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Cover Photo: Map of 10-GG-1 Excavation.

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ARTICLES AND REPORTS

A SUMMARY REPORT OF 1991 AND 1992 ARCHAEOLOGICAL EXCAVATIONS AT THE BLISS SITE (10-GG-1), MIDDLE SNAKE RIVER, IDAHO

Mark G. Plew and Russell T. Gould

INTRODUCTION

The Bliss site (10-GG-1) was originally investigated as part of the cultural resources evaluation of the Wiley Hydroelectric Project. The investigation included the excavation of 39 1 x 1 and 1 x 2 meter test units, six trenches, and two horizontal block areas. Excavations produced evidence of four discreet activity areas dating between 1140 B.P. and 250 B.P. (Plew 1981:158). Though radiometric dates placed the components within the Late Archaic, projectile point types including Humboldt and Northern Side-Notched were present in limited numbers. This suggested that while Late Archaic peoples may have visited the locality on numerous occasions, that the earliest use of the area dated to the Early Archaic. It was not clear that the components were directly associated and were thought to represent different groups visiting the locations at separate intervals during the past several thousands of years. The four components produced a wide array of artifactual and ecofactual materials. Notable are an elaborate chipped stone assemblage and a faunal assemblage (N=60,000+) containing bison, deer and salmon. Also of interest was the absence of cultural features including hearths. Of particular interest was component Area A1 dated into the late 17th or early 18th century, a period little known on the Middle Snake River.

During the summers of 1991 and 1992, Boise State University conducted its Archaeological Field School at the protohistoric component at 10-GG-1. We were interested in assessing variation in the technological organization of the assemblages as a basis for determining whether variations might reflect expedient manufacturing strategies in the context of Binford's (1980) collector/forager continuum and whether the assemblages would exhibit any variance from Late Archaic locations in the area. Additionally, we were concerned with the nature and extent of fishing activity at the site. Was fishing a primary activity/focus? Were there multiple uses of the site, and were these associated with the use of different resources at different seasons by groups of hunter-gatherers using different strategies?

SITE DESCRIPTION

Site 10-GG-1 is located on the north side of the Snake River Canyon just below the modern town of Bliss, Idaho (see Figure 1). Situated on a large terrace just above the Snake River, the site, consisting of four components, lies just west of the county bridge and within a designated wildlife management area. Covering an area of ca. 3000 square meters, the terrace, which has been grazed, is presently covered by short and scattered stands of sagebrush (*Artimisia tridentata*) and various exotics. Willows are scattered along the river front and adjacent to a marsh on the north side of the terrace, which is cross-cut by a road running east-west. Test excavations conducted in 1980 indicated the formation of dunes on the western periphery of the site. The dune deposits, which accrued to more than a meter in depth in some areas, have obliterated the evidences of material culture noted by Tuohy and Hulse in 1959. More recently, the terrace has been impacted by redirection of the river channel associated with massive earth slides just east of the site area.

FIELD METHODS

A secondary site datum point was established from the permanent datum located on the north side of the terrace along the perimeter of the marsh in 1980. From the secondary datum, from which all measurements for the 1991 and 1992 excavations were taken, we were able to relocate Area A1 and the test pit excavated in 1980. Using a two-meter grid system, a site map was produced prior to excavation (see Figure 2). Since no physical evidence was observed on the surface, no preliminary surface collections were made. Excavations employed standard methods of subsurface data recovery, including shovel shaving, hand-trowelling, and auguring. All sediments were passed through 1/8-inch hardware mesh, with artifacts and ecofacts bagged separately by unit and level. The recovery methods for flotation and sediments samples were standardized throughout the excavation. Over the course of two field seasons, 62 square meters were excavated to a relative depth of one meter below datum—the maximum extent of cultural deposits (see Figure 3).

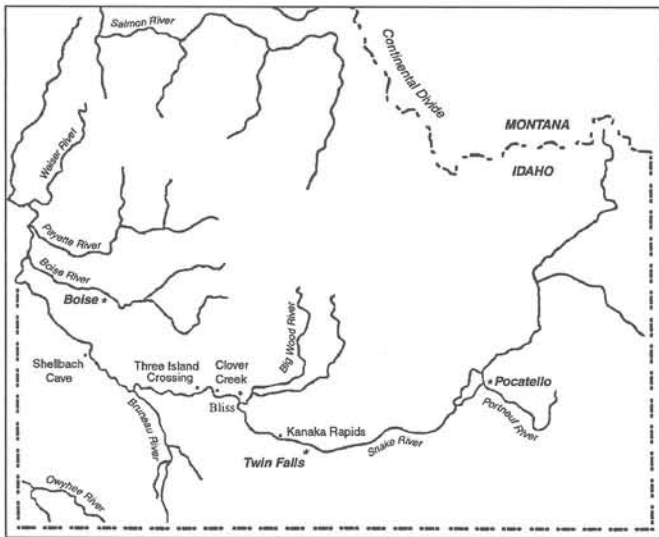


Figure 1. Map showing the general location of the Bliss site.

NATURE OF THE DEPOSITS

The deposits at Area A1, 10-GG-1, consist of extremely sandy sediments. The deposit contains some silt, no clay and is relatively uniform throughout with sediment color ranging from light brown to grayish brown to dark brown. The upper 50 cm of the deposit exhibits evidence of some cross-bedding and much disturbance. The deeper portions of the deposit are less disturbed and somewhat more compacted. Cultural materials are scattered throughout the deposit to a depth of approximately

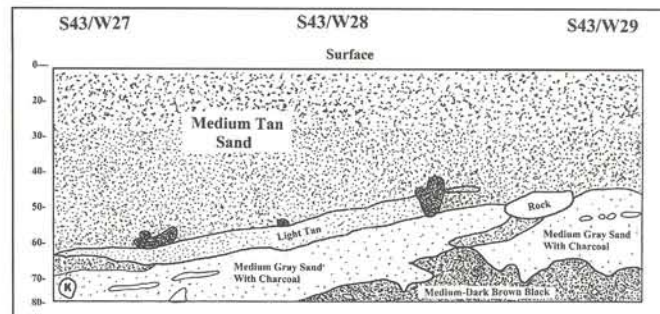


Figure 3. South profile of unit S42-43/W27-29.

one meter below surface with material concentration variable across the site area. A discernable charcoal stained cultural stratum is situated between 20 and 50 cm below the surface. Although disturbed by rodent activity, the stratum contains notable concentrations of cultural and ecofactual items.

