctions among Indian cultures and types. "Leave their bodies thus exposed as an example of what evildoers might expect," said Colonel Patrick E. Connor of the California Volunteers: "You [the troops] will also destroy every male Indian who you may encounter. . . . I desire that the order may be rigidly enforced (Crum, 1994)." Shooting Shoshone on sight as his army marched eastward from Sacramento to Camp Douglas above Salt Lake City, Connor spoiled for combat. It came on the subzero morning of January 29, 1863, at Battle Creek off the Bear River north of Franklin, Idaho. Connor allegedly yelled "kill everything—nits make lice" as 300 volunteers with two howitzers opened fire on a seventy teepee encampment. Four hours of methodical fire killed an estimated 368 Shoshone, including perhaps 90 women and children. Twenty-two soldiers died (Madsen, 1985).

It was the bloodiest slaughter of Indians on record in the history of the American West. With a body count more than double the Sioux dead at Wounded Knee (146) or the Cheyenne dead at Sand Creek (130), the Battle of Bear River remains all the more tragic because its tale is rarely told. In the 1974 edition of *Western Expansion*, a standard college-level textbook, famed historian Ray Allen Billington reduced the Shoshone resistance to a single, inaccurate sentence: “[In 1868] Shoshoni and Bannock tribes ceded their lands in return for annuities and two small reservations (Billington, 1974). Perhaps Idahoans prefer the brevity of William Ghent’s account in *Road to Oregon* (1929): “The weather was bitterly cold and [Colonel Comer’s] men suffered greatly. . . . [Connor] attacked the Indian camp on Bear River, near the present Franklin, Idaho, killing most of three hundred warriors and capturing 160 women and children. For this feat, which brought peace, cleared the Trail, and opened to settlement a region that had been harassed for fifteen years, Connor was made a brigadier general of volunteers (Ghent, 1929).”

Alas the hapless savage. Peace and progress required a crushing defeat—or so Ghent contended in 1929. A poem published in Boise the following year bled for the “brave pioneers” who “suffered woe/ to bring the frontier westward ho.” The poet continued:

They braved dangers ever near,
 In early days of Idaho,
 Ah, who can say they did not fear—
 In Idaho, our Idaho—
 To meet the dusky, hidden foe,
 With poison dart and trusted bow,
 Whose purpose was to lay them low,
 In Idaho, our Idaho? (Idaho Pioneers, 1930)

So fogged was the road to empire that historians ignored the Shoshone resistance until the United States army was again chasing a hidden foe through the jungles of Vietnam. Not until the late 1960s and 70s did historians such as Merle Wells and Brigham Madsen begin to understand that the killing of Shoshone noncombatants accomplished about as much as the carpet bombing of Hanoi: it infuriated the enemy, redoubling the will to resist. "Instead of cowing the Northwestern Shoshoni," wrote Madsen, "there is overwhelming evidence that the reverse happened (Madsen, 1985)." In 1863, for example, a twenty-warrior attack near boomtown of Bannock City (future Idaho City) killed the gold miner who discovered the mother lode, George Grimes. Michael Jordon, the prospector who found gold in the Owyhees, met the same brutal fate. The emigrant road from Rock Creek Station to the ferry at Salmon Falls became a target of Sho-Ban resistance, frequently raided for livestock. In 1865 a battle near Rock Creek suspended stage service and left three Indians dead (Madsen, 1985).

Violence trapped the salmon eaters like wayfarers battered by storm. More than four hundred Shoshone from various places spent the bitter winter of 1867-68 under armed guard at refugee camp near Boise. But no trail of tears forced the refugees to abandon ancestral homelands. When the army in 1869 attempted to caravan the refugees to the new Fort Hall Shoshone-Bannock Indian Reservation, most dispersed into trackless canyons. When again in 1877 the U.S. Indian Bureau used "every possible means" to entice "homeless" nomads to a second Sho-Ban reservation at Duck Valley in the Owyheec highlands, two-thirds refused to go (Crum, 1994). Some returned to the Hagerman Valley under the protection of friendly whites. For decades they ranched, sold baskets, worked the ferries, fished the seasonal salmon, camped along the river, and

learned the ways of the whites without forsaking all tradition. When Swan Falls Dam opened without fish ladders in 1902, they subsisted on suckers and trout (Meyers, 1999).

"The Shoshone had little to lose," wrote anthropologist Peter Farb in an essay that tried to explain why horseless nomads were spared the wrenching dislocation experienced by other Indian groups (Farb, 1978). For centuries they had purposefully migrated from resource to resource without trade goods or military escort or even the pretense of sole ownership to any particular place. Warfare reduced the Shoshone-Paiutes to the bare minimum of human existence—a familiar state. Acculturating without assimilating, the fishing people of the Middle Snake acknowledged the emigrant's world without forsaking native religion or language and without conceding defeat. Thus they weathered the Oregon Trail in much the same way their ancestors had braved the trauma of smallpox or the ecological ravage of lava flows and floods. They coped with the catastrophic, adapting to survive.

Stand at Hagerman

"Stand at the Cumberland Gap," said Frederick Jackson Turner, "and watch the procession of civilization, marching single file—the buffalo following the trail to the salt springs, the Indian, the fur-trader and hunter, the cattle-raiser, the pioneer farmer—and the frontier has passed by." Turner continued: "Stand at the South Pass in the Rockies a century later and see the same procession with wider intervals between (Turner, 1972)." Stand at Hagerman and deconstruct that linear progress. See not one society consuming another but strata upon strata of human experience, not a process remaking a nation but a homeland, an actual place.

Stand where Applegate stood and see the historical importance of a ridge more famously known for fossils. Much has changed. An Idaho Power Company dam has silenced Salmon Falls, reducing Class III rapids to an annual generating capacity of 60,000 kilowatts. Likewise, the fury that so astonished John C. Frémont and Clarence King at Shoshone Falls and Thousand Springs can today best be appreciated by flicking a light switch in Salt Lake City or Seattle. But the mystery of the steppeland remains atop the Devil's Backbone where sandy soil preserves a metallic record of rings, rims, pins, chains, and square nails of the sort that partially blinded farm girl Emiline Trimble. The Hagerman Fossil Beds National Monument is one of only three park service sites with Oregon Trail remnants. Largely undeveloped and undiscovered by vandals, the torturous grade preserves in its graveyard of broken hardware a maze of trails and cutoffs. Some are straight and rutted with hardship enough to support the well-worn mythology of the West as America's triumph.

As history became metaphysics, the emigrant corridor all but vanished as a physical space. In 1914, after a search of the Idaho Statehouse, a historical society founder wrote a letter to a patron in Caldwell. "I regret," said John Hailey, "that I have no map of the Old Oregon road." Nor had he ever seen one. The desert passage, he continued, had never been a single road: it was a swath of parallel trails a mile across in places. Ironically it was Hailey, formerly a stage-coach entrepreneur, who had done as much as any one man to scatter the original trail. Eighty-five percent of the 19th century road had been plowed or paved or otherwise obliterated by the time Congress, in 1978, granted historic landmark status to what shrinking mileage remained. The trail, said a 1999 report to the National Park Service, was "a symbol of westward expansion [that embodied] traditional concepts of pioneer spirit, patriotism, and rugged individualism (USDI, 2000)." But which set of ruts best embodied that Americanism? Decades of

meticulous work by a dozen or more state and federal agencies have since rediscovered and mapped 318 miles, mostly in Wyoming. Three difficult miles (and perhaps another three waiting for further study) dissect the Hagerman Fossil Beds National Monument.

"It is rare to see history pure and undisturbed," said Idaho's department of tourism in its brochure on the Oregon Trail. Rare—but not in Idaho where "the landscape is exactly as the emigrants left it," where the tourist willing to step away from the highway can "almost imperceptibly hear the creak of the axles, the lowing of the oxen, the crying of babies (ID Dept. of Commerce and Tourism, 1990)." Atop the Devil's Backbone that tourist could almost hear and see what Applegate recollected if not for reservoir-flooded rapids, row crops, barbed wire, cattle crossings, and a line of steel towers that harness the Hagerman Valley to a power grid larger than France. It is rare to see history as pure as the Monument's wagon ruts, especially rare in a flood-swept lava desert where ordinary farmers in an extraordinary migration transformed a remarkable land.

"How did the United States get title to Shoshone territory?" asks Raymond Yowell of Elko, Nevada. Black hat, silver hair, a U.S. Airforce veteran who heads the Western Shoshone National Council on the Duck Valley Reservation, he fights the government still. "If you say we've been conquered, show us where the battle took place. Show us the terms of surrender and show us the signatures of the Shoshone chiefs who signed the papers (Crum, 1994)."

HISTORIC PERIOD - PLACER MINING

A succession of placer gold mining booms along the Snake River near Hagerman occurred over a period spanning approximately 70 years, beginning when gold was initially discovered in 1869 several miles upstream from Hagerman and the Fossil Beds, in the vicinity of the Shoshone Falls. This historic legacy remains vividly manifest in the ditches, tailing piles, and placer cuts scattered along the north and east sides of the Snake between Upper Salmon Falls and the Lower Salmon Falls. Before Hagerman, there was "Gouger's Bend", an adventitious encampment that had begun in the early 1870s with Payne's Ferry on the Snake River, a handful of placer miners, and some scattered ranches. It is difficult to exaggerate or overstate the role placer mining played in the development of Idaho's frontier communities. A southern Idaho pioneer, Charles Walgamott, who was eyewitness to much of the region's history during the middle 1870s and early 1880s, later wrote that "[f]he history of the Rocky Mountain region shows that mining has fostered all other industries. And . . . southern Idaho . . . having as though by magic, under the influence of soil, sunshine, and Snake River water . . . is no exception to the rule" (Walgamott, 1926).

Idaho was primarily the domain of Native Americans and the rump end of the Washington Territory until gold discoveries on the Clearwater River in 1861 brought about one the greatest gold excitements the West had seen since California in the days of '49. Virtually overnight, thousands of prospectors moved into Idaho's rugged and remote realms. Snake River gold was first discovered in 1855 by troops stationed at Fort Boise and prospectors explored the mighty river from source to mouth throughout the 1860s searching for diggings that promised high stakes (Beal & Wells, 1959; Wells, 1983). The sudden influx of miners into the Boise Basin and Owyhee Mountains was greatly resented by the Native American tribes inhabiting the region. The increasing

friction between miners and Indians resulted in several violent skirmishes. The prevailing hostility of the Paiutes, Shoshones, and Bannocks hindered most prospecting ventures on the Snake River Plain until the late 1860s when the Indian uprisings were finally quelled and the tribes placed on reservations (Beal & Wells, 1959; Utley & Washburn, 1982).

While thousands of American and European trappers, missionaries, and emigrants had traversed the full length of the Snake River Plain, there was no vestige of permanent settlement until the federal government began establishing mail and stage routes during the 1860s. The rapid expansion of transportation routes connecting the Salt Lake Valley with the mining communities of the Boise Basin brought increasing numbers of Euroamericans into the Snake River Plain. As more and more Euroamericans traveled across southern Idaho and came into contact with the Snake River Plain, the resources of this once dreaded and much maligned region became more and more apparent, particularly its deposits of placer gold. By the end of the 1860s, a small but distinctive enclave of settlement had been established at Rock Creek where a stage stop and trading post were located by agents of Ben Halliday in 1864 (Gentry 1995:12). Later on, during the 1870s, a second permanent and viable Euroamerican settlement on the Snake River Plain would begin to coalesce, downstream in the vicinity of the ancient Shoshone fishing camp at the place the fur trappers and Oregon bound emigrants referred to as Fishing Falls, what we now know as the Hagerman Valley.

Who actually found the first placer gold diggings in the Snake River Canyon is uncertain. Boise's *Idaho Statesman* stated that gold was discovered on the Snake River near the Shoshone Falls during the autumn of 1869 by a prospector named Jamison, a former associate of Captain Elias D. Pierce who had discovered Idaho's first placer diggings on the Clearwater. Jamison was convinced gold in paying

quantities could be located on the Snake as well and so began a prospecting reconnaissance near the Snake's mouth. As he worked his way methodically up the Snake, Jamison started finding profitable placer deposits near the mouth of the Bruneau River; the further upstream Jamison went, the more deposits increased. In the vicinity of the Shoshone Falls, Jamison found a placer bar that yielded gold "as high as \$40 to the hand" (*Idaho Statesman* 23 March, 1870). Charles Walgamott, a southern Idaho pioneer wrote in his memoirs that two off-duty stage drivers discovered gold in the fall of 1869 while prospecting in the vicinity of the Shoshone Falls (Walgamott, 1926).

Regardless of the identity of the discoverer, the result was that a gold rush of sorts was inaugurated in southern Idaho. During the spring and summer of 1870, hundreds of miners entered the Snake River Canyon. The miners were scattered along the river from the Fossil Beds and Salmon Falls east to Clark's Ferry and upriver to Dry Creek over a distance of approximately 60 miles. Some estimates put the number of prospectors at 3,000 to 4,000. The gold rush was primarily centered in the vicinity of Shoshone Falls and the Twin Falls. The two most substantial miners' metropolises were Shoshone, located half a mile below the Twin Falls, and Drytown, situated at the mouth of Dry Creek near present location of Murtaugh. A third mining camp called Springtown, located half a mile west of the Hansen Bridge, became the "metropolis of the river" or the largest and most important settlement after the Chinese entered the canyon in 1871 (James, 1995; Walgamott, 1926).

The nature of mining and methods for recovering Snake River fluvial gold requires some explanation. A placer is defined as "any gravel deposits or minerals, usually gold, [that are] not in place." Placers contain free or alluvial gold that has eroded out of veins or lodes. Also found in association with placer gold are magnetic "black sands" which are colored black due to high concentrations of iron oxide. A

typical placer claim was 1320 feet and contained 10 acres (Von Bernewitz, 1943). The place of origin for Snake River flour gold are lode deposits located near Yellowstone National Park. The Green River in Utah, which has its source in the same area, also contains similar fine gold (Maley, 1987).

Unlike the gold found in California and in north Idaho, which was often found described the frustration experienced by a Snake River miner attempting to recover "nuggets," the Snake River gold is very fine and very pure in content, but it is in the form of particles rather than nuggets. To the miners trying to recover these minute particles, the gold flakes seemed like flour. If, for example, during the recovery process, the volume of water in the sluice or rocker was too forceful, the flour gold could be floated away and lost. Mining engineer Thomas Egleston described the frustration experienced by a Snake River miner attempting to pan flour gold:

"The heavier pieces of the black sand[,] and flour gold remain persistently together . . . After the heavy black sand has been separated by the magnet, the fine particles of gold float . . . when, after much trouble, the surfaces are wetted and the gold is got under the water and onto the top of the sand, the first wave from the other side of the pan over the sand floats the gold again" (Egleston quoted in Wegars, 1993).