FEATURES AND ASSOCIATED RADIOCARBON DATES

As noted, the 1980 excavations at 10-GG-1 failed to document the presence of significant cultural features. While this may reflect sampling, the 1991 and 1992 field seasons did record cultural features of some magnitude. Some 10 clearly definable features were excavated. These included charcoal-stained areas and areas of material and ecofactual concentrations. The 1991 excavations encountered two important features designated Features 4 and 5. Feature 4 is a large fire hearth appearing at approximately 90 cm below the surface in

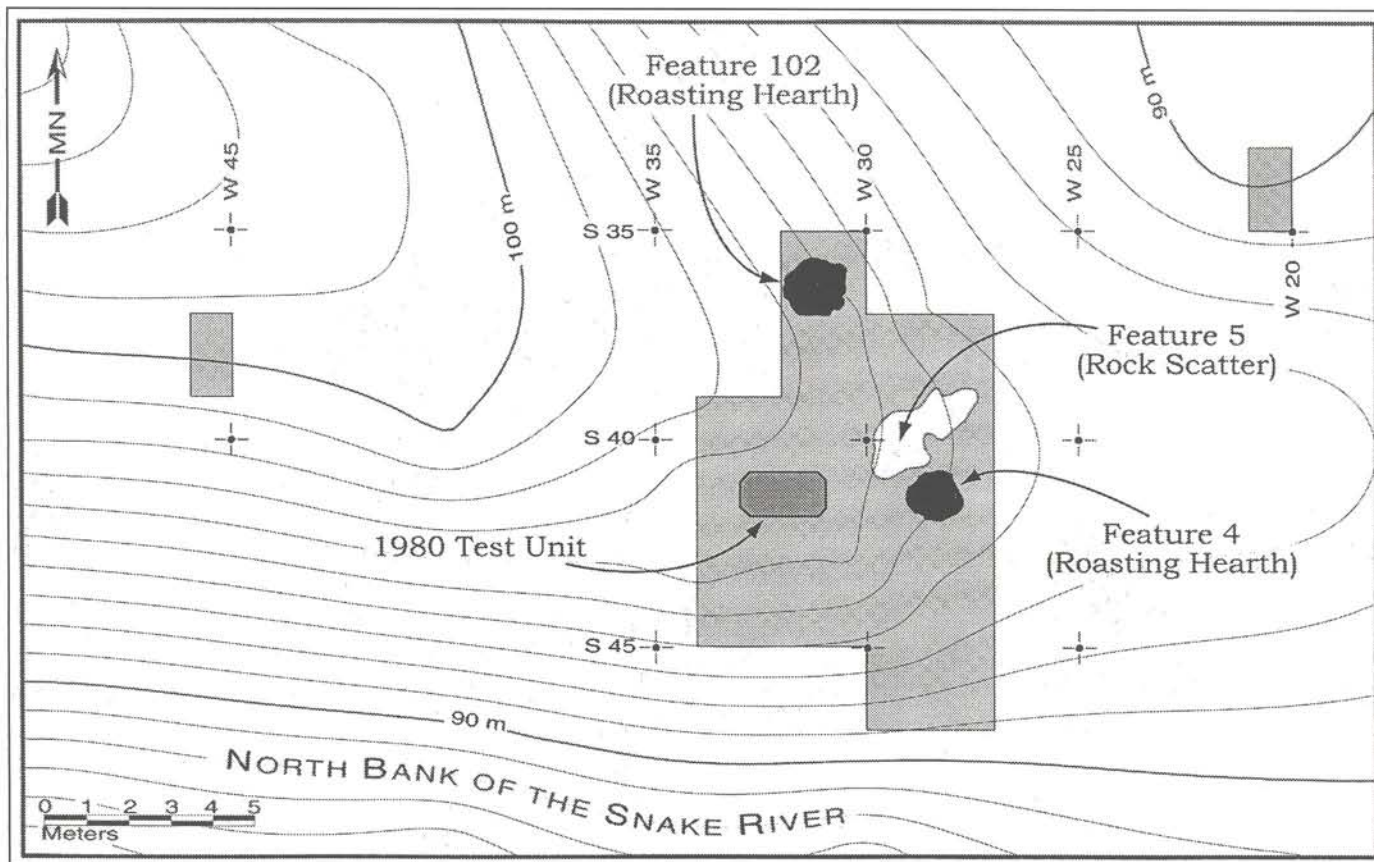


Figure 2. Plan map showing excavation at Bliss.

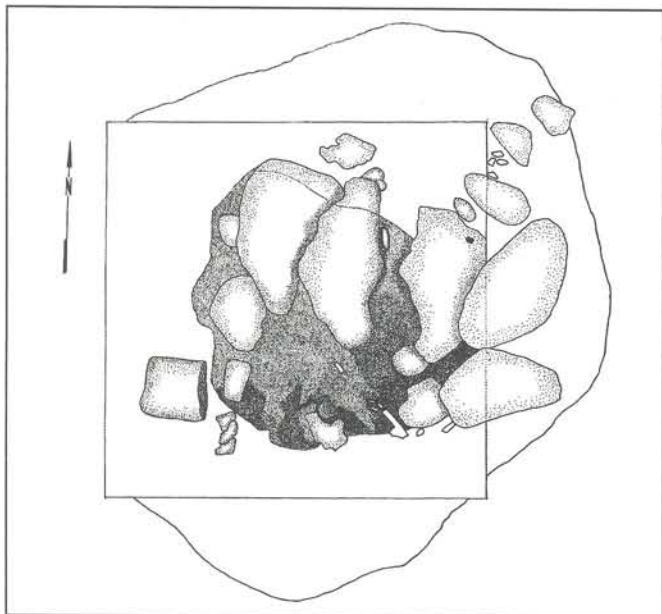


Figure 4. Plan view of Feature 4, 90 cm below surface. Exterior line marks extent of charcoal stain. Unit S41 W29.

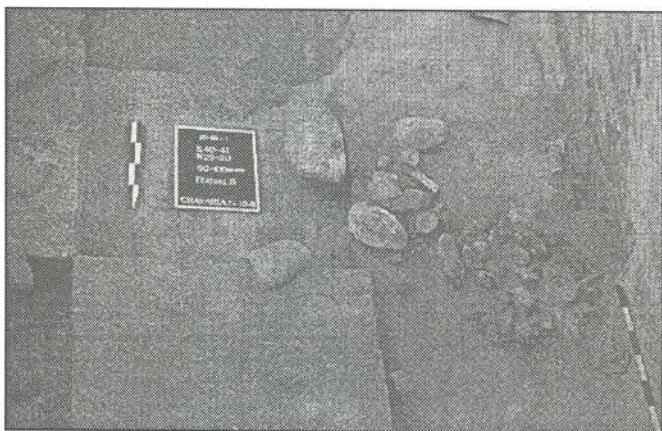


Figure 5. Photograph showing Feature 5, S40-41, W20-30, 50-100 cm.