The gold appeared to be present in amounts that encouraged prospecting, but a piece of ground that miners thought would pay \$8 per day would in reality pay only \$3. The problem was that they were working to recover flour gold, "gold . . . so fine and light that a miner is easily deceived here" (*Idaho Statesman* July 30, 1870). While the Snake River still contains millions of dollars worth of gold to this day, the frustrating work of extracting it from the gravels deters even the most skillful and determined of miners. It is estimated that at least 1000 colors or particles of flour gold were needed to equal 1 cent during the 1870s when gold was valued at \$20 an ounce (Maley, 1987).

The miners on the Snake River faced formidable hardships, mining operations were difficult even under favorable circumstances and impossible during the high spring and early summer runoff. Various dispatches and letters published in the Corinne, Utah; Boise, and Silver City newspapers expressed both the miners praise and condemnation for the Snake's "vast and singular defile." One miner wrote the *Idaho Statesman* that "for rattlesnakes, scorpions, mosquitoes, gnats, sagebrush and hot sand it is the best country I have ever seen; but as for gold and a mining country, I cannot say as much, although there is scarcely a place on the river that a man cannot get a prospect, but not in sufficient quantity to pay" (*Idaho Statesman* July 30, 1870). In a contrasting description, we glimpse a prospector's idyll that presages the recreational opportunities now commonly associated with the Snake and the Hagerman Valley: while waiting for the high spring runoff to end, Boise miners H. Way, N. B. Lindsey, A. Gortz, and Al Pence:

"built a very fine yacht [and sailed] up the river a distance of . . . four to eight miles, and witnessed scenery for splendor almost indescribable . . . the steep walls along the entire distance traveled . . . are more formidable than wall surrounding ancient cities. The clear water gushing from the high banks forms falls along the north side, at the foot of which are great resorts for mountain trout" (*Idaho Statesman* 19 May 1870).

As the 1870 mining season got underway, perhaps as many as 400 or 500 miners actually persevered in their rude encampments strewn along the interior of the Snake's canyon. The greatest concentrations of settlement and mining activity were in the area of the Shoshone and Twin Falls.

"Deposits of gold are found in larger quantities in canyons, especially where the water is very swift and forms eddies, and by the reaction, deposits the precious metal on its banks. Several of these canyons are located near this vicinity [Shoshone Falls], one above here and one below Salmon Falls . . ." (*Idaho Statesman* 30 August,

1870).

The miners who worked placer claims along the Snake River in the canyon at Springtown and Shoshone Falls, as well as at Salmon Falls, primarily relied on rockers and sluices to recover the extremely fine Snake River flour gold deposits found along the river bank, on upstream bars, and along the higher level benches. (Maley, 1987). The miners preferred working bars exposed by low water as well as "skim bars" and "bench gravels" which are deposits located right at or just above the river. The Snake River miners also located "bench placers" which are elevated bars where gold was deposited among boulders and gravels. These paystreaks were found as much as 50 to 100 feet above the present river level. The continuing challenge to the miners was not only finding the gold deposits but successfully recovering the lightweight gold which was constantly being moved around by the river current. Along the Snake River at Bell Rapids and the stretch between the Upper and Lower Salmon Falls, gold was erratically scattered along the shore and riverbank, covered with sand and gravel. Although the placers were rich enough to entice prospectors with the lure of rich claims, for most miners the expenses were so steep that profit was rarely attained. Miners in this area would later use a combination of hydraulic and ground sluicing methods to locate the gold. During the latter 19th century, burlap sluices were used and proved to be more effective in recovering the fine flour gold particles. (Maley, 1987). The most productive deposits on the Snake River were located on Bonanza Bar west of American Falls and from Raft River to Salmon Falls. Mining sites in these areas were extensively worked during the 1870s and 1880s well into the 1900s. Many of these same claims along the Snake River were reopened during the Depression when the gold standard was raised from \$20 to \$35 an ounce.

But the first Snake River gold rush was short lived. By the end of

the 1870s, daunted and discouraged miners were leaving the river and returning to Silver City, Boise, and Corinne; the prevailing disillusionment clearly apparent in an item from Silver City's *Owyhee Avalanche*. "Bob Drummond got back from the Snake River mines this week, and says that he is Snake bitten enough to last him some time" (*Owyhee Avalanche*; Silver City, Idaho 12 November, 1870).

In the early spring of 1871, the first Chinese were allowed to come into the canyon and buy up used claims from the increasing number of caucasian prospectors discouraged with the frustrating work of trying to recover Snake River flour gold. There was no profitable gain to be made with claims that only paid less than three dollars a day.

"The Chinese," wrote one discouraged Snake River, "are better adapted to this sort of mining and there is room for 500 of them. Therefore, let them come. They can work in peace." (*Idaho Statesman* 21 January 1871)

What is presently known of the Chinese presence in the Snake River Canyon comes from such disparate sources such as fragmentary archival records, contemporary newspaper articles, recollections and memoirs of pioneers, and archaeological surveys. By fitting together the various pieces of historical, archaeological, and circumstantial evidence, a reasonably clear picture of the Chinese has been obtained. A deed dated November 11, 1871 that was fortuitously discovered rolled up inside of a baking powder can along the river below the Twin Falls in 1986 revealed the name of a Chinese company that bought used mining claims. This deed documented the purchase of a Snake River mining claim by a Chinese company recorded as the Tung Toek Tong. How extensive the Tung Toek Tong's placer holdings were all along the Snake River is not known. The archaeological evidence indicates that Chinese miners

worked claims all along the Snake from the Upper Canyon to Salmon Falls and everywhere in between.

Several Chinese companies may have had operations along the Snake. The 1871 deed is the only documentary evidence naming a Chinese company that has been uncovered so far. In a pattern that was repeated over and over again in mining regions throughout the West, Chinese merchants would buy up claims as the whites left. As a result, Chinese mining companies achieved a temporary monopoly of the systematic mining operations in many gold rush areas. Often, Chinese merchants or companies would offer to purchase the used claims at discounted prices. A similar process was described in an 1857 article in the *Alta California*, "... many a claim, abandoned in despair on previous occasions by the impatient American miner, will be made to pay handsome wages by these celestial gold hunters" (quoted in Roche, 1996).

The presence of Chinese miners on the Snake River has been documented and assessed by recent archaeological and historical research. The archaeological and archival record provides evidence for the Chinese presence in the vicinity of the Twin Falls and Shoshone Falls. Evidence for the Chinese being at Salmon Falls is more ephemeral. But, if there is no direct indication of the Chinese being along the Snake River in the vicinity of Salmon Falls and Hagerman, some circumstantial evidence is to be found. There are noteworthy placer mining sites located at and near Dolman Island, west of Upper Salmon Falls. These sites include a rock wall site and numerous tailings, sluice ditches, and so on. Over the years, it has been reported that various sites in the vicinity of Dolman Island contained Chinese artifacts at one time. One site at Dolman Island is definitely known to have once contained Chinese artifacts (Murphey 1995&1998; personal communication). The features of the rock wall site, for example, are consistent with late 19th century placer mining and could very well have

been occupied by Chinese miners at one time. Supplies for the Snake River mines were brought in from the railroad at Kelton, Utah via the Kelton Road. This road was also the stage route connecting Salt Lake City with Boise. The Rock Creek Trading Post, 5 miles south of Hansen (and about 9 miles south of the canyon) was the area's only trading post. The mining claims further downstream at Salmon Falls were far removed from the commercial and mining centers. The Kelton Road crossed the Snake River two miles above Thousand Springs at Payne's Ferry. In 1873, Len Lewis took over Payne's Ferry (Hagerman History, n.d.) The Kelton Road and the various ferry services provided the earliest Salmon Falls settlements with access to the outside world's marketplace. With the expansion of the transportation infrastructure in conjunction with the development of placer gold camps, Hagerman Valley began to experience the growth and development of one of southern Idaho's first distinctive and permanent Euroamerican settlements.

By taking into account what we know of the Cantonese who settled elsewhere in the West as well as the information acquired about the Chinese in the Snake River Canyon, we can set forth some reasonable assumptions concerning the Chinese who worked placer claims at Salmon Falls during the 1870s. The Chinese were allowed access to Snake River placers in the late winter and/or early spring of 1871 and the deed found near the Twin Falls in 1986 sheds interesting light on how the Chinese came to perhaps dominate the Snake River mining claims for a period of time between 1871 and 1880.

The 1871 deed found near the Twin Falls (identified in the deed as "Little Falls") identified the Tung Tock Tong as the buyer of a mining claim being sold by Relf Bledsoe. The full text of the deed, as transcribed by Virginia Ricketts in 1986, reads:

Little Falls

This is to certify that I have this day bargained and sold to Ah Mon Mong

*the claim known as the Bledsoe claim together with all tools thereon also
 (1) blacksmith shop 2 cabbins also (700) feet lumber. Said claim to [illegible]
 assessor at the Little Falls and [illegible] to the claim
 known as the Tung Toek Tong claim.*

*The above is held by said company for wages due them from R. Bledsoe.
 They are to have [illegible] to hold all [entire line illegible] is made. The
 assessment due said company is twelve hundred and forty two and 50/100
 (1242.50) dollars.*

Witness

G. Ramsey R. [?] Bledsoe

Wm R. Barnum

The sale, which included "all the tools thereon also 1 blacksmith shop, 2 cabbins [sic] also 700 feet lumber" turned the claim over to the Chinese in lieu of wages, which implies that Bledsoe had employed Chinese laborers from the Tung Toek Tong during the summer and fall of 1871. Rather than pay the Chinese with gold dust, Bledsoe simply gave them his claim and all the related equipment (Bledsoe Deed, 1871; James, 1995). The Tung Toek Tong was most likely one of the fraternal organizations that the Chinese formed in those days (Chen, 1997; personal communication). The Chinese who came to America were Cantonese from the Pearl River Delta in eastern Guangdong Province near Canton and Hong Kong. Most were laborers from villages and farms. But many were merchants who were well educated and possessed a high degree of "business sagacity" which helped immensely in the achievement of business success on the American frontier (Chen, 1997).

The institutional framework that connected the Chinese communities scattered across the West with the homeland was a complex network known as the Six Companies. The Six Companies was a powerful mercantile organization that represented the Chinese from the various districts of Guangdong Province. The Cantonese were characterized by "clannishness" and:

"[a] merchant had automatic membership in one of the Six Companies, and then most likely belonged to any number of benevolent tongs, at least one clan tong, and perhaps a secret society tong for protection. Tongs

were part of the Chinese sojourners' effort to preserve and maintain indigenous Chinese culture in a foreign land. Chinese values, norms, and beliefs were distinctly expressed in these organizations' (Tsai, 1986).

The well developed mercantile network of the Six Companies and access to the Snake River placers provided by the Kelton Road made it possible for Chinese miners to maintain contact with Guangdong and thereby retain some of their cultural preferences. Chinese merchants such as 'Ah Mon Mong,' the individual named in the Bledsoe deed, kept the Chinese supplied with a variety of durable and practical items such as ceramic wares and foodstuffs imported from Guangzhou.

The culturally diagnostic artifacts found scattered amongst the remaining rock wall shelters and mining sites upriver attest to an extensive and significant Chinese presence all along the Snake River. The coins, opium cans, and pottery, reported to have been found in the vicinity of Dolman Island are artifacts typical of Chinese mining sites.

Merchants in Guangzhou shipped large quantities of ceramic wares to San Francisco. Increasing expansion of the transportation infrastructure permitted a direct trade route between the remote interior mining camps and the West Coast. The types of Chinese ceramic wares found in the Snake River mining sites are similar to types found throughout the West and are therefore invaluable in determining whether or not the Chinese were present for a sustained period. The presence of extensive placer mining features and abundant Chinese artifacts at Upper Salmon Falls certainly indicates that Chinese miners worked claims in the vicinity.

Any opium paraphernalia, for example, metal containers and ceramic pipe bowls, is indicative of a Chinese presence. Opium was widely used for various

purposes during the 19th century. Many patent medicines contained opium as the active ingredient. Opium based medicines were abundant and constituted the only really effective drugs "to relieve pain and irritation, to relax spasms, to produce sleep, to check secretions, and to influence nutrition" (Scholl, 1925). The recreational use of opium, that is opium smoking, was a very prevalent and perfectly legal vice in the West during the 1870s. Largely a cultural attribute of the Chinese, smoking opium was commonplace and actually quite acceptable in southern China during the 1800s. During the 1860s, 1870s, and on into the 1880s, opium was legally exported from China to the United States (Courtwright, 1982). Opium came packaged in very distinctive rectangular brass-like metal cans that contained 6.67 ounces and was sold over the counter at trading posts throughout the West along with all the other necessities and luxuries such as brandy, tea, gunpowder, and canned goods. In 1881, the 11th Idaho Territorial legislature passed acts aimed at regulating the sale and preventing the smoking of opium (Hawley, 1920). While most Chinese used opium in moderation, use was extensive; thus opium paraphernalia is frequently found at sites having had a Chinese occupation.

The distinctive Chinese coins, or *wen*, with their square holes have been found throughout the West in sites occupied by Chinese as well as Native Americans. The specific function of the *wen* is still not completely known. These coins had no value as currency in gold camps where gold dust was the medium of exchange. Instead, the coins most likely served as gaming pieces, talismans, to throw the *I Ching*, or in 'Gua Sha,' the ancient folk remedy of coin rubbing to release "blood stasis which blocks the flow of Ch'i" and sooth tense muscles (Akin, 1992).

The Chinese population was never fixed, the numbers of Chinese miners on the Snake would have waxed and waned in response to mining fortunes, annual winter/summer migrations, too much or too little water, and the

availability of opportunities elsewhere. By the late 1870s, the number of Chinese miners definitely grew smaller as the placer yields diminished. A British tourist who visited Shoshone Falls circa 1878 described Springtown as:

“ . . . a hamlet composed of a few miserable Chinese huts, that lies buried at the base of the canyon 500 feet below. Here I found two merchants who traded with the Chinese miners . . . ” (John Mortimer Murphy 1879).