Unit S41 W27 extending 130 cm below the surface (see Figure 4), and measures roughly 1 x 1.2 meters. The interior of the hearth contains large water-worn stones and artifactual materials including edge-battered cobbles and groundstone, bone awls and faunal remains. Around the exterior of the feature a number of large stones appear to have been removed from the hearth, which had been cleared of debris. Some two meters west of Feature 4, excavations during 1992 identified a large midden concentration reflective of the dense concentration of refuse items (N=22,000) encountered during the excavation of the 1980 test pit. It appears now that the refuse represents one or multiple clearings of the hearth contents. A radiocarbon date from Feature 4 establishes its age at 290+/-50 B.P. (TX7465).

A second feature, Feature 5, is a rock-lined fire hearth located approximately one meter west of Feature 4 (see Figure 5, Figure 6). This feature consists of a circular configuration of some twenty river cobbles measuring 10-15 cm in length. Charcoal fragments are scattered about the hearth area with a number of larger rocks situ-

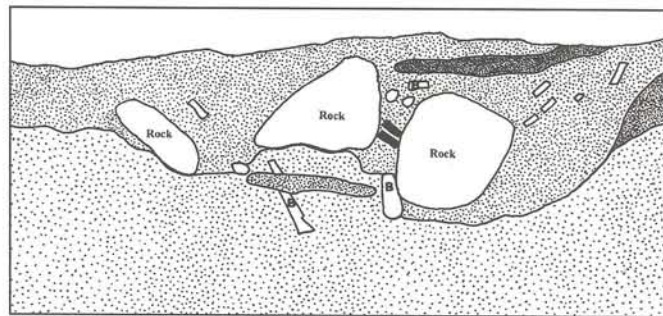


Figure 6. Cross section of Feature 5.

ated on the southeastern margin of the feature. These stones appear to have been removed from the adjacent Feature 4. The feature extends a few centimeters below the stones. There is no evidence that a basin was excavated below the rock configuration. Surrounding the perimeter of the feature are a pestle, edge-battered cobble and faunal remains including a fragment of a deer bone and some ten articulated salmon vertebrae. The feature was radiocarbon dated at 290+/-50 B.P. (TX 7464).

Though not radiocarbon dated, Feature 102, recorded during the 1992 field season, was a fire hearth having relatively the same dimensions as Feature 4. The notable difference was the absence of rock lining. The feature, which was excavated to a depth of 30 cm, is a broad basin-shaped charcoal and debris-filled feature (see Figure 7).

The excavation of Features 4 and 5 and 102 is notable since such features are uncommon in southwestern Idaho. The size, depth and rock lining of Feature 4 are notable and suggest that the pit may have served as a roasting pit. The stone configuration, which characterizes Feature 5, is unique in the area. It appears that Feature 4 was used repeatedly or for an extended period of time since hearth refuse is located adjacent to the feature. The radiocarbon dates reaffirm the 1980 assess-

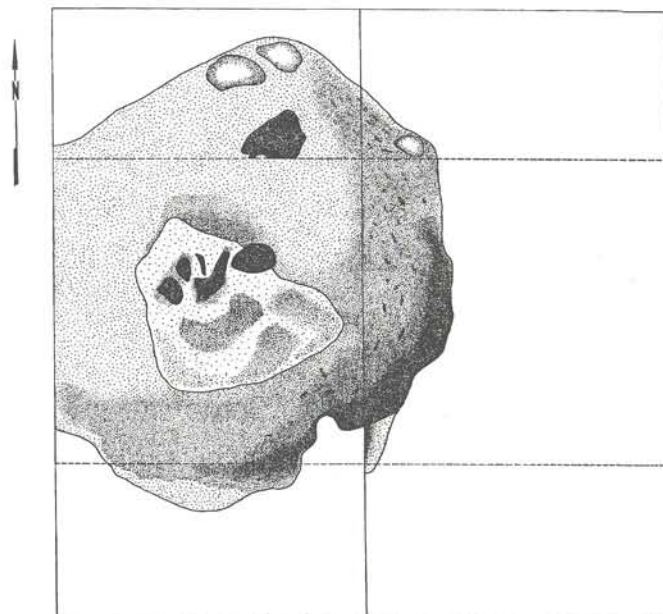


Figure 7. Plan map of Feature 102.

ment, which establishes a late and possible 17th or perhaps early 18th century date. Fragments of worked early 19th century bottle glass in the vicinity of the features seem to suggest that the site was occupied into the 19th century.

MATERIAL CULTURE

Description of the material culture recovered from excavations of Area A1, 10-GG-1, is basic to cultural historical interpretation of the region. This section discusses the lithic, ceramic, and bone assemblages from 10-GG-1, providing distribution and relative frequencies of each artifact class. The 1,400 plus artifacts recovered from 10-GG-1 were initially described using Winter's (1969) functional classification system that categorizes assemblages into functionally discreet units.

WEAPONS

Projectile Points

A total of 395 projectile points and point fragments (N=93) were recovered. Four major projectile point types were recovered from 10-GG-1. The predominate forms include Desert Side-Notched (N=151, 38%) and Cottonwood (N=46, 12%), though Bliss (N=7), Rose Spring Corner-Notched (N=6) and Eastgate Expanding Stem (N=4) are present.

Desert Side-Notched

General sub-types are most common, though the Sierra sub-type is represented. The specimens range between 2.9-1.5L x 1.5-1.0W x 0.2-0.3T in size and are produced mainly from obsidian, followed in order of preference by cryptocrystalline materials. Flaking patterns are irregular.

Rose Spring Side-Notched (N=6) points having shallow side notches sloping into small stems range between 2.4-1.9L x 1.4 x 1.1 x 0.5W x 0.3T in size. Three points are made from obsidian and three from cryptocrystalline materials. Flaking patterns are irregular. All specimens are incomplete.

Cottonwood Triangular points constitute the second highest frequency of projectiles (N=46). Of these the majority are made from obsidian, while only a few are made from cryptocrystalline. The size range for Cottonwood series projectiles is 2.4L (complete specimen) x 2.0-1.0W x 0.5-0.2T. Generally, the Cottonwood series points recovered from the 1991 investigation at Area A1 contrast to those found in 1980, being somewhat shorter and broader at the base. The flaking patterns are highly irregular with the majority of the specimens being incomplete.