Three separate accounts of an 1880 accident in which a ferry went over Shoshone Falls killing 2 or 3 Chinese men provide the last mention of the Chinese presence in the Snake River Canyon. Tom Bell, a fiddle-playing Scottish miner, started operating a ferry above the Shoshone Falls in 1879. One day in June, 1880, Bell and two Chinese men were killed when Bell's ferry was swept over Shoshone Falls. Walgamott personally knew Bell and describes this incident in “The Story of Tom Bell and His Tragic Death” in *Reminiscences of Early Days*, published in 1926:

“Bell was asked to . . . ferry over several Chinamen and their cargo of groceries to the north side . . . All went well until the current was reached, when the Chinamen ashore noticed the boat with its human freight, swirl and plunge bow first towards that awful chasm. Some thought that an oar had been broken, others that the current was just too strong . . . It was an exciting scene. All three men in the boat rose to their feet, cries could be heard and one Chinaman was sure Tom Bell sang or chanted . . . In a few seconds all was over, not even a piece of the broken boat was distinguishable from the other drift below the falls. The Chinamen ashore immediately established a camp below the falls to wait for the bodies to rise and as they were recovered they were taken to the top and buried until they could be shipped to China.” (Walgamott, 1926).

Lucy Stricker, whose husband Herman owned the Rock Creek Trading Post at that time, recalled in a 1942 interview that one of the Chinese men killed

in the accident was an individual named Mon Chu, "the leader of the Chinese in the area" (Stricker, 1942).

In a travel account published in 1888 entitled *Shoshone and Other Western Wonders*, author Edward Roberts briefly mentions Tom Bell's accident while describing his visit to the Shoshone and Twin Falls sometime in the 1880s; "The only man to lend historical interest to the Falls was Tom Bell. He was a miner who worked a claim on the island separating the Bridal Veil Falls. His custom was to cross the river by boat. One day, when in mid-stream, his oar broke. It is needless to picture the result. Poor Tom went over the brink, of course, and Shoshone had its tragedy. If local information may be relied upon, one or two Chinamen have since shared Bell's fate" (Roberts, 1888).

During the late 1870s, perhaps as the Chinese were leaving the Snake River, there occurred a revival of interest in Snake River placers. According to the earliest account (Walgamott, 1936), mining in the vicinity of the Fossil Beds and Hagerman Valley began in 1875 with Johnny Stewart. In 1875 he staked a claim known Mud Creek Bar at the mouth of Mud Creek, near Kanaka Rapids northwest of Buhl. Stewart's activities included locating placer claims, killing two men that he had employed, and then fleeing to the Black Hills where he was killed in turn by the Sioux (Walgamott, 1936).

According to the historian H. H. Bancroft "about 1879 there was a revival of interest in the Snake River placers and an improvement in appliances for mining them and saving the gold (Bancroft, 1890). Improvements in mining technology, such as "burlap sluices," enabled miners to work the upper river benches which contained promising amounts of gold bearing gravels and sands. Often these

bench placers were located as far as fifty to seventy feet above the present level of the river (Staley, 1960; Wegars, 1993). The *Idaho Statesman*, in an 1879 news article, offered a report on the revival of placer mining in the Hagerman Valley:

Mr. Sampson Reed, just in from the Snake River area of the Malad, says that the great river placers are all they have been represented. All who have got to work are doing well. The lull in the excitement has been caused by parties who located ground with the sole view of selling. Mr. Reed will commence operations on his claims as soon as his plates arrive. The claims adjoining his are making \$100 per twenty-four hours for each claim, working only one man at a time. Mr. Reed assures us that the Snake River placers are all right. All that is needed is real work (*Idaho Statesman*, 20 May, 1879).

Idaho historian Merle Wells has explained that the "plates" referred to in the 1879 *Idaho Statesman* article had to be inserted in the sluice box to allow the extremely fine flour gold to settle out. These plates were not usually chemically treated but rather served as baffles which utilized the constant water flow to separate gold from gravel (Wells to Willhite, 1992: personal communication).

At the Salmon Falls site across from Dolman Island, evidence indicates placer mining over 100 feet from the river. Burlap sluices were connected to a system of ditches and flumes which diverted water from upstream; similar networks of ditches are common features of the mining sites in the Hagerman Valley (James, Gross, and DeYoung, 1995).

The new mining methodology and technology often required greater capital investment in equipment than the previous ventures had needed. The Chinese mining investments had consisted, for the most part, of large-scale, intensive labor, a resource they had in abundance. Historian Randall Roche's assessment of Chinese river

mining in California is also applicable to the Snake River:

“. . . the Chinese proved particularly adept at river mining, often succeeding where Euroamericans failed . . . While they used the same basic methods and equipment as Euroamericans miners, the Chinese had a distinct way of using them. Invariably the Chinese substituted labor for machinery” (Rohc, 1996).

This revival in mining brought extensive mining activity to the stretch of river near the Fossil Beds and present day Hagerman. Corporate mining seems to have started to dominate mining in the Hagerman Valley during the late 1870s. The New York Mining Company mined in the vicinity of Salmon Falls and Dolman Island. Regional historian Helen Palmer has written that “After these first companies gave up, Chinese miners worked over the old diggings and signs of these workings are still plainly visible” (Palmer, 1959). Hagerman historian Dick Cook has also stated that placer operations at Dolman Island and the Buckeye were “company mining” (Cook, 1995: personal communication). In addition to the New York Mining Co., the California Bar Mining Company filed claim on:

“1,000 inches of water known as Birch Creek situated between Billingsley Creek and Malad Creek, for mining purposes and intend to take it out by means of ditches, flumes or pipes for the above purposes . . .” (Hagerman Mining Book; Palmer, 1959).

In 1877 a post office was established at Upper Salmon Falls to serve the burgeoning settlements in the Hagerman Valley. The area was known at this time as both the Salmon Falls Mining District and Gouger’s Bend because of the mining claims which had become increasingly prevalent all along the Snake in the Hagerman Valley (Palmer, 1959). This interest in mining, which continued well into the 1880s, is recounted by many of the long time Hagerman Valley residents various (Hagerman: History, n.d.). While Dolman Island was mined “by the companies, including the

Buckeye property, small time operators were all up and down the area" (Dick Cook, 1995: personal communication). In an interview taped in 1963, Hagerman Valley pioneer Earl Hopkins (now deceased), who lived at the Clear Lakes Ranch between 1880 and 1903, described placer mining along the Snake as being prevalent in the vicinity of Clear Lakes and Salmon Falls. Mr. Hopkins' father drove the stage coach to the Salmon Falls settlement which predated Hagerman (Hopkins, 1963).

Mining has had significant and long lasting effects on the culture and economic development of the Hagerman Valley. It provided a transitional economic activity that sustained the livelihood of many settlers while agriculture was being introduced into the area. Many of the irrigation ditches that criss-cross the Hagerman Valley were originally dug to carry water for mining operations (Boyer, 1995: personal communication). Luther Jacobsen, an early Hagerman settler, did placer mining and after he quit mining, he farmed the land on the upper part of his placer claim (*The First To Arrive*, n.d.) Two miners, Andy Brown and Sid Smith, had placer claims along Billingsley Creek that "proved quite profitable". Some of the claims along the river were worked by an old hermit miner, Jimmie Divilbiss. He lived on his claim in a cabin and kept burros to pack in his supplies. Divilbiss tended to keep to himself and had little interaction with his neighbors. One day, Divilbiss was found dead in his bunk. The sixty dollars found stashed in a can that Divilbiss had buried in his dirt cellar helped pay for a decent burial in the local cemetery (Hagerman History, n. d.).

During the 1880s, agricultural settlers began moving into the Hagerman Valley and establishing the area's first orchards and farms. Among the first Hagerman Valley pioneers was Robert Justice who established an early cattle ranch in the Hagerman Valley. When Justice first investigated the Snake River he was impressed by the area, he found the valley inhabited by only a few placer miners and small ranches.

Justice bought 160 acres of prime land along Billingsley Creek from a prospector who wanted to sell out and move on. Robert's brother, Will Justice, and R.C. Smith filed on a placer claim in the Salmon Falls district. According to one source, Will Justice recovered enough flour gold to have \$800 in 520 gold pieces minted (Hagerman History n.d.; Palmer, 1959). This account of a Hagerman Valley land transaction may also explain why the Chinese were not present in greater numbers. The simple fact is that land in the Hagerman Valley was being regarded as valuable by successive waves of Euroamerican settlers; the Chinese would have been permitted to hold on to claims located on land of only marginal value.

By the 1880s, a viable Euroamerican community was beginning to be sustained not just by placer mining but also by farming and ranching. Mining was being conducted by individuals, many of whom divided their time between farming and placer mining. The Hagerman Valley miners held a meeting in late June 1884 to reaffirm their land claims to four miles on the north side and two miles on the south side of the river (Murphy, Freeman, and Bowler, 1993; Hagerman Mining Book, n.d.). A record of this meeting was kept by the Salmon Falls Mining District secretary, J. B. Hunt, who listed all who attended. The names include Martin Malone, R. L. Justice, M. L. Thompson, R. W. Layton, W. L. Coltharp, M. D. Brown, L. Millet, Daniel White, and J. E. Stewart (Murphy, Freeman, and Bowler, 1993; Hagerman Mining Book, n.d.). The Hagerman Mining Book constitutes the official record and index of the valley's mining period. According to the record book, a single mining claim consisted of twenty acres. The mining book documents that between 1878 and 1884, wide scale buying and trading of mining properties took place. Corporate scale mining ventures bought out smaller independent operations and tracking the ownership of specific claims at this becomes difficult if not impossible. The claims are often described by their relative location to obscure local land features and other mining claims rather than absolute reference points.

To further complicate matters, claims were frequently subdivided and then renamed.

During the 1880s and on into the 1890s, the Hagerman Valley communities grew in size and agriculture, rather than mining, became the dominant economic activity. Mining activities still persisted with many long-time miners holding on to their claims as well as several recent arrivals trying their luck.

Placer mining experienced another resurgence during the 1930s, in direct response to the Great Depression. The Gold Reserve Act, passed in 1934 as part of President Franklin Roosevelt's New Deal, raised the gold standard from \$20 an ounce to \$35, resulting in a Depression-era gold rush, especially in the West (*Idaho Evening News*, 1934; Newcomb, Merrill, and Kiessling, 1940). Depression-era mining was a distinctly western adaptation to adverse economic conditions. Gold production, which had been stagnant during the 1920s, experienced significant gains during the 1930s in states such as California, Oregon, and Idaho. Idaho had the second highest number of placer miners in the nation during the 1930s and the Hagerman Valley was one area in particular that offered locals with mining savvy the opportunity to "beat Old Man Depression" (Newcomb, Merrill, and Kiessling, 1940). Long time Hagerman resident Dick Cook recalled that a miner named Earl Padgett did some placer mining near Hagerman while another miner named Charlie Peters mined on the Buckeye and took "a pile of money" (Dick Cook, 1995; personal communication).

The mining based settlements in the vicinity of the Fossil Beds at Salmon Falls and Gouger's Bend were directly related to the development of Hagerman. The mining boom camp and 'ghost towns' are a phenomenon strangely peculiar to the history of the West. Geography and history combined to give the Hagerman Valley a strategic location, a diversity of resources, as well as sublime

aesthetic appeal. Instead of becoming a ghost town, Gouger's Bend and the Salmon Falls Mining District continued to grow and diversify. Placer mining was the primary economic activity that, for several years, supported what was one of the few significant and distinctive Euroamerican settlements along the Snake River in the Hagerman Valley of southern Idaho.

HISTORIC PERIOD - THE HOMESTEADERS

THE SETTING

By the end of the 1870's, the fur trappers and much of the game in the Hagerman Valley were but a memory, and the American Indian culture was rapidly dissipating. Emigrants passed through this desolate high desert as quickly as possible to reach the fertile lands of Oregon. Those seeking their fortune in gold had moved on, leaving the meager digs along the Snake River. What attraction could possibly entice people to remain? The incentive was water, transported by the abandoned placer mining ditches and available to farm the land. The period of settlement was about to commence and the hardy folks involved were called homesteaders.

The journals of travelers along the Oregon Trail frequently remarked on the Thousand Springs and their potential for water-driven mills and farming, if it were not for their inaccessibility. Late in the Oregon Trail migration, Payne's Ferry, downstream from Salmon Falls Creek, provided the access. Eventually the Utah to Idaho Kelton stage road and stop were associated with that ferry (Murphey, et. al., n.d.) Also, freight wagons with mule teams began to travel the ruts where emigrant oxen once plodded. There was finally a support system to sustain settlement. An understanding of the Hagerman Valley environment makes clearer the monumental tasks faced by the homesteaders.

For thousands of years during the more recent past, geologically speaking, the Hagerman Valley area has remained the high desert typical of the Great Basin. This vegetation type occupies what is now southern Idaho, and parts of Nevada and Utah. The annual rainfall is approximately ten inches, a moderate portion of which comes as snow. Temperatures often exceed 100 degrees Fahrenheit in the summer and sometimes dip below zero in the winter. Winds are common, which is why some people living today on the Snake River Plain jokingly call the state "Idablow."

Wyoming big sagebrush and spiny hopsage were interspersed with two species of rabbit brush as well as bitter brush. Lightning-caused fires maintained a varied mosaic of brush age classes and composition. Native grasses and wildflowers were prolific when spring rains were sufficient. Only the influence of the Snake River provided any diversity with tree cover. Rocky Mountain juniper, willows, and black cottonwood occupied the adjacent shores.

Wildlife including antelope, deer, elk, moose, bear, beaver, river otter, and muskrat had been radically reduced or driven away by the trappers, emigrants, and placer miners. The same was true for predators such as mountain lion, bobcat, wolf, silver fox, and coyote. As a result, smaller mammals like mice, rabbits, ground squirrels, and others probably flourished but continued to have cyclic populations controlled by food supply and disease. Hawk, golden eagle and owl (raptor) populations quickly responded to the changes in this food base.

Reptiles and amphibians were another major group of species present. Western rattlesnake numbers responded to small mammal populations as did the raptors. Accounts from early settlers indicate that "rattlers" were abundant. Lizards including the horned "toad" occupied the arid lands, and frogs thrived in the aquatic areas. Turtles went extinct in Idaho from climatic changes prior to the presence of American Indians.

Insects were diverse and plentiful. Songbirds and waterfowl flourished on the insects, as well as upland game birds including sage grouse and quail. Fish populations also depended heavily on insects for their survival. Birds such as herons, white pelicans and kingfishers thrived on the fish. Species of salmon, trout, steelhead, and sturgeon were abundant when settlement began. Catfish had gone extinct before the presence of American Indians.

Many aspects of settlement on the east side of the Snake River are well documented by the Hagerman Valley Historical Society. The following accounts are drawn from unpublished oral histories about the only known homestead on the west side of the river in what is now the Hagerman Fossil Beds National Monument.

THE TASKS

In this less than hospitable environment the homesteaders had to subsist and survive. They were tough. The journey West made sure of that. Natural selection (survival of the fittest) applied to people as well as critters. The necessary tasks were numerous and formidable. Shelter had to be built, but wood was available only in the distant mountains. What is now a one-hour drive took several days by wagon to haul logs; as a result, most of the structures relied heavily on basalt rock or were dugouts burrowed into dirt banks. Sod roofs were common until the introduction of tin. Brush had to be cleared by hand and cropland tilled by horse, mule or oxen with hand-guided plows. Water had to be transferred from ditches to the fields for flood-irrigation. Some settlers quickly realized that raising livestock on the native grasses among the brush was easier than extensive farming. Sheep and cattle were grazed, and horses were added to the range.

The oral histories conducted by park staff led to important information about the homesteaders. Dick Cook was interviewed, because his father, Elmer, played an integral role in the discovery of the fossils. Elmer's older son, Vay,

also contributed. Asahel Gridley provided another key interview. Their stories paint a picture of the people, their vision, and the seemingly endless work they put into the land.

THE PEOPLE

Dick Cook's description of his family adds a dimension to understanding the homesteaders:

My dad's father came from Germany; I don't know where. Cook was originally spelled K-O-C-H. Don't know too much about him. His name was Will. There was four, maybe five, brothers and one girl in his family. He wound up in Utah and some of 'em were in Chicago. Some were paupers and some got filthy rich; one owned the Cook Coal Company. Another was partners with Weyerhauser in the lumber business and did good. Two of the brothers almost starved to death in a prison camp during the Civil War after being captured by the South; they eventually headed to Alaska to get in on the gold rush. Didn't end up with anything. My granddad had a ranch in Utah, and had quite a few cattle and then he went in partners with a sheep outfit. He figured they had about 17,000 ewes. Then they had a depression and he went plum broke--flat broke.

Vay Cook recounted, "My grandfather was crippled. A horse threw him off or something. In those days there was nothing you could do. Now, I think back and his leg could have been fixed." Dick Cook added that their grandfather's name was John Schooler, and he was kicked in the hip by a horse in 1887 on the O. P. Johnson ranch.

Dick Cook said about his father:

Elmer was born in Glenwood, Utah in 1887. His mother died when he was 8 years old. His dad started working in a mine in Eureka, Utah. He worked there a year or so and then went into a dry lead mine somewhere in California and ruined his lungs. He was sick when they left Owens Valley headed for Mountain Home, Idaho, in a wagon. It took them most of the summer. They ran out of money about Tonopah, Nevada, so he went to work for another mine for awhile. Eventually he made it as far as Hagerman and died that fall when Elmer was 12.



Will Post & Leget Answorth Post

Will was born in Germany & died
in Hagerman Valley the fall of 196

He was 71 years old. Leget was
born in England & died in

Glennwood Utah in 1896 at 29 years
of age. Two children survived.

Oliver & Eugenia. They were my
grandfather & grandmother.

Will & Leget
Richard L. Post



The Jeff brothers, back now
Henry, Will, my grandfather
bottom - I don't know his name - man

one night John Jeff. John Jeff Henry

were in the Civil War - both were captured
by the Conf. One of them told of being in
a stockade nearly starved to death - one day a
young boy cleaned a rabbit & threw the skin
& incident nested to the fence - he reached
under the fence & started to eat the inside.
- a Southern guard saw this & kicked him
in the pit of his stomach nearly killing him.
Charles L. Jeff



Then Elmer stayed with his uncle Bill in Salt Lake City, but he hated him. He ran away to Eureka and stayed with another uncle and at 13 worked in the mine like a man. He worked all that winter to pay for a train ticket to Shoshone. Worked in the McFall Hotel as a bellhop at night and shoveled coal after school. Put himself through the 8th grade. He met my mother's folks and started working for them freighting from Shoshone to Twin Falls until their railroad came in.

My father, Elmer, started running cattle here in 1903 as an orphan boy. He went into Charlie Gridley's bank to borrow some money to run cattle on the west side of the river. 'Kid,' Charlie asked, 'Where are your parents?' My father told him that they were dead and that he had been on his own for two years already. Charlie loaned him the money to buy cattle even though he was running them on the same ground that Charlie grazed his horses!

Asahel Gridley was asked if the men ever worked in the mornings and then took a break during the heat of the day; he replied, "You're talking about the people that grewed up in this country. The G...damn weather didn't bother nobody here. That was just part of living. They never cared what it was." Dick Cook added:

My dad had some tough times early on, but he was able to buy ten acres and eventually increased it to forty. He did a lot of fishing and looked for arrowheads. Oh, he liked to hunt. Times was too hard to travel. My folks went to the mountains with teams and wagons and stayed some in the summertime. We ran about two hundred head of cattle on the west side of the river; it was good range. My dad and I ran cattle there into the 60s when the irrigation pumping took over. It was a great, carefree life with lots of work and damned little money. I look back and I think my experiences were worth more than the highest paid job.

My mother's name was Lydia Ann Schooler. Her great-granddad was born in 1813. Her granddad was born in 1842. He came west in 1858, I believe with the Iowa Regiment. They got snowed in at La Grande, Oregon, and almost starved to death there one winter; he wasn't married then; he was fairly young. He went back and got married. They crossed the plains in a wagon in 1862 and come to Fort Boise. Had two kids; one was my mom and I don't know who the other one was. They was basically freighters. They freighted the first lumber into Boise to build the



Chicago Club

1887-1914

COOK 99

first lumber building. They also freighted the first grain-thrashing machine into Boise. They left there and went to Texas for awhile. When they returned here they settled on the Gridley Island. Then they freighted from Kelton, Utah, to Boise before the railroad came. They went from there up to Wood River and came back to Hagerman about 1890. Then they freighted from Gooding to Wendell and Bliss to Hagerman. They also broke horses and cowboied-- anything they could to make a living. The Schooler Hotel was eventually built in Hagerman. Mom was born in 1894. She wasn't very tall and only weighed about 98 pounds. Didn't really talk that much--unless she was mad. She had quite a temper. It took quite a bit to rile her up, though. Oh, she was a hard worker. I can say that for her. Took good care of her family. She liked to cook. She canned quite a lot of fruit and she sewed some; not a great deal. Had a treadle sewing machine and washed on a board.

They're all buried here.

When Cook was asked if his parents were strict when he was growing up, he said:

Yeah, in a way they were and in another way they weren't. I didn't have any kids to play with, you know. I played alone, but took real good care of my stuff. I've still got what few toys I had. But I'm real sure that if they had ever caught me stealing anything or told a lie they'd have killed me. I know they would've.

These memories reveal the kind of people that homesteaded on what is now the Monument.

THE EXPERIENCE

Charlie Gridley was one of the first to use the free grazing in this expansive sagebrush country. His son, Asahel, provided a colorful glimpse of how they capitalized on these "wild" horses. Since the horse went extinct in North America, how did wild horses get to the Hagerman Valley? That question cannot be definitively answered. The expedition of Spanish Conquistadors did not extend so far north, but it is possible their escaped horses eventually migrated to the valley. As previously noted, the American Indians in the area were not dependent on the horse for their mobility and lifestyle as were the tribes to the northeast that hunted buffalo, some animals may have

been brought or escaped here (Murphey). Oregon Trail journals allege that emigrant horses were stolen by American Indians, though the thieves may have also been white marauders in disguise. Certainly weak horses may have been left behind, or others may have escaped. Asahel Gridley provided another explanation:

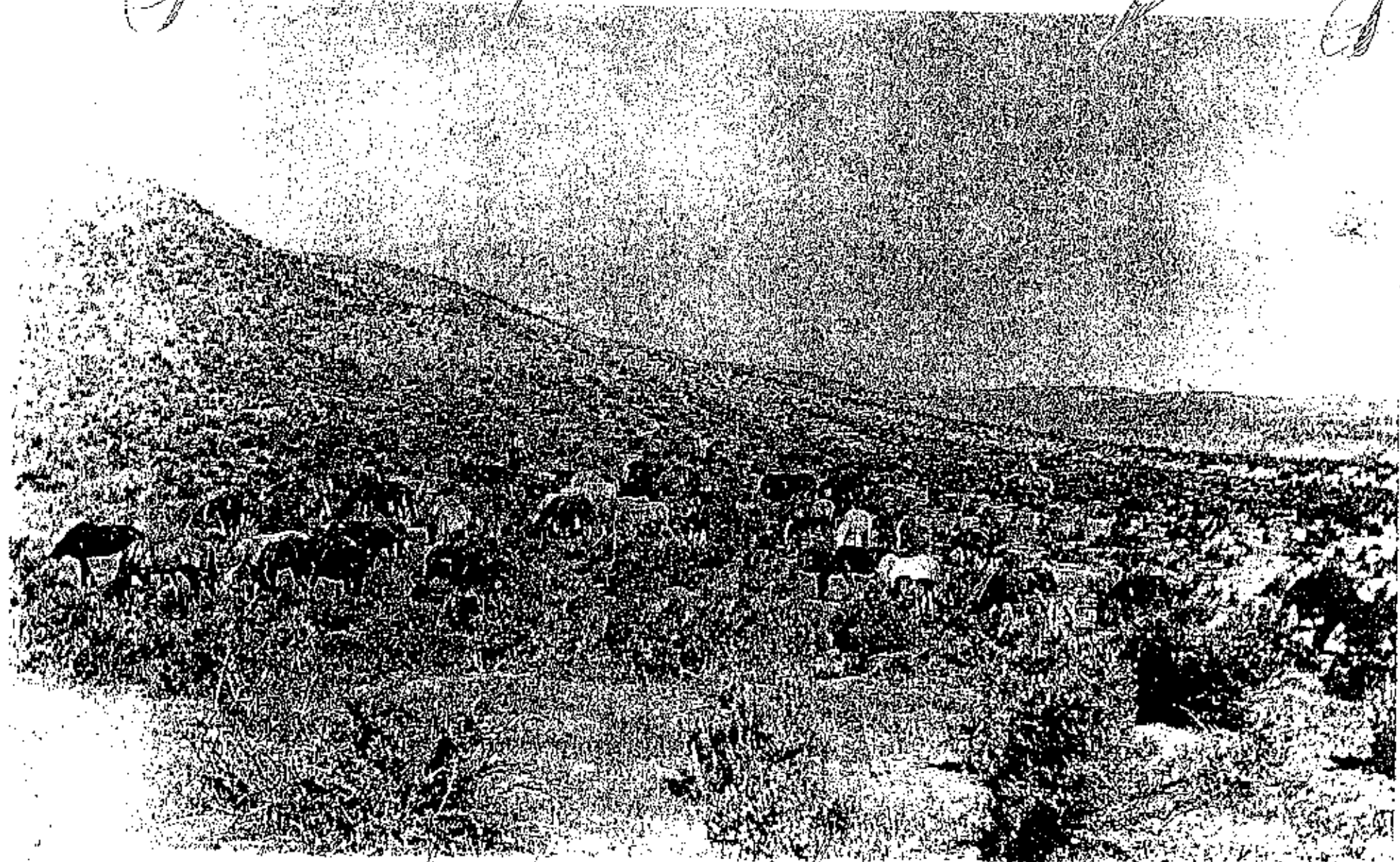
My grandfather, Charlie, brought them in from Gridley, California and released them on the range. He had a lot of wild horses on the desert. I was busy with them most of the time—helping them out with the wild horses. We had about ten thousand of them over the years.

According to Cook, "The Gridleys had a large range horse operation on the west side of the river that started near Glenns Ferry and ran to Three Creek. I saw with my own eyes twenty-five hundred head about 1935." Gridley said, "They'd come down any one of them ridges" daily to the Snake River for water. Cook added: "You could see dust coming on a horse trail, mostly about sundown. A line of horses would be in a slow trot, maybe a hundred head in a bunch. They would range out a good fifteen miles from water so they did a lot of traveling in a day."

Asked what his dad was like, Gridley responded, "He didn't say much. Kinda quiet." When asked about his mother, he said, "Her name was Jamie and she was a wonderful woman. My mom rode, too, side saddle and straight saddle. Had one brother who died when he was a week old. I never saw him. Also have four sisters. Two were younger and two were older."

According to Cook, the Gridleys constructed a rock and pole corral adjacent to Tuana Springs a few miles northwest of what is now the Monument. He said, "The springs was just a trickle, but it was enough to draw the horses there for a drink; they ran them into the rock corral." A larger wood post and wire corral built later by the Gridleys was found on what is now the Monument in 1993 by Chris Force, a National

Sheep with many of the cattle at camp across from Pledge.



horses are hungry, have been in camp for a while.

Park Service archeologist. Cook said the poles were brought over from the earlier Tuana Corral. Gridley stated:

A lot of horses went through that corral. People would come over and watch us brand. There were a lot of branding irons out there. Some of those young kids wanted to ride a colt. They'd jump right on 'em. Buck like hell! People would come over and pick horses they wanted right out of the corral. We'd halter break them and take them across the river whenever they wanted them. We didn't get much out of them; everybody got a horse if they wanted one.

The corral was constructed with posts consisting of tree stems and smooth, heavy gauge wire. It was about 100 feet wide and 150 feet long. Cook explained its use:

To round them up, the Gridleys would hold them off water for a day until they were thirsty; then they would let them drink their fill. A horse full of water can't run well so they are easier to herd. They had a pole corral on a ridge flat with a long wire netting wing running downhill towards the river. On the wing they tied white rags all over it so the horses could see it even when it was dark. They'd herd 'em right in.


I remember one time we rode up to the corral when Gridleys were working colts; someone wanted to know if I wanted something to eat. Sure, I said! There was a branding fire with a lot of colt fries [testicles of gelded colts] roasting in it. I was only about six years old so they thought colt fries would turn my stomach, but the joke was on them. I ate them and wanted more. I had eaten hundreds of fries by then.

What happened to the horses after branding? Cook said:

Gridleys swam a few range horses across the river below the corral. We swam our saddle horses there back of a boat, usually three or four at a time. I saw a few horses drown. If they give up and get their head under, that is it. We swam a lot of cows there but a cow won't drown; they float. Gridleys branded with a C. G. and in later years a box on one side of the jaw, then a box on both jaws. We branded with a pitchfork on the right ribs of our cattle.



• Bridgys gathering horses to ship
left to right - Frank, Arlie,
little Charles boy, George, &
Watt - he always wears a tie.