Bliss points (N=7) fall within a size range of 2.9-1.2L x 0.8-0.7W x 0.5-0.4T though a single item is nearly a third longer than the other artifacts. The bipointed, Bliss points are typical of the range in form and size of Bliss points previously described, though widths are slightly smaller (see Plew and Woods 1985). Most artifacts are made of cryptocrystalline (see Figures 8, 9).

DOMESTIC ITEMS

(see Figure 10)

Pestles

Five pestle fragments and a single complete basalt pestle were recovered from Area A1. The complete artifact

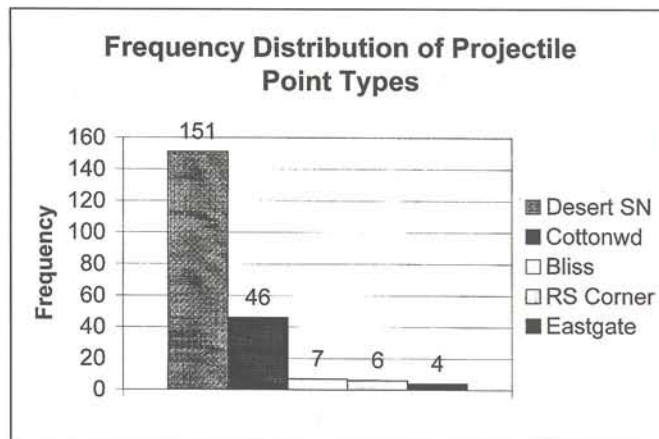


Figure 8. Frequency distribution of projectile point types.

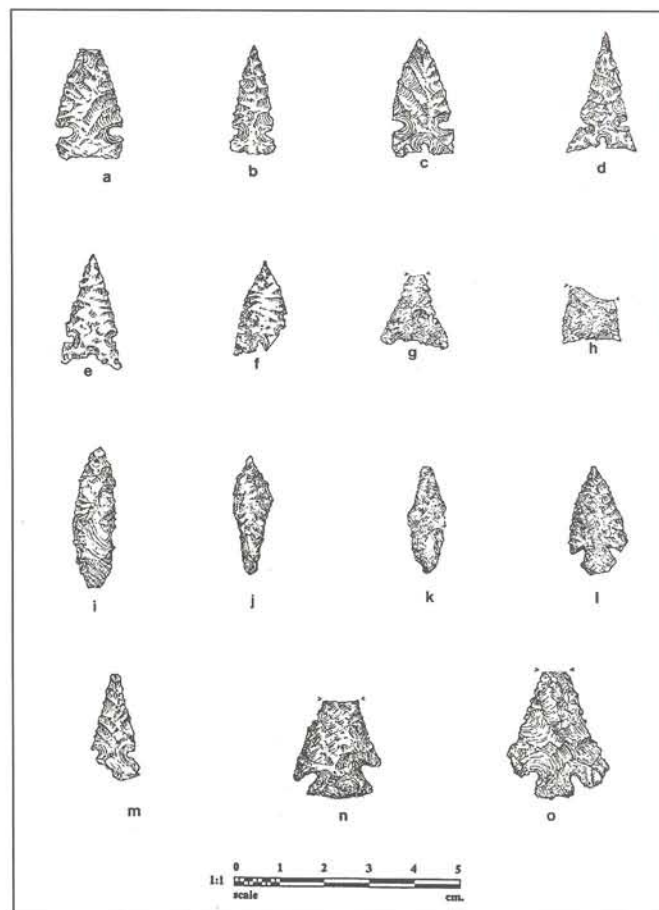


Figure 9. Projectile Points: a-f, Desert Side-Notched; g-h, Cottonwood; i-k, Bliss; l, Rose Spring Corner-Notched; m, Rose Spring Side-Notched; n-o, Eastgate.

is bell-shaped, measures 17L x 9.9W x 5.7T, and exhibits distal/proximal modification. The incomplete specimens include three midsections and a proximal end. In cross-section, one is rectangular, two are triangular, and the single specimen is elliptical (see Pavesic and Meatee 1980: 70; Plew 1981: 122). On the largest of the specimens the distal end measures 9.1L x 6.2W x 5.1T (cm) and is stained with red ochre. Three items are made of a microcrystalline material while a fourth is basalt. The microcrystalline specimens are highly polished.

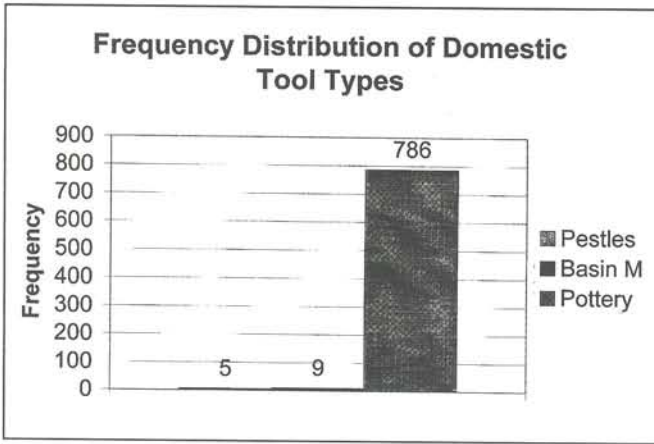


Figure 10. Frequency distribution of domestic tool types.

Basin Mortars

Specimens are manufactured from both irregular and oval-shaped stones (N=9). The average size range is 30L x 25W x 22T. Basin diameters average 1-12 centimeters (see Pavesic and Meatte 1980: 70-71; Plew 1981:122). A single specimen has a very shallow basin.

Pottery

Pottery (N=786) constitutes the single largest artifact category. Sherds are typically thick and variable in both quality of construction and surface treatment. Most sherds represent Intermountain or Shoshoni splay-walled "flower-pot" forms. Rim form is typically flaring to straight or vertical with horizontally flattened or rounded lips. A few specimens are slightly incurving. Construction appears to be coiling and scraping with sand tempering most common. Core and surface color are highly variable, ranging from black to reddish brown and light brown. Surface finish is dull to slightly polished, with a single sherd having decoration. This consists of three small, incised lines running parallel to the rim of a small sherd measuring 5 cm in width. Wall thicknesses range between 0.4 and 0.2 cm. Three bases and one large vessel wall section measuring approximately 15 cm in length contrast with the majority of sherds, which measure no more than 2-5 centimeters in width. In general, the pottery conforms to the variability described by Plew and Bennick (1990) for southwestern Idaho.

GENERAL UTILITY TOOLS

(see Figure 11)

Knives

A total of fourteen (N=14) bifacial knives were recovered. All but two specimens are incomplete. Only two items are triangular to leaf-shaped bifaces, which are bi-convex in cross-section. The size range for complete specimens is 6.3-4.8L x 2.4-2.0W x 0.8-0.6T cm. Specimens have slightly constricting stems, one with a straight base and another with a rounded base. Two specimens have simple rounded bases. Three additional specimens are too fragmentary to determine basal form. The non-triangular blade forms include a large core reduction flake modified bifacially along both lateral margins and a "seam" knife bifacially modified into a crescent form. Seven knives are made from cryptocryst-

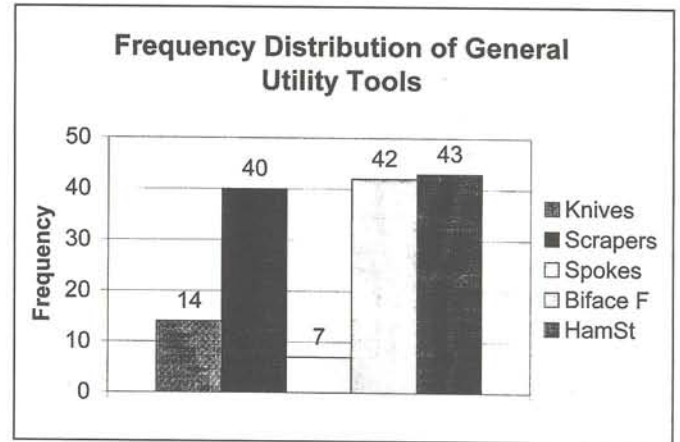


Figure 11. Frequency distribution of general utility tools.

talline materials while one each is manufactured from obsidian and basalt (see Figure 12 a-c).

Scrapers

Scrapers consist of end (N=12), side scrapers (N=23) and end-and-side scrapers (N=5). One end scraper might be considered a steep end scraper (edge angle=45°). Eight scraper fragments cannot be classified. The end scrapers are manufactured from relatively irregular flakes, the majority (N=8) of which are large reduction flakes and the remainder thinning flakes. All are plano-convex. The size range is 4.3-1.4L x 4.3-1.4W x 1.7-0.4T cm. The majority of scrapers are made from cryptocrystalline (see Figure 12 d-e).

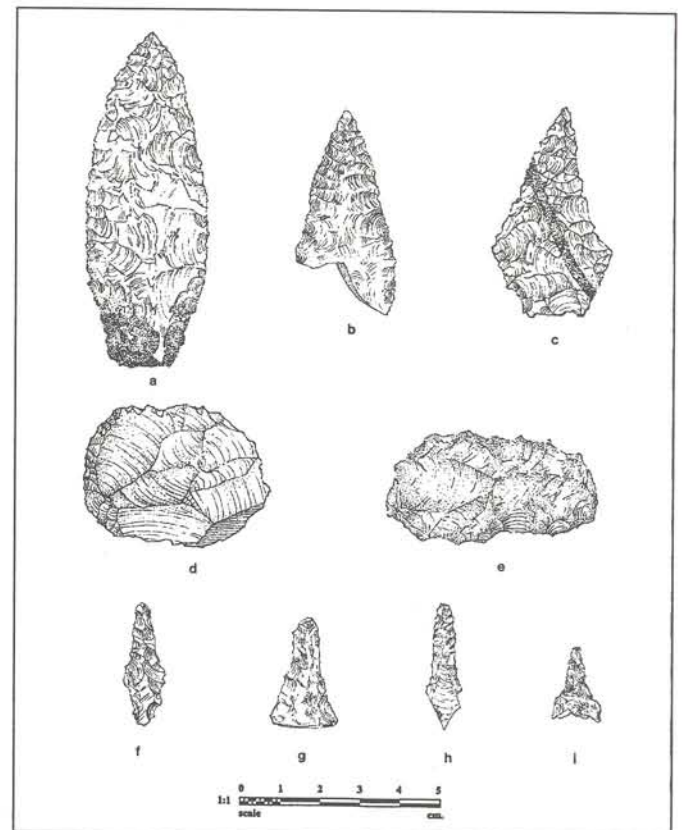


Figure 12. General Utility Tools: a-c, Knives; d-e, Scrapers; f-i, Perforators.

Spokeshaves

Seven spokeshaves were produced from exhausted cores.

Bifaces/Fragments

A total of forty-two bifaces and biface fragments were recovered. All are biconvex and represent a range in the stages of production. Material type includes obsidian and cryptocrystalline (see Figure 13).

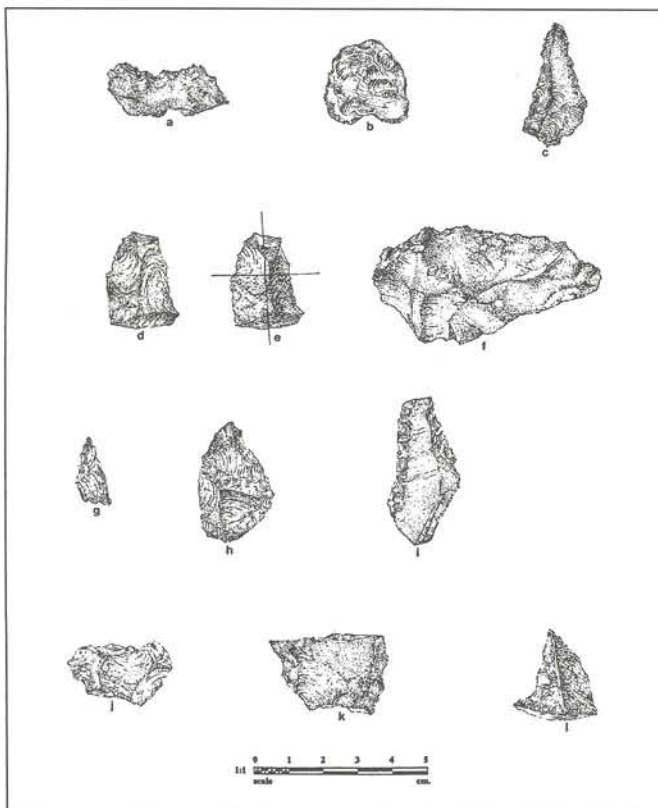


Figure 13. General Utility Tools: a-l, Biface Fragments.