• 



Cook 98

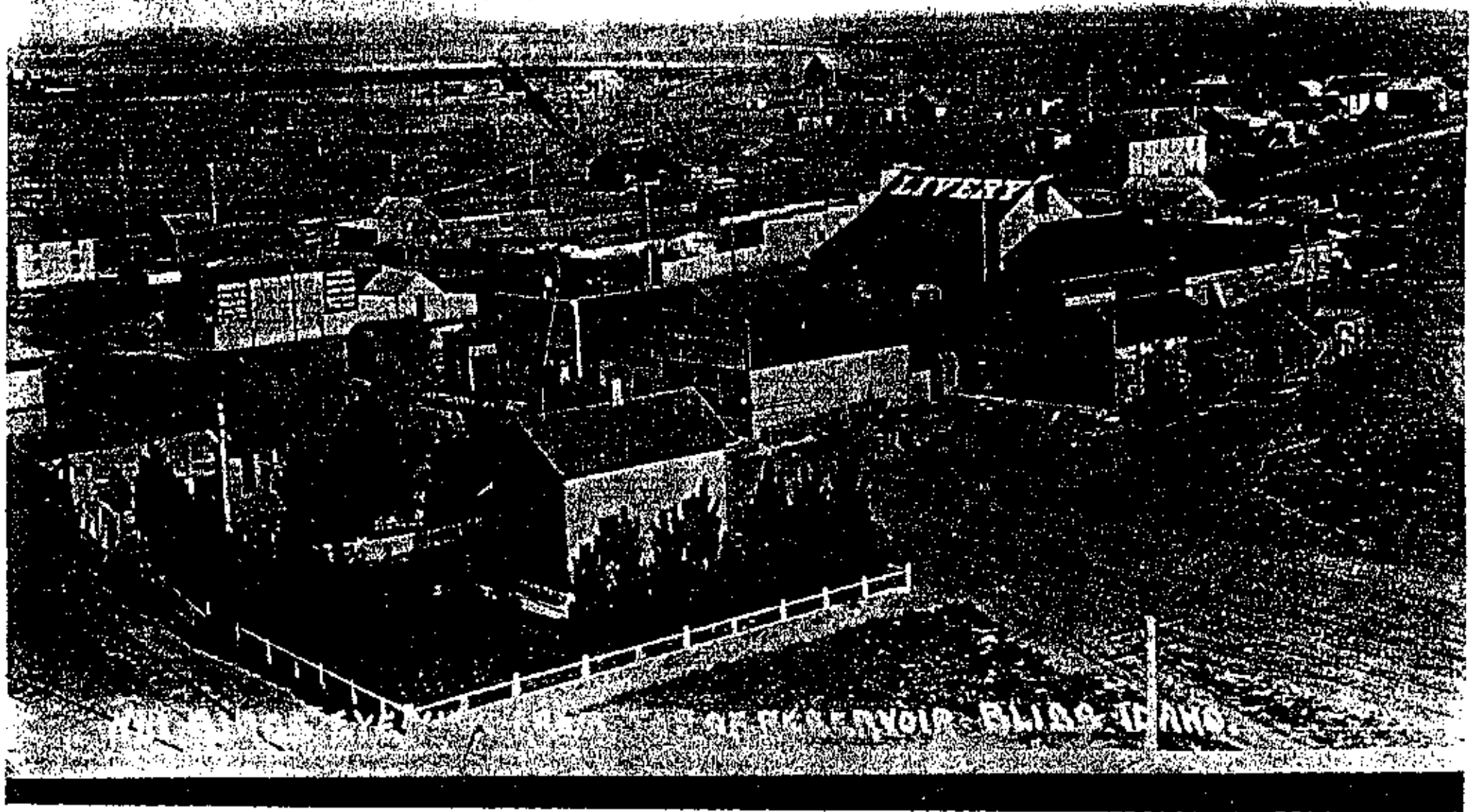
Gridley said that after branding the horses, they drove them through the sagebrush to get them downriver: "We'd take them down below Bliss and cross to the other side of the river for the railroad yard. Took 1,500 off the first year. Got six bucks a head for 'em at Bliss. They shipped them out of there for meat."

That was the "Wild West." According to Gridley, "A posse came across my dad workin' horses. He had a hell of a time convincin' those S.O.B's that he wasn't a robber. My dad was a good shot, but they didn't lose anybody."

Cook expanded on the story:

Two teen age boys robbed a hardware store in Wendell and stole a few things including some guns. The two boys came down to the Owsley Ferry and crossed to the west side of the river. In the meantime, Wendell organized a posse to hunt down the two boys; they were well armed and mounted on horses. The posse split into two groups on the west side of the river to cover more country. Each group rode around each side of a small hill in a fast lope. When they met, panic took over and they began to shoot at each other. Lucky there wasn't a good shot in the bunch so no one was hurt. Next they went to the bottom of Yahoo canyon where Gridleys had a horse camp, opened fire, and ran all of them into the brush. They didn't hurt anyone at that camp, but later on they ran into the two boys and shot and killed one of them. By this time the people of Hagerman had had enough of Wendell's posse so they got together a posse of their own and went after Wendell's posse. They found them headed back to Wendell with the boy's body in a wagon. Hagerman's posse told them not to say or do one more thing wrong or they would shoot all of them. I guess they made a real quiet trip being escorted by Hagerman's posse all the way back to Wendell.

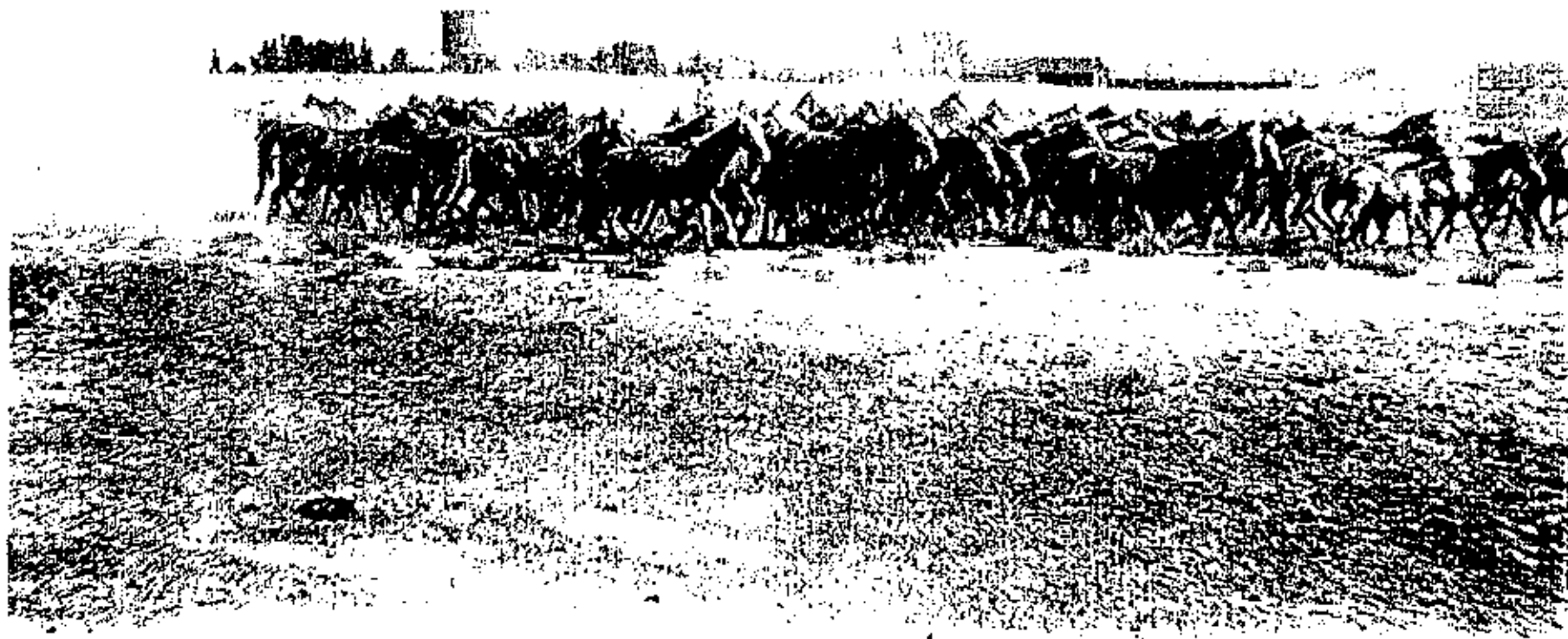
When asked if there were any American Indians still living in the valley then, Gridley replied that an Indian named "Old Buck lived out on one of the islands. He was in World War I. A lot of people lived and died here and never left Hagerman."



LIVERY

EVERETT BLISS PHOTOGRAPHY

Early Police Work about 1980



Hidley's shipping horses at Bliss
note water tank in background =

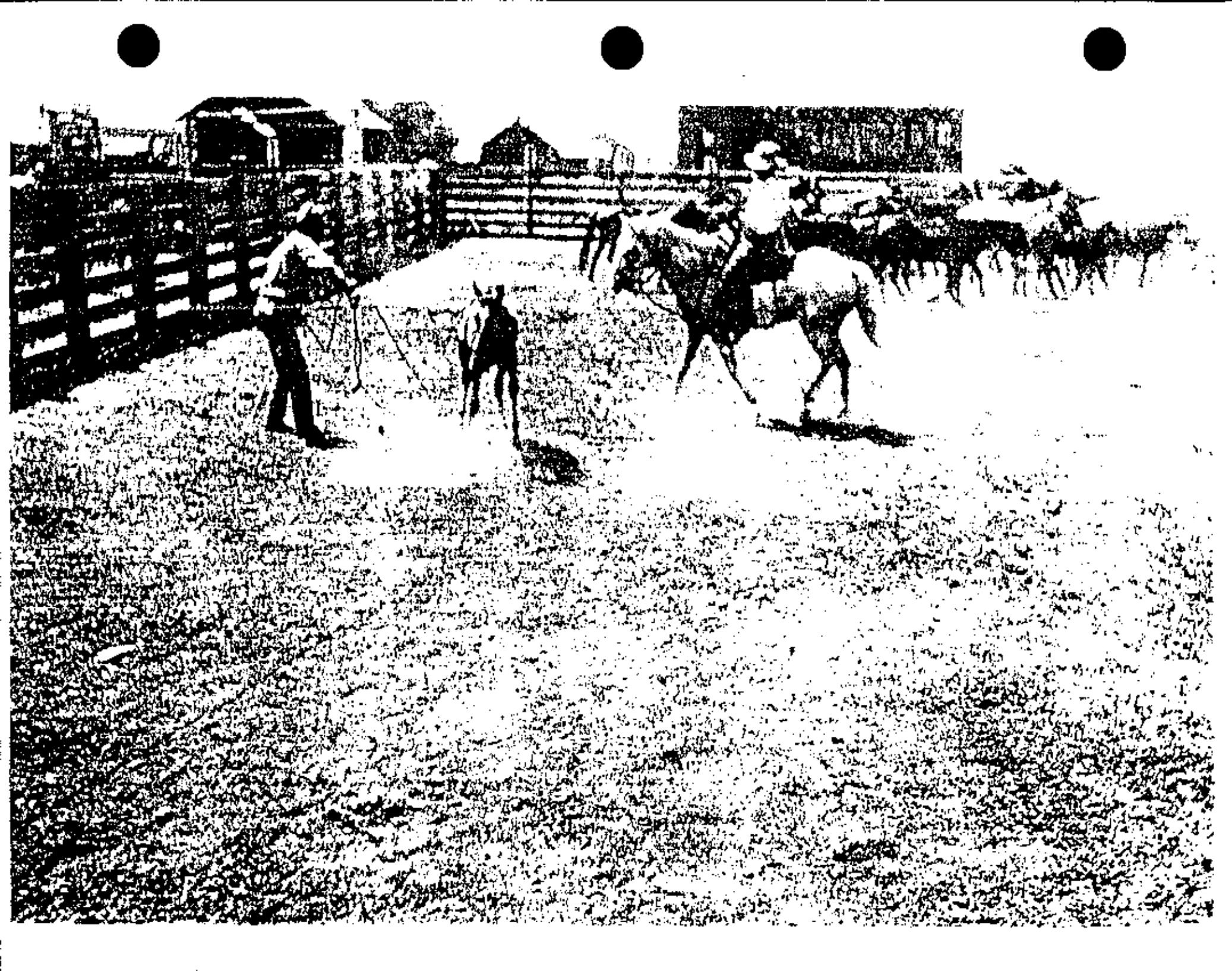


PHOTO BY [unreadable] FOR [unreadable]

Shingles working cotton believed to
be in stock yards at Blue Lake.

Supplying material for the ...
A





In those early times, there were many hazards for the careless. Gridley commented about snakes: "Pretty near everyday I passed rattlesnakes going up there. In those days there were lots of rattlesnakes; there was lots of bitter brush." After a pause, he said, "But anyway, that's the way it was back then."

Gridley also described the agriculture around Hagerman: "There wasn't anything going on around here much other than what little farming there always is." Most of the farming was on the Hagerman side of the river where the placer mining canals were already in place. On the Monument side, to get water from upriver transported to the "flat," the gradient would have encountered the bluffs, and it was impossible to construct a canal there. It wasn't until Fred Conklin had an idea how to get water for crops that the flat became a complete homestead. According to Dick Cook:

My mother was born in a dugout on the east side of the river overlooking the Conklin/Brailsford flats, as the old timers called it. Early people here would just kind of dig a hole in the side of a hill and put a roof over it. That's about what it amounted to. Fred Conklin was my mother's uncle and sometime in the 1920s, Fred built a shack on that flat. For a few years a man by the name of Lou Day and his wife lived there. Mrs. Day was related to my mother somehow, but I don't recall how. The house exterior was covered with tarpaper, and on a hot day you could smell it a mile away. There was also a root cellar dug into a bank, and up the canyon was a little spring box to get water and keep food cool.

The locations of all these structures have been identified by the National Park Service, and preservation plans are underway.

Conklin also built a cable ferry across the river at this site. An undated photo shows his ferry in use with the house in the background. Cook said, "A road extended west past the house and up a ridge to the top of the plateau; it was actually a well-traveled





Fred Penkin his sister ^{of} Wilber Schooner

on left



Young's Mailford Ferry with E. J. J. house in back ground



horse trail." According to Cook, Conklin used his wagon on the road, and Brailsfords ferried their wagons and sheep over to graze on top of the bluffs. Gridley said, "There were lots of sheep and they couldn't go far from the water on that desert." When asked if he had used the ferry, he responded, "Nah. We'd just jump the horses into the river."

Conklin created the homestead by bringing water from the Hagerman side of the valley across the Snake River. According to Dick Cook:

A wooden pipeline was suspended on cables to convey water to the west side of the river. My father, Elmer, helped Fred build the pipeline, which was a large undertaking in those days. They borrowed a huge chain block and tackle from Idaho Power Company. It took a full day to winch the heavy cable only a few feet. They anchored the cable in good, up in the rocks, not far from the dugout where my mother was born.

Gridley also spoke of the pipeline but could not remember who built it.

Conklin connected the pipeline outflow to two canal systems. The lower canal ran south around the end of a ridge above the Snake River and contoured across the terrain for about one quarter mile to reach the uphill side of the flat. Cook noted, "A few crops of alfalfa hay were raised, but jack rabbits were thick and ate most of it."

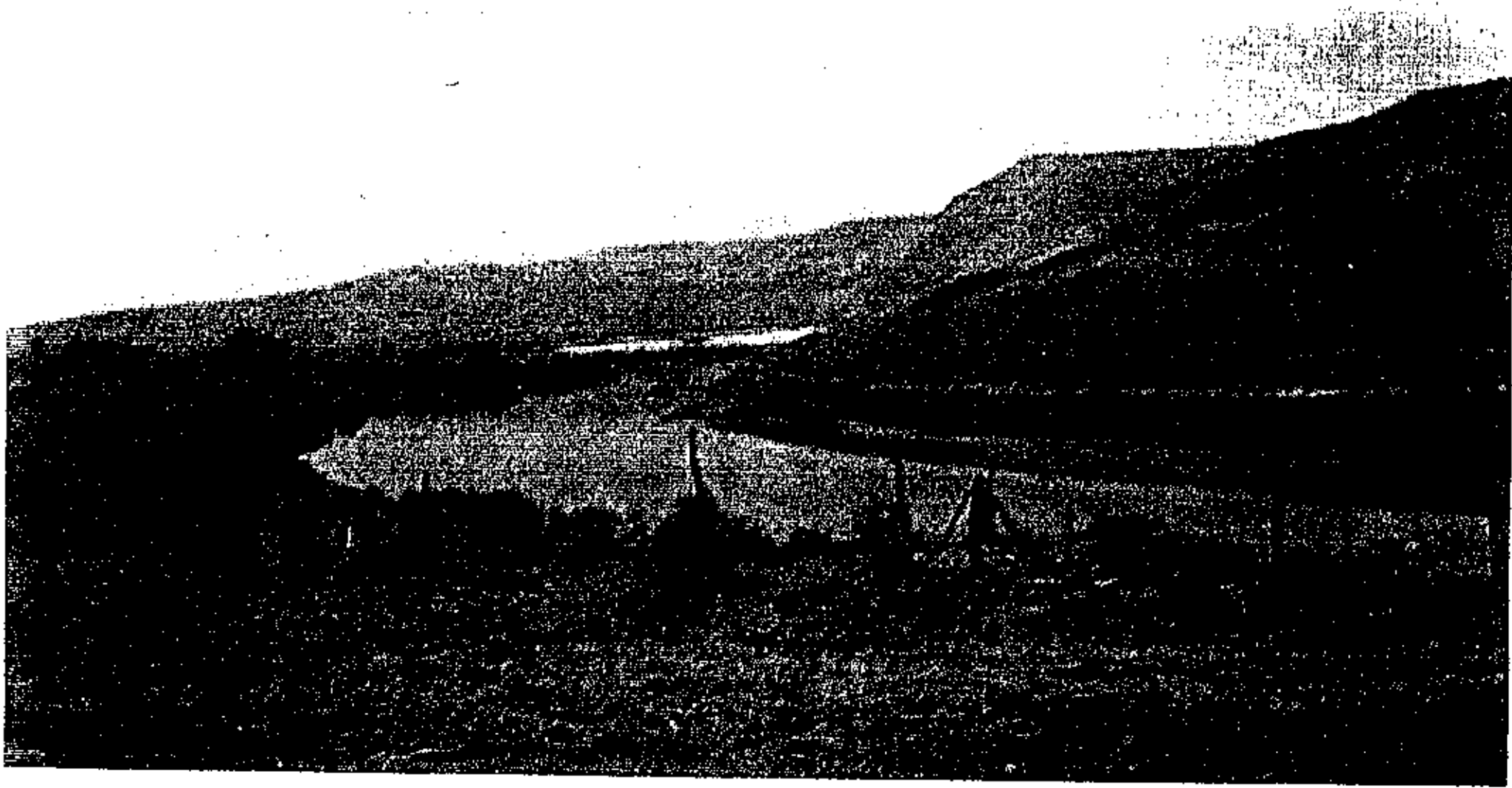
The upper canal was constructed by piling up a ridge of dirt about two feet high and three feet wide on which the pipe was extended. At the end of this raised canal where its gradient reached the natural elevation of the terrain, a "T" was formed where one canal continued southwest for about one-quarter mile upriver to expand the flood-irrigation crop area. The other canal went northeast for only a couple hundred feet, along which it appears that several minor gravel deposits were worked



Shearing sheep in Hogjerman Valley.

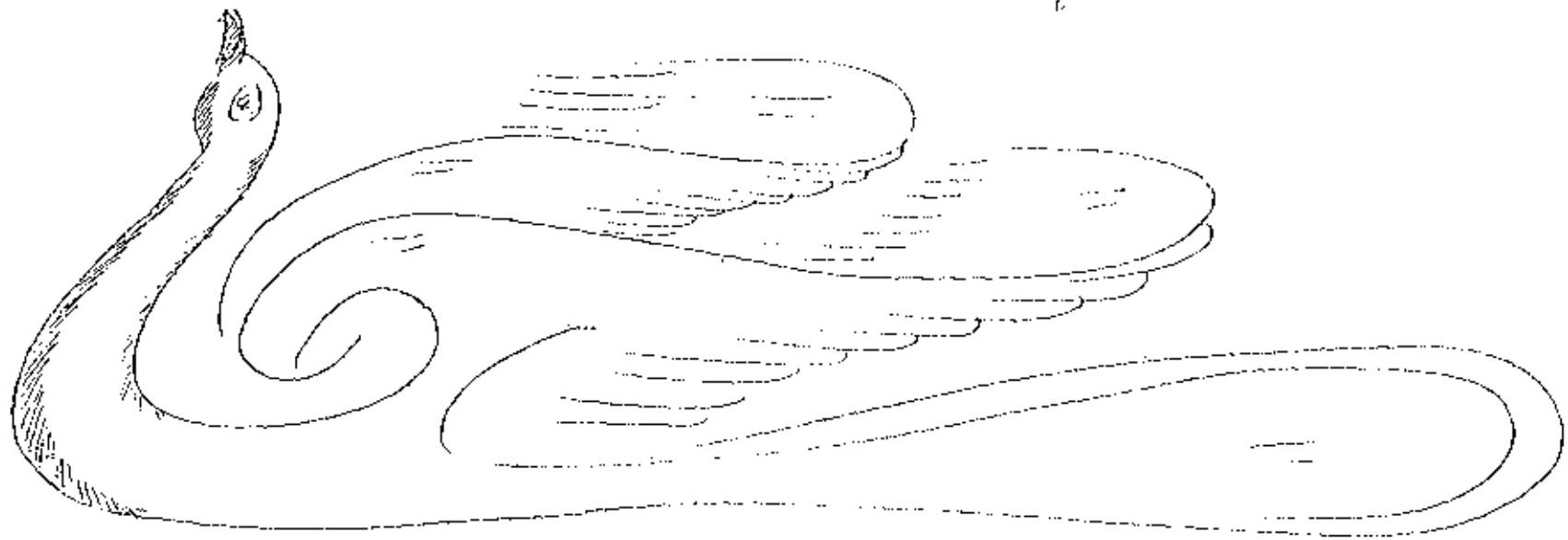
This is a blades crew - damned hard

work.

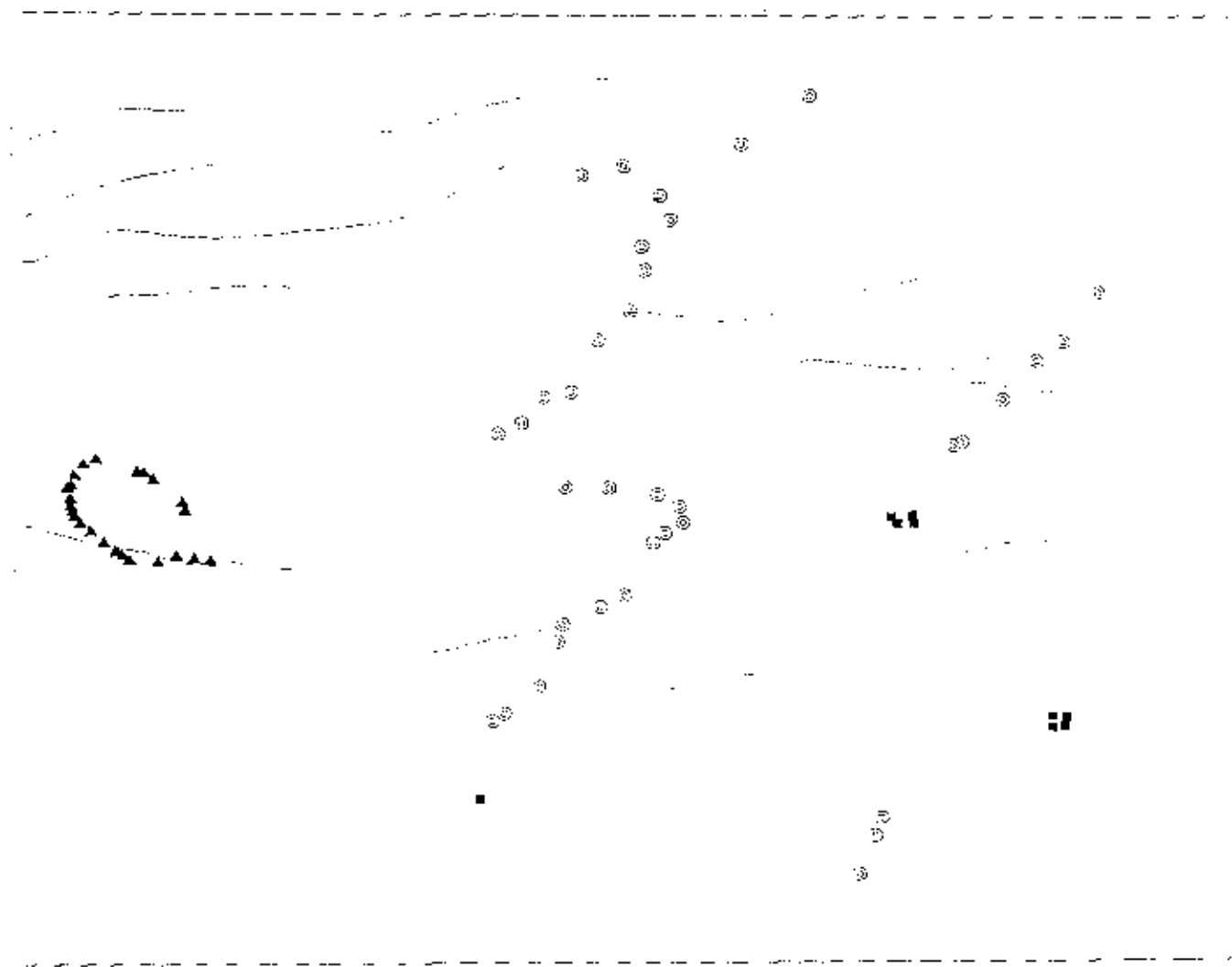


is sitting at Snake River from old Martin place west
of Hagerman. Looking up river south you can see Baker
Rapids where white water is ^{left} island. On early days this
was the best trout fishing in Idaho.

Ed. J. Cook



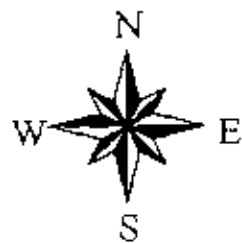
Homestead



100 0 100 200 300 Feet



- Contours
- * Canals
- Structures
- ▲ Corral



hydraulically for gold. Cook believed Conklin built that canal to irrigate another flat about one-half mile to the north for more crops. The upper canal system was never completed. Cook explained: "One winter a group of Hagerman students playing hooky built a fire in the end of the wooden pipe and burned it all down. All that was left of the pipeline was suspension cables."

The tragedy and disappointment of this loss must have been staggering. The destruction of the pipeline and its agricultural water was the death-knell of the homestead. It is unknown when Conklin quit using the site, when the Day family left, or when the house disappeared. A 1934 photograph in the Smithsonian Institution archives shows the pipeline support on the west side of the Snake River and cable sagging into the water; they no longer remain. The photo also shows the house was gone by then. Eventually, the ferry sank, and the Gridleys' corral collapsed. The Bureau of Land Management was responsible for management of the area and terminated grazing in 1984 to protect the fossils. Today these historic sites are covered with sagebrush/grass and are being detrimentally impacted by a dirt road that leads to the only wheel chair accessible site along the River. Test excavations are needed to determine the spatial arrangement of the site so the road can be relocated. A subsequent, thorough site excavation is critically needed to recover more information from remaining artifacts.

HISTORIC PERIOD - FOSSILS

As an infant nation, the United States faced an identity crisis. Not only did Americans need a strong government and a robust economy—they needed their own cultural identity to establish themselves beside European nations who looked down their long historical noses at the upstart transplants in the New World. Abbe Raynal wrote from France, "One must be astonished that America has not yet produced one good poet,

and established penalties for destroying any historic or prehistoric ruin on federal land. Unlike the act establishing national parks, it authorized the president to set aside by proclamation historic places, landmarks, and structures as national monuments. Its enactment created a mechanism with which federal officials, professionals, and other special interest groups could accomplish preservation goals without waiting for popular or congressional consensus. President Theodore Roosevelt employed the new act to create Devils Tower, Petrified Forest, Montezuma Castle, and El Morro national monuments in 1906, and the Grand Canyon in 1908. These proclamations protected the areas from land claims, but Congress again provided little money for funding, and the looting of archeological treasures continued (Rothman, 1989).

The issue of preservation versus management persisted. By the early 1900s, men like Muir and Horace McFarland, president of the American Civic Association, had recognized the necessity of working within the system to preserve wilderness in the parks and called for a centralized administrative system. Secretary of the Interior Richard Ballinger requested a national park bureau in his 1910 report. Ballinger's successors at the Interior, Walter Fisher and Franklin Lane, continued to champion the proposal. In 1912, President Howard Taft implored Congress to establish a Bureau of National Parks. However, the Forest Service, created to manage woodlands and led by Pinchot, opposed such a bureau, seeing it as a competitor for resources and suspecting an augmented national park system would try to reserve the lands under its jurisdiction. Despite opposition, on August 25, 1916, President Woodrow Wilson signed the National Park Service Act, which attempted to bridge the issue by charging the parks to promote recreation as well as preserve nature. Though McFarland and his allies had

sought a more comprehensive act, at least the defense of the parks and monuments had been shifted to the full responsibility of the federal government (Miles, 1965).