Modified Flakes

Flakes and shatter fragments exhibit minor unofficial modification (N=2).

Hammerstones

Forty-three (N=43) hammerstones range in size between 13.5-5.2L x 7.1-3.0W x 3.6-1.9T. Specimen forms are irregular to elongate, most exhibiting distal modification. Four hammerstones exhibit proximal/distal modification.

Large Hammerstones

Three large hammerstone types include seven irregularly shaped cobbles, which exhibit distal/proximal wear. These artifacts may have been used as multipurpose tools. The size range of 17-13L x 10.5-7.2W x 8.4-4.5T cm suggests that some items would have been useful for lithic reduction only in early core reduction stages. These artifacts may well have been used to process bone and ochre.

Choppers

Three large modified choppers were recovered. One specimen is a round and bifacial cobble chopper made of quartzite and measuring 9.8L x 8.8W x 5.0T. Two additional specimens are made from flat objects; one is basalt and the other a microcrystalline material. The latter items are unifacial and range in size between 13-11L x 6.2-4.4W x 3.4-1.6T.

Modified Pebbles

Two small round and relatively thin quartzite pebbles exhibit minor edge modification in the form of grinding. The size range is 5.6-5.3L x 4.2-3.9W x 1.1-0.7T cm. One pebble has a small flake removed from one end. This item resembles the "net sinkers" found on the Plateau.

FABRICATION AND PROCESSING TOOLS

(see Figure 14)

Perforators/Drills

Two distinct drill forms are characterized. The first form consists of drills with relatively large, rounded bases. Two are cryptocrystalline, a third obsidian. All are made from large biface reduction flakes. The drill tip on one specimen is extremely thin and biconvex in cross-section. The other specimens have plano-convex tips. The size range is 5.0-2.8L x 3.5-1.5W x 1.2-0.4T. A second type consists of a single basalt drill with a slightly expanding, parallel-sided straight base and bi-convex base. The latter item is 2.9L x 1.0W x 0.4T and appears to be reworked from a larger form. Six drill tips were recovered. Six are biconvex while a single specimen is plano-convex. Five are made from cryptocrystalline (see Plew 1981:112).

Cores

Thirty-one irregular cores exhibiting minimal cortex were recovered. Most are nearly exhausted. One large basalt cobble exhibits extensive cortex. The latter specimen measures 9.5L x 8.4W x 7.8T. The range of the other specimens is 6.8-2.5L x 3.9-1.9W x 3.4-1.2T cm.

Bone Awls

The bone awls (N=10) consist of two types, those relatively large, thick and rounded specimens and those

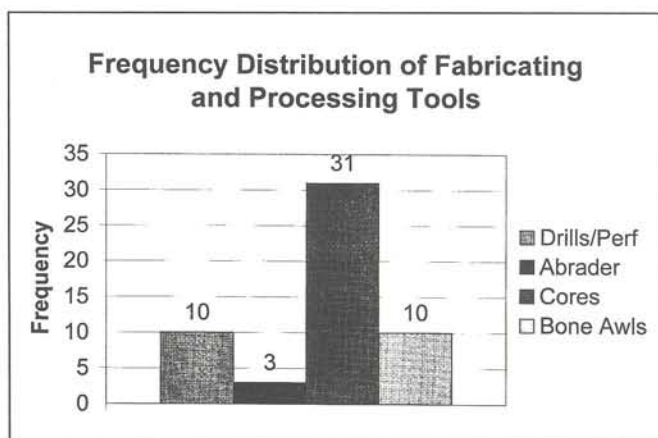


Figure 14. Frequency Distribution of Fabricating and Processing Tools.

having been worked to very fine points. The larger specimens range to 0.8 cm in diameter near the tips, which are blunt. All but two exhibit evidence of fire hardening. The tips of the thin, fine-pointed specimens are approximately 0.2 cm in diameter. None of the specimens are complete (see Plew 1981:127; Plew, Pavesic and Davis 1987:68-69; see Figure 15, a-f).

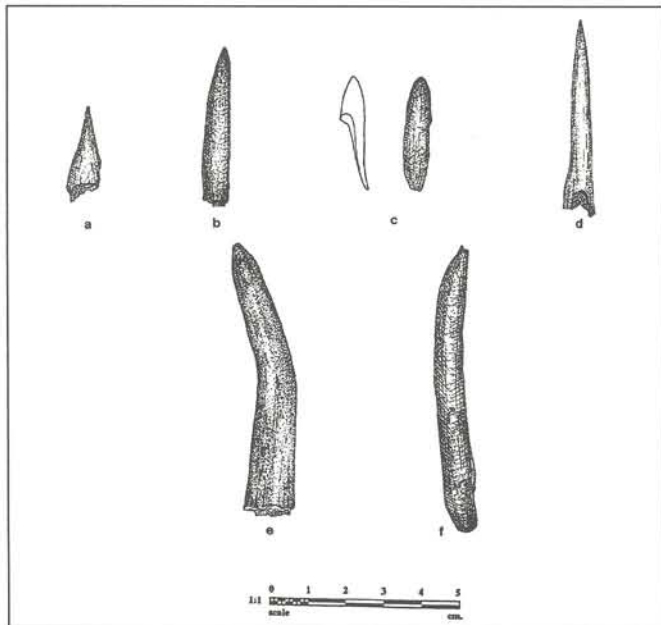


Figure 15. a-f, Bone Awls.

Abraders

Abraders consist of two types. Two specimens of coarse pumice-like material have broad open grooves—in one instance measuring 1.4 cm in diameter. One specimen has grooves on dorsal and ventral surfaces (684). The items measure 6.0L x 6.1-4.9W x 3.2-1.9 T. A second type consists of a single specimen made from a microcrystalline material having two small grooves running parallel across its surface. The grooves measure 0.2 cm in diameter.

CEREMONIAL ITEMS

Red Ochre

A number of small specimens of red ochre (N=90) were recovered in the excavations. As noted in the description of groundstone, red ochre staining was evident on one pestle and mortar.

ORNAMENTAL ITEMS

(see Figure 16)

Cut Bone

These specimens have been cut or prepared for cutting in bone bead production. These include 54 small mammal ulna and tibia specimens (largely rabbit), cut just above the articulating surfaces (see Plew 1981:132, Fig. 31). Additional 13 specimens are small mammal long bones, which have been cut into sections. One specimen, measuring 0.7 cm in length, has two grooves cut around the diaphysis.

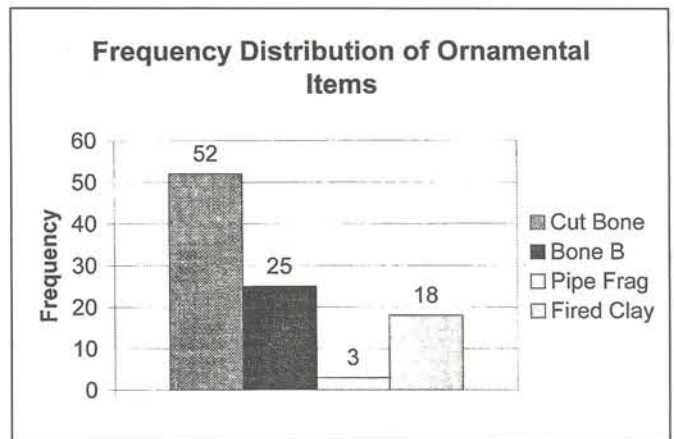


Figure 16. Frequency Distribution of Ornamental Items.

Bone Beads

Cylindrical beads were cut from small mammal or bird bones (N=25). Beads range in size between 1.0-0.7 in length and 0.7-0.4 in diameter. All specimens exhibit high polish. Five specimens appear to have been fire hardened prior to polishing.

Pipe Fragments

Six pipe fragments were recovered. A small red sandstone pipe bowl fragment measures 1.3L x 1.1W x 0.5T, and has a 2 mm lip.

Fired Clay Objects

Two fired clay "cigar-shaped" objects (see Gruhn 1961 for similar items) are approximately 1.5 cm in diameter. The longest is 4.0 cm. Both have a dark gray core and surface color and are sand tempered. Two additional objects have been purposely formed. One is a light tan, three-pronged object. One of the pointed projections, with the ends slightly curving, has been snapped off. The item measures 4.4L x 1.9W x 0.9T cm. The other object is dark gray and has the surface appearance of the "cigar-shaped" object except that one end has been flattened and bent to form a right angle. Object measures 2.1L x 1.8W x 1.1T (see Plew and Woods 1985).

Unformed Fired Clay Fragments

Sixteen fired clay fragments having grass impressions were recovered. The largest of the specimens is 4.0L x 3.1W x 1.0T (see Plew and Woods 1985).

Bifacially Flaked Historic Glass Fragments

Six bifacially worked 19th century historic bottle glass fragments were recovered. The fragments include one scraper (see Figure 17).

ASSEMBLAGE ANALYSIS SUMMARY

Analysis of the Bliss assemblage suggests considerable richness in artifact types but a degree of unevenness in the distribution of certain artifact types and categories. Though twenty-five artifact types are represented in the assemblage, the total number of artifacts (N=1482) consists largely of projectile points (N=488) and pottery sherds (N=786)—weighting the assemblage heavily toward functional categories of Domestic Tools (53%) and

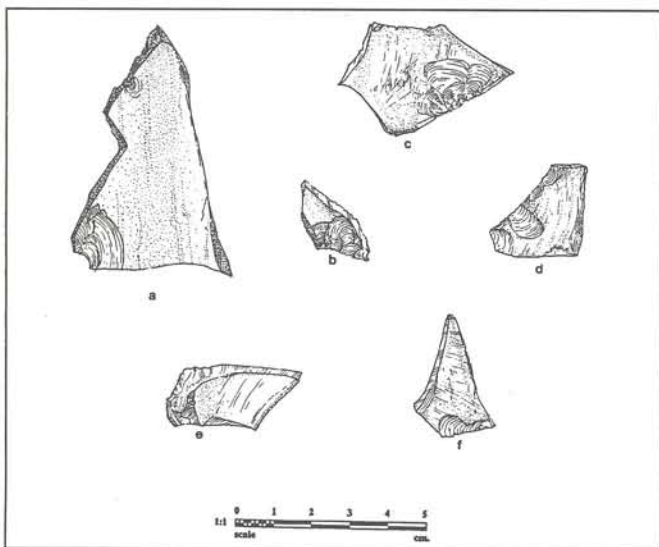


Figure 17. a-f, Historic worked glass fragments.

Weapons (33%). General Utility Tools (12%) suggest that extensive processing activities occurred (see Figure 18). The predominance of ceramics—constituting nearly one-half of the 10-GG-1 assemblage—appears to be a factor of breakage. The presence of pottery, however, even if only four or five ceramic vessels—may be more significant in determining site utilization than the presence of a large number of projectiles. We argue, on the basis of extensive carbon accretions on the interior walls of some sherds, that there were differing uses of ceramic

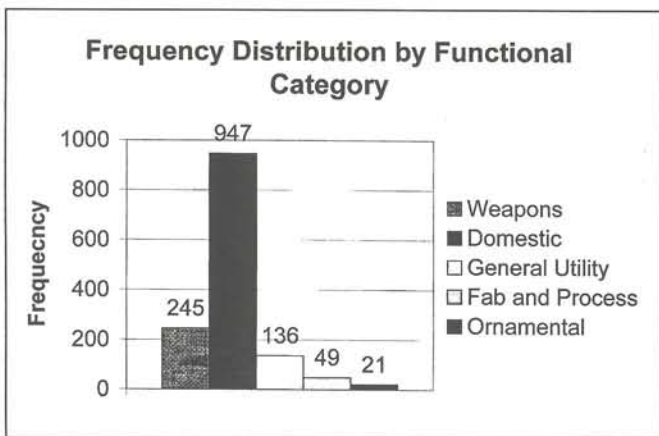


Figure 18. Frequency distribution by functional category.

vessels for boiling and parching. The presence of groundstone pestles (N=5) and mortars (N=9) suggest considerable processing. Though plant processing may be assumed and associated with preparation for storage as is indicated by ceramics, groundstone artifacts could have been used to process bone. One of the pestle exhibits evidence of red ochre. The extensive presence of cut bone indicates the manufacture of bone artifacts—particularly beads. A large number of battered cobbles may be associated with the disarticulation and shattering of bone. The manufacture of fired clay artifacts is of interest as they occur infrequently in southern Idaho sites. One of the most interesting discoveries was the recovery

of worked 19th century bottle glass. In general, the assemblage from Bliss includes, with exceptions, a common range of artifact types and suggests the range of activities present at a number of Late Archaic Middle Snake River sites (see Gould and Plew 1996).

LITHIC DEBITAGE ANALYSIS

Preliminary investigation of the chipped-stone assemblages shows little evidence of a biface reduction strategy. There are few bifaces and a limited collection of debitage. Using Magne's (1985) method of classifying debris, it does not appear that any significant manufacturing activity occurred at the site. The small size of debitage may reflect use of small nodules and cores in producing expedient tools. Debitage was examined and observations made regarding the number of platform and dorsal scars and percentage of cortex on each complete flake (see Table 1). The late stage debitage, which consists largely of local materials, may reflect, as noted, expedient tool production, particularly from basalt and CCS. Tools produced from obsidian represent items which appear to have been transported to the locality. XFR analysis being conducted on samples from 10-GG-1 should assist in addressing this issue and the number of occupational episodes.

TABLE 1.
LITHIC DEBRIS ATTRIBUTES AND
RAW MATERIAL TOTALS

	Basalt	CCS	Obsidian
Dorsal Scars 1	68	335	637
Dorsal Scars 2	114	518	1118
Dorsal Scars 3	264	970	2859
Platform Scars 1	299	1190	3267
Platform Scars 2	68	310	641
Platform Scars 3	61	316	669
Cortex 0%	396	1698	4359
Cortex 1-25%	33	103	168
Cortex 26-50%	11	16	41
Cortex 51-75%	4	6	20
Cortex 76-99%	3	7	17
Cortex 100%	3	3	12
Shatter	1687	7235	16346

FAUNAL REMAINS

Faunal remains were analyzed by Steven Churchill using comparative collections at the University of New Mexico. In contrast to many Snake River sites, few invertebrate remains—primarily fragmented mussels, (N=485) were recovered. Mussel fragments were not directly associated with features and are thought to be largely naturally deposited. Vertebrate faunal remains are primarily of large to medium sized mammals, particularly artiodactyl or deer-sized species. Species identified include deer, antelope, pronghorn, elk, rabbit, coyote, gray wolf, black bear and a range of small to medium sized birds and amphibians and fish (see Table 2).

Common Name	Latin Name	NISP	%
Large mammal	Large mammal (antelope-bison size)	562	24.12%
Medium artiodactyl	Medium artiodactyl (deer size)	506	21.72%
Mammal, indeterminate size	Mammal (indeterminate size)	500	21.46%
Deer	<i>Odocoileus sp.</i>	351	15.06%
Medium mammal	Medium mammal (jackrabbit-wolf size)	122	5.24%
<i>Canis sp.</i>	<i>Canis sp.</i> (dog, coyote, wolf)	72	3.09%
Pronghorn	<i>Antilocapra americana</i>	55	2.36%
Gray wolf	<i>Canis lupus</i>	54	2.32%
Small mammal	Small mammal (mouse-prairie dog size)	21	0.90%
Jackrabbit	<i>Lepus sp.</i>	20	0.86%
Mule deer	<i>Odocoileus hemionus</i>	19	0.82%
Artiodactyl	Order Artiodactyla	12	0.52%
Elk	<i>Cervus canadensis</i>	10	0.43%
Cottontail rabbit	<i>Sylvilagus sp.</i>	3	0.13%
Cow/bison	<i>Bos/Bison (indeterminate)</i>	3	0.13%
Small artiodactyl	Small artiodactyl (antelope-sheep size)	3	0.13%
Canid	Family Canidae (dog, coyote, fox, wolf)	2	0.09%
Coyote	<i>Canis latrans</i>	2	0.09%
Large artiodactyl	Large artiodactyl (elk or bison size)	2	0.09%
Medium bird	Medium bird	2	0.09%
Amphibian	Amphibian	1	0.04%
Black bear	<i>Ursus americanus</i>	1	0.04%
Carnivore	Order Carnivora	1	0.04%
Cervid	Family Cervidae	1	0.04%
Large bird	Large bird	1	0.04%
Large carnivore	Large carnivore (canid-bear size)	1	0.04%
Rabbit	Family Leporidae	1	0.04%
Sheep/goat	<i>Ovis/Capra (indeterminate)</i>	1	0.04%
Shell	Shell	1	0.04%
Total		2330*	

*Collection from 1991 Excavation. Fish not included.

Bison may be present and was recovered from 1980 excavations. A total of 16,767 vertebrate faunal remains were recovered. Of these only 4,439 were identifiable. Vertebrate remains exhibit variable degrees of post-breakage burning (see Table 3). Of 2,307 NISP examined, only about 1% of the assemblage exhibit oblique, transverse and longitudinal cut marks. A total of 2,826 fish remains were recovered. Of these, 72% were "green" or lightly burned (N=2046) while 28% were charred (N=780).

Preservation and sampling aside, preliminary calculations of MNI suggest that fish were an important but not predominate species. We cannot demonstrate that all fish remains have cultural associations, particularly as we have no evidence of features or artifact types (save possibly Bliss points, see Yohe et al. 1996) that indicate fishing. Of additional interest are a significant number of large canid remains, which fall beyond the size range of coyotes. This tentatively suggests the presence of dogs, though gray wolf is present in the assemblage. Analysis of butchering techniques indicates the battering of metapodials (see Table 4).

	Burning Timing	NISP	Percentage
None	Postbreakage	937	40.21%
	Not applicable	923	39.61%
Heavy (black)	Postbreakage	233	10.00%
	Graded, light to heavy	134	5.75%
Light (tan-brown)	Indeterminate	68	2.92%
	Postbreakage	15	0.64%
Calcined	Postbreakage	7	0.30%
	Graded, heavy to calcined	6	0.26%
Graded, light to heavy	Indeterminate	6	0.26%
	Prebreakage	1	0.04%
Total		2330	

Cutmark Description	NISP	Percentage
None	2307	99.01%
Oblique cuts, not further specified	10	0.43%
Transverse cuts, not further specified	4	0.17%
Sawn, transverse	3	0.13%
Longitudinal cuts, not further specified	2	0.09%
Longitudinal cuts, distal end	1	0.04%
Oblique cuts, distal end	1	0.04%
Oblique cuts, proximal shaft	1	0.04%
Snap break, proximal end	1	0.04%
Total	2330	

SUMMARY OF SIGNIFICANT FINDINGS AND IMPLICATIONS

(1) The 1991 and 1992 excavations at Area A1, 10-GG-1, affirm the Late Archaic/Protohistoric age of occupations established by the 1980 excavations. Based upon radiocarbon dates, the age of the site appears to date between A.D. 1660 and A.D. 1700. The Late Archaic time frame is further suggested by the presence of Desert Side-Notched points and ceramics