The addition of the National Park Service provided a system of management where there had been none, but wilderness activists like Charles Walcott believed the national parks could be better guided by adding an organization of people outside the government and unobstructed by politics. On May 19, 1919, Walcott, a paleontologist and former secretary of the Smithsonian Institute, signed with several others the articles of incorporation that formed the National Parks Association. This group of prominent educators and scientists made education its chief mission, while also addressing the matter of standards for national parks and monuments. Finally, with both the National Park Service and the National Parks Association established, the country held the means necessary to oversee its natural and cultural heritage (Miles, 1965).

Science had grown as an intellectual power in the late 19th century, supplying insights into nature and tools for overseeing forests and other resources. Many scientists led influential institutions such as universities, the Smithsonian Institute, and the America Museum of Natural History, and they brought the power of their constituencies to the national park movement. Citizen activism also emerged as a persuasive force in the 19th century for reforming government, industry, and land use. With progressivism in the air, clubs and associations centered on diverse reforms affecting the entire American landscape. Virtually every cause had its citizen advocacy group and each park its defenders. By the early 20th century, Pinchot and his colleagues had made wise use synonymous with conservation, but Muir's wilderness proponents enjoyed unprecedented grassroots support. When the Smithsonian Institute ventured to

Hagerman, Idaho, at the end of the Roaring Twenties to unearth fossils at a future national monument site, conservation had become part of the American social environment, and wilderness had become a cult (Miles, 1965).

The Smithsonian Institution Finds Hagerman

In south-central Idaho, the small town of Hagerman sits directly opposite a series of steep bluffs shaped by the Snake River cutting through the Glens Ferry Formation. Over three million years ago, this formation was deposited as sand, silt, and clay by rivers associated with the lakes on what is now the lower Snake River Plain. During the Blancan Land Mammal Age, fossils accumulated along the eastern perimeter of the Glens Ferry basin. In this region, the Snake River flows due north with the Hagerman fossil beds resting on a plateau west of the river. Only 14,500 years ago, the Bonneville Flood enlarged the valley. The enormous deluge ripped across the Snake River Plain and covered the valley floor, leaving behind melon gravels, the large, rounded basalt boulders that litter the Hagerman countryside. Through millennia, runoff from seasonal rains deeply dissected the river-carved bluffs and created ravines in which fossils could be found—a treasury of fossils including the world's largest sample of an extinct, zebra-like ancestor to all modern horses (Akersten and Thompson, 1992).

In the early 1920s, Hagerman rancher Elmer Cook discovered the horse quarry site while chasing cows in an inaccessible wash on the west side of the Snake River. He began collecting a large cache of fossils, sometimes dumping out his Bull Durham to save the small bones of mice, shrews, or fish in the tobacco sack. Cook wrote letters for several years in an effort to interest the government in his find, but the

bones did not gain national attention until 1928 when Harold Stearns of the U.S. Geological Survey found fossils on Cook's front porch. While gathering data on Idaho ground water resources, the geologist had heard about the rancher's large collection and paid him a visit. Impressed with the material, Stearns asked to see the site and collect fossils of his own. He sent almost two hundred pounds of material to Dr. James Gidley at the Smithsonian's U.S. National Museum. The bones were identified as the remains of a new species of fossil horse, and the Smithsonian made excavation plans for the following summer (Cook, D., 1996).

Gidley wasted little time arranging the National Museum's first trip to Hagerman. It would be the first of four Smithsonian excavations over the next six years. Gidley left Washington on June 24, 1929, for Idaho Falls to meet Stearns. He spent the first days following his arrival surveying major areas of southern Idaho, including McCammon, American Falls, Twin Falls, and Bliss. After thoroughly exploring the countryside, a group consisting of Gidley, Stearns, C.P. Singleton, Fred Conklin, Eimer Cook, and Frank Garnier made camp on the plateau above what would later be named the Hagerman Horse Quarry. The Smithsonian had persuaded Singleton, credited with the discovery of the important Pleistocene fossil locality in Melbourne, Florida, to come west and be part of possibly another grand discovery. Gidley hired Hagerman local Conklin to construct boxes for shipping the fragile fossils back to the Smithsonian in Washington D.C. Cook pulled himself away from his ranch to dig in the quarry and survey other areas. His enthusiasm and knowledge of the area made him a valuable asset on all four Smithsonian digs. Gidley hired Garnier, another local resident, to be the cook and camp man. When Garnier left the dig at the end of July, the Idaho

Power Company had employed most of the available men in the region to erect a new power plant, and finding a suitable replacement proved difficult for Gidley. Luckily for the Smithsonian staff, Cook's wife, Lydia Ann, assumed the duties of keeping the camp in order and preparing the meals (Gidley, 1929).

The purpose of the expedition was to acquire good collections of fossil bones from the more important localities and attempt to determine the age of the various sedimentary deposits of the Snake River Valley. Material gathered during the trip would be used for exchange with other museums, as well as for the purpose of study and exhibition within the National Museum itself. By early July, Assistant Secretary of the Smithsonian Alexander Wetmore concluded Gidley's work should focus on Idaho for the rest of the summer of 1929. In his July 9 letter to Gidley, Wetmore suggested the planned expedition to Montana be postponed in favor of additional time in Idaho. On July 21, Gidley responded: "I agree with you that the Idaho work is now of major importance the rest being side issues to be postponed or abandoned as seems best later, and of course Hagerman is at present the chief point of attack." He had already shipped 1,300 pounds of horse fossils to the Smithsonian, and he hinted there might be enough material in the 'old hill' to supply all the big museums of the country with exceptional collections (Gidley communication to Wetmore, 1929).

In August, fossil bones were still coming strong. The group had already prepared four boxes for shipment to Washington D.C., while nearly five more boxes of material waited to be stored. The bones were abundant and easy to dig, but some were hard for the Smithsonian staff to handle. Large, casted fossils required a wooden sled to remove. Since the trail was too narrow for a horse team, they used

Cook's old workhorse, Fred. Gidley explained in a letter the difficulty in salvaging the delicate fossils: "They are in soft sand, many of them partly encased in a hard contemporary rock, and usually mixed without rhyme or reason. To add to our troubles many of the bones not protected by the rock are very fragile and much cracked up requiring much gum and plaster, then even it is not possible to save some of them (Gidley communication to Gilmore, 1929)."

Preserving the brittle bones was only one kind of trouble the crew encountered. Hagerman's native scorpions and rattlesnakes provided another. The Smithsonian determined a nine-inch scorpion captured by Cook on the Hagerman bluffs to be one of the world's largest. A week later he found another eleven inches long. He put it in a tomato can and tried to carry it out in his pack, but when he heard it prying at the lid, he let it go. Once Cook had to grab his young son, Dick, and throw him down the hill when the boy cornered a rattlesnake on the narrow, steep-sided trail to the quarry. While snakes and scorpions startled, the weather aggravated. In nearly every letter Gidley wrote, he mentioned the heat or the wind and sometimes both. The intense heat prompted early morning starts, and the high winds meant work might be postponed or called off for the day. Water especially was a tough issue for the camp. The nearest source, the Snake River, required negotiating a steep, twenty-five mile trail with horses to fill the five-gallon milk cans used for storage. Gidley even refused to let the tobacco-chewing Garnier share the communal canvas waterbag (Gidley communication to Gilmore, 1929).

Strict about water and work, Gidley was also good-natured. When the crew inadvertently got into an ant nest, he danced around and stripped off with the

rest of them. Singleton, a pipe-smoking Georgian in jodhpurs, laughed at others' ant bites but had to endure his own torment when a snake skeleton he had found turned out to be a horse's tail. Cook and Conklin gave the camp another good story when they drove to pick up a load of fossils. The people ahead of them on the old coyote trapper road turned off on the same road they had to take. The other outfit turned again on the same road they had to turn on. After a third time, the two men ahead of them jumped out with rifles. Cook just drove around the men, a couple of moonshiners who thought they had been caught (Cook, D., 1996).

By August 22, Gidley decided he had accomplished enough for the first season in Hagerman. The Smithsonian crew stored all its camp equipment in a warehouse located next to the Merit Store in Hagerman. Besides being inexpensive, it meant less to bring back the following summer. Gidley left Hagerman on August 23, 1929. When he returned to Washington D.C., he planned to quickly clean and prepare the fossils recovered in Hagerman but encountered another frustration. Though he had sent five crates on the Oregon Short Line Railroad from Bliss on July 17, only four boxes arrived at the museum on August 1. He was unaware of the lost box until his arrival at the Smithsonian in early September. On September 14, the museum shipping clerk sent a letter to the freight agent inquiring about the lost parcel, but no reply came from Bliss. Angered by the apparent disinterest of the railroad, Assistant Secretary Whitmore also sent a letter to the freight agent in Bliss. Finally, almost one month after the shipping clerk's first letter, the railroad responded. The package was traced to Baltimore and delivered personally to Gidley on October 19, 1929 (Gidley communication to Whitmore, 1929).

Gidley's crew sent three tons of specimens to Washington D.C. that summer. Most were of a single species of extinct horse later named *Equus simplicidens* and included fossils of all ages and both sexes. Not only had the Smithsonian discovered the largest single sample of an extinct species of horse, it had also found the earliest known representative of the modern horse genus, *Equus*. The Smithsonian's first season in Hagerman aroused great excitement and expectation in the scientific world (McDonald, 1993).

Maximum Yield

Letters from museums and universities from all corners of the country poured into the Smithsonian after the first season at Hagerman. Eager museum curators and paleontologists wanted details about the variety and number of fossils recovered, as well as future plans for the Horse Quarry. In response to a letter written by W. D. Mathews, Chair of the Department of Paleontology at Berkeley, Wetmore outlined plans for a second trip to Hagerman in the early summer of 1930. He planned to send Gidley to the same Idaho sites opened the previous year. Wetmore wrote, "We expect to develop this site carefully so that the maximum yield of scientific material will be obtained ... and I believe that we shall have some material that we can let you have in exchange later (Wetmore communication to Mathews, 1930)."

In early May, 1930, Gidley and his assistants traveled back to Hagerman to resume work at the Horse Quarry. Instead of the previous summer's devastating heat, the Smithsonian crew found themselves in the middle of a cold rainstorm. This year's camp included C. P. Singleton, S. P. Wells, Elmer Cook, Frank

Garnier, and J. Young Rogers. Singleton, making his second trip to Hagerman, worked as chief field assistant. Wells, a graduate student from the University of California, received his first opportunity to work with the Smithsonian in Idaho. Cook returned, but his attendance was sporadic. Garnier came again as camp cook, but like the year before, he left. After a week's services, Gidley replaced him with Rogers (Gidley, 1930).

The rain made the dirt roads slippery and hazardous, postponing the crew's trek to the high desert plateau near the fossil bone deposit the Smithsonian had worked the previous year. The group spent five days indoors waiting for the weather to break. Not until May 9 did sunshine offer a reprieve. The men loaded their two ton Ford truck with a week's rations, boxes, lumber, and thirty gallons of water. To reach camp, they had to cross the river on the main highway bridge four miles south of Hagerman and then traverse twenty-five miles over a rarely used, hilly, dirt road. Part of this route followed the same path many pioneers took as they journeyed the historic Oregon Trail, and Gidley procured three cast iron hub-thimbles for the National Museum's collection during one of the biweekly trips to town for food, water, and materials (Gidley, 1930).

With camp established, work began at the bone deposit situated at the southern edge of a short hill jutting out from the border of the plain. The party had to first remove overburden from the bone-bearing layers. In the Horse Quarry, it was often necessary to spend hours and even days shoveling the cross-bedded bands of coarse and fine sand to reach the fossil layer. As the crew uncovered bones, they brushed them clean, then saturated each with a thin solution of gum arabic. Following this treatment, Gidley and his assistants further safeguarded the delicate bones by adhering burlap dipped in raw flour paste or thin plaster of paris. When dry, it formed a light, tough

jacket similar to casts for broken human bones and necessary for packing and shipping to Washington D.C. Cook ran out of plaster of paris once while casting fossils by himself. He built a fire to heat some gypsum and ground it up as a substitute. According to his son, Dick, the Smithsonian wrote and asked "what in the hell he cast those fossils in because they couldn't get it off." (Cook, D., 1996)

The only insights into the Smithsonian's second expedition come from Gidley's long journal article written for the National Museum in 1930. Gidley never returned to Idaho; illness kept him from leading a third Smithsonian dig at Hagerman, and he died in Washington D.C. on September 26, 1931. His life's work centered on the science of vertebrate paleontology, and his research on fossil horses earned him distinction. His final journal article concerning fossil excavation in Idaho conveyed not only accounts of his work in Hagerman, but also revealed his passion for discovery:

To the fossil hunter such a deposit as the one here described is of much more than passing interest. First there is a satisfaction in working out a successful technique for collecting and preparing the bones for shipment to the laboratory; and there is the added keen pleasure of anticipation and expectation, as foot after foot and yard after yard of undisturbed ground is worked over, that the next bone to be discovered and developed will prove to be new to science or at least a better specimen than has before been found of an already known species (Gidley, 1930).

Boise resident Richard P. Ervin shared Gidley's passion and had long believed scientists would someday discover Idaho as a field for investigation. He took a keen interest in the rock writings of Native Americans and considered all remnants of Idaho history important. Thinking the state museum should make efforts to acquire Hagerman Horse fossils, he asked the Idaho State Historical Society to seek a cooperative

expedition with the Smithsonian in their upcoming 1931 season. When the board voted in favor of his idea, Erwin's wife wrote to Gidley inquiring if a joint effort would be agreeable. Gidley replied the decision was not his, but he could think of no reason why an agreement satisfactory to both parties could not be arranged; however, he did offer some advice. He believed the Society would be better served by sending one representative rather than a group: "The natural result of two parties working the deposit at one time and dividing the material on the ground would be to separate permanently the more or less scattered bones of single specimens." Gidley advised the Historical Society to contribute money to the expedition and send one man to receive instruction on proper methods of fossil bone collection. And he assured Mrs. Erwin the Boise Museum would obtain a liberal amount of fossil material for their contribution, as well as a better representation than the Society could hope to get by undertaking the work independently (Gidley communication to Erwin, 1930).

Mrs. Erwin shared the general plan outlined by Gidley with the board members, and they approved unanimously. The Historical Society quickly authorized a \$200 contribution, hoping the amount would be enough to secure a good amount of fossil material for the state museum. On June 5, 1931, Assistant Secretary Wetmore officially welcomed their cooperation and agreed to accept Boise's \$200 donation (Erwin communication to Gidley, 1931).

By June 1, Smithsonian paleontologist Norman Boss had left Washington to begin the Institute's third expedition. After arriving in Bliss on the 4th, he traveled by bus to Hagerman, where he met crewmembers C.P. Singleton, Charles Bremner, and C.W. Caldwell late in the evening. The group gathered equipment and

supplies and left Hagerman on the 8th to establish camp near the Horse Quarry (Boss communication to Wetmore, 1931).

On June 13, while Boss and his Smithsonian crew collected material left over from the previous year, the Historical Society hired Harold Tucker of the College of Idaho at Caldwell as their representative in Hagerman. In Tucker's first letter to the society, he told of three skulls and a jaw he helped uncover, as well as the harsh winds that blew all day. He was experiencing all facets of fossil collection: the removal of overburden, the search for the fossils, their retrieval from the ground, and their preparation for shipment. Also in the letter, Tucker requested gum arabic, ten gunnysacks, and fairly tough but not too heavy wrapping paper for casting and packing bones. He believed the items could be purchased in Boise and sent to the Smithsonian camp less expensively than they could be bought in Buhl or Twin Falls (Tucker communication to Ervin, 1931).

The work force stripped away enough overburden using a plow and a horse-drawn scraper to reveal a bone-bearing layer approximately 500 square feet. With all the dirt removed, fossils could be found in great abundance. By the end of July, the crew had recovered five complete horse skeletons, 32 skulls, 48 pairs of lower jaws, and numerous limb and foot bones in excellent condition representing both sexes and all stages of growth. The season's work filled 37 boxes weighing 8,332 pounds. The group also found the fossil remains of birds, turtles, and fish (Boss communication to Wetmore, 1931).

On July 24, Tucker wrote to Boise informing the Historical Society of the current situation at the dig. Boss wanted to break camp on August 3, so Tucker

needed timber to build boxes for shipment and a truck to haul the fossils to Boise. He wrote of the Smithsonian's decision to give the Idaho State Historical Society one fifth of the material uncovered in Hagerman, but he also reminded his employers of the work still ahead to prepare the fossils for display (Tucker communication to Peasley, 1951).

Before leaving Hagerman, the lean-faced, sun-darkened Boss sold all the Smithsonian's camp equipment. Nothing would be taken back to Washington or stored in Martin's Warehouse, a departure from years past. It seemed the Smithsonian had no further plans in Hagerman, something Mrs. Erwin understood when she had asked to cooperate on the Smithsonian's "third and final trip (Wetmore to Boss, Tucker to Erwin)."

More Than Enough Fossils

After the first three Smithsonian excavations, the United States fell into economic depression following the stock market crash of 1929. A sense of despair overtook the country, and neither President Herbert Hoover nor his administration could spur the economy or lift the nation's spirits. In 1932, voters put their faith in Franklin D. Roosevelt's promise of a new deal. As a result of Roosevelt's New Deal legislation and the leadership of his Secretary of the Interior, Harold Ickes, the National Park Service became one of the most formidable federal agencies. By the end of the 1930s, the number of areas governed by the Park Service more than doubled, permanent staff grew significantly, and the scope of its obligations greatly expanded. When Roosevelt issued Executive Order 6166 to make government more controllable, one of its provisions transferred responsibility for preservation to the Park Service; Roosevelt ceded

jurisdiction of all memorials, military cemeteries, battlefields, and numerous other sites to that agency. From then on, the guardians of Yosemite looked after the Statue of Liberty and Antietam as well. The order also opened greater opportunities for historical interpretation to the Park Service. Through interpretation of sites, park rangers could do much more than merely guide visitors; they could reveal the essence of a particular park. The Park Service had entered a new era when the Smithsonian sent Dr. C. Lewis Gazin, hired in 1932 as assistant curator of fossil mammals, on a final expedition to Hagerman (Rothman, 1986).

On May 18, 1934, Gazin left Washington by train and started the Smithsonian's fourth journey to Idaho's Snake River basin. Along the way, he stopped in Pittsburgh, Chicago, and Denver, touring the exhibit halls of local museums and visiting colleagues. George Stemburg and George Pearce met Gazin as he came off the train in Bliss on May 28. The three drove to Hagerman, bought groceries, and set up their camp near the same quarry worked by Gidley and Boss. Dick Cook remembers Gazin as "an old man with a white moustache, a white cap, white shirt, white pants, everything was white." In spite of the dig's demands, the scientist took time to set the small boy on his knee, tell him stories, and give him gum (Cook, D., 1996).

Gazin described the quarry as being in extremely poor condition, mostly owing to wind-blown sand and a cave-in of the 45 feet tall back wall worked three years previously by Boss. A substantial amount of overburden had to be removed to work the bone-bearing layer. Gazin hired Harry Hall, a local prospector and experienced miner, to blast out a large section of the back wall, and Richard Clifford used his workhorse team and Fresno (scraper) to remove debris from the quarry. While Hall and

Clifford removed tons of dirt, Gazin, Pearce, and Elmer Cook prospected other sites near the camp. In these sites, the group recovered various horse fossils, the skull of an extinct species of antelope, the skulls and lower jaws of large beaver, and the bones of a puma-like cat (Gazin communication to Wetmore, 1934).

On July 1, over thirty days after Hall and Clifford began clearing the Horse Quarry, it was ready for excavation. Gazin described the quarry in detail:

The exposed surface of the fossil bed was in plan the shape of a crescent about 55 feet between tips and about 18 feet from front to back across the widest portion. The back wall rose from both ends of the cut to a point somewhat over 50 feet higher than the middle of the bone layer. The dump in front of the quarry extended some 50 or 60 feet out from the edge of the bone layer and represented the accumulated debris of three seasons of quarrying in addition to the material moved during the present season.

Because of the high concentration of bones, large blocks of earth had to be taken up and carefully bound in burlap and plaster of paris. Though Gazin's party unearthed the remains of many different animals, the bulk of the fossils collected belonged to the extinct horse, *Equus simplicidens* (Gazin to Wetmore, 1934).

Prospecting the bluffs south of the quarry along the west side of the Snake River, the crew found a variety of other animals in the well-exposed formation. Within its sandy slopes the group encountered the widest variety of fossil remains found during the expedition, among them a shrew, a small dog about the size of a coyote, a saber-tooth cat, a large otter, beaver, muskrats, ground squirrels, rabbits, ground sloths, mastodons, and two species of camel. In addition to the mammals they found an assortment of birds, turtles, snakes, frogs and fish. Gazin specifically mentioned the skeletal remains of three peccaries uncovered by Pearce: "an adult and two young huddled together almost as in life" that looked complete (Gazin to Wetmore, 1934).

By August 5, Gazin and his group began making crates to ship all the fossils they had collected. They built 36 boxes from 820 feet of lumber, and used over 1,200 pounds of plaster of paris in order to ready the 15,000 pounds of fossils for the train ride to Washington D.C. By the 16th the bones were sent, and Gazin traveled to other locations prospecting for more material. After searching near the Bruneau River, Grand View, and Stinker Creek, he decided to end the season (Gazin to Wetmore, 1934).

Between 1934 and 1938, Gazin published articles on fossil shrews, mustelids, sloths, hares, and horses collected from the early Pliocene in Idaho. His efforts, combined with the work of Gidley and Boss, seemed to cover all points of interest in the area. Since the Smithsonian had more than enough fossils to exchange with interested museums across the country, it appeared further explorations and writings concerning the deposits at Hagerman could only be an act of repetition (McDonald, 1993).

Rediscovery

Over twenty years after the final Smithsonian excavation in 1934, the steep bluffs opposite Hagerman once again crawled with scientists. This time attention centered not on the larger specimens but on the critically important small Pliocene fauna like snails and rodents. Claude Hibbard and Dwight Taylor spent several seasons exploring the Hagerman fossil beds during the late 1950s and 1960s and collaborated on a series of journal articles. Hibbard, working for the University of Michigan, wrote on insectivores, rabbits, and rodents found from the Pliocene in Idaho. Aldred Bowler, who brought his young son Peter out to work on the Hagerman

excavations, described the paleontologist as "tall and dark, a very striking man." Dick Cook recalled Hibbard's aversion to buzzards: "The worst thing he ever studied. They would puke and stink--he said it was his worst assignment." Taylor, working for the United States Geological Survey, wrote extensively on snails. Hibbard's and Taylor's cooperative articles provided a detailed study of Pliocene and Pleistocene faunas in the western U.S. They aimed to advance the knowledge of the geologic range and stratigraphic value of many fossils and to create a more solid foundation for environmental interpretation of fossil deposits. Their work helped establish Hagerman not only as a source for horse fossils, but also as a world standard in Pliocene fauna (Hibbard, 1958).

James Reid Macdonald had long carried an ambition to reopen the Horse Quarry and collect a representation for the Natural History Museum of Los Angeles County. The opportunity eluded him until after his museum's work in the Anza-Borrego Desert, when a Hagerman collection became a "must" for comparison with the fossils excavated there. On June 1, 1966, Macdonald and Floyd Humeston left California and traveled to Idaho. They organized camp near the edge of the Snake River across from the striking falls of Thousand Springs. Unlike the Smithsonian excavators, Macdonald had a bulldozer to remove overburden and level the quarry face. After a day with the bulldozer, Macdonald, helped by University of Michigan students under the direction of Hibbard, spent a week shoveling the coarse-grained sand and clay. The group uncovered an average of a skull a day, with the other skeletal remains jumbled together in the ancient sandbar. Students found fossils in solid concretions and in soft sand, but all specimens had to be carefully handled and untangled in proper sequence to

preserve as much of the bone as possible. By the end of June their finds included 25 horse skulls, a colt skeleton, and a huge pile of miscellaneous bones representing a great many animals from the fauna, certainly more than enough to compare with the Anza-Borrego material (MacDonald, 1966).

John White, of the Idaho Natural History Museum, decided to conduct excavations in Hagerman the following year. With the help of Dave Fortsch, White began work in early June, 1967. Like the Gidley party of 1931, they had to postpone the removal of overburden due to poor weather conditions. It rained for about a week before efforts could begin in both the quarry opened by the Los Angeles County Museum and a new area west of the site. White uncovered about a dozen skulls and numerous other bones during the 19-day excavation, a fair amount for the Pocatello museum (Akersten and Thompson, 1992).

In 1988, nearly sixty years after the first Smithsonian excavation, Congress established the bluffs along the Snake River as the Hagerman Fossil Beds National Monument. Because of the area's unique variety, quantity, and quality of fossils, the government set aside 4,281 acres:

... to preserve for the benefit and enjoyment of present and future generations the outstanding paleontological sites known as the Hagerman Valley fossil sites, to provide a center for continuing paleontological research, and to provide for the display and interpretation of the scientific specimens uncovered at such sites."

More than a hundred years after Yellowstone, the monument's birth was protested by farmers who believed agriculture more important than fossils. Preservation still battled use (Runte, 1979).

A Cultural Identity

Conservation emerged as a young nation's means for historical significance. It drove the creation of national parks to satisfy American longing for heritage. Historian Alfred Runte (1979) wrote:

When national parks were first established, protection of the "environment" as now defined was the least of preservationists' aims. Rather America's incentive for the national park idea lay in the persistence of a painfully felt desire for time-honored traditions in the United States. For decades the nation had suffered the embarrassment of a dearth of recognized cultural achievements. Unlike established European countries, which traced their origins far back into antiquity, the United States lacked a long artistic and literary heritage. The absence of reminders of a human past, including castles, ancient ruins, and cathedrals on the landscape, further alienated American intellectuals from a cultural identity.

Americans adopted the West's wilderness as a surrogate for historical achievement. Ageless wonderlands became the observable symbol of permanence and stability for the new nation, and science likewise lent itself to America's developing national pride. President Thomas Jefferson, angered by French claims that the animals of the New World were feeble and small, sent the skeleton of an enormous moose to France to demonstrate the magnitude and strength of wild American beasts. Natural science and natural history fed the fledgling national ego (Runte, 1979).

Hagerman's fossil quarries are significant for their diverse and abundant material from the late Pliocene, but also because the Smithsonian's ventures in Idaho reflect the conservationist mood that swept America in the late 19th and 20th

centuries. That strong sentiment led to the creation of forty-eight national parks, and numerous monuments, preserves, lakeshores, rivers, seashores, historic sites, memorials, military parks, battlefield parks, historical parks, recreation areas, and parkways. The goal, according to public-land theorist Joseph Sax, was "... to preserve the spectacular sites for the average citizen by holding them as public places to be enjoyed by all." But preservation has also made what Runte calls a "pragmatic alliance" with use (Runte, 1979). At Hagerman, paleontological discovery evolved into preservation of past environments. Its management of natural resources makes cultural ones. The story of the excavations there does more than illustrate scientific trends or explain procedures for fossil preservation. It unearthed a lost world that helped create a new one.

CONCLUSIONS

With so many unanswered questions, remaining archaeological and historical efforts should continue on the Monument. A research plan needs to be developed as the next step, taking into account the issues raised by this overview to help establish priorities.

These are summarized as follows:

1. Abundant stemmed-point sites directly south of the Monument warrant careful study for possible sites of this era on the Monument.
2. A circular-shaped pit house typical from 4660 to 1300 B.P. may have been located on the Monument and needs test excavation.
3. More rectangular and slightly deeper houses of Fremont era are known to occur in isolated settings near rapids on the Fossil Beds side of the river and may occur on the Monument.
4. Monument sites have the potential to provide season of use, economic, and temporal

data that is important to understanding how, when and why the vicinity of Upper and Lower Salmon Falls developed into a major fishing location.

5. Significant sites may be submerged by the reservoir, necessitating an underwater survey along the Monument and adjacent to the newly acquired research center and museum property.
6. The rim rock along the north Monument needs to be examined to see if it contains burial sites related to people using Lower Salmon Falls.
7. Southern visitors early in the fishing season might have made temporary camps established on the Fossil Beds side of the river to wait out high water.
8. No biological examination has been done of the residue left on milling items or search for other such data (e.g., coprolites).
9. It is possible that sites on the Monument may provide information as to the appearance, effect, and spread of the equestrian culture in this study area.
10. A more focused ethnographic pattern needs to be discerned from surviving tribal members.
11. There are possible Oregon Trail ruts identified by experts at Brigham Young University from aerial photographs that have not yet been evaluated. A field verification process is necessary.
12. Oral histories indicate there are significant historic homestead resources, and possibly hydraulic mining sites, on the Monument so excavations are critically needed to protect these and to recover more information from remaining artifacts.
13. A Cultural Landscape Inventory and preparation for the National Register are needed.

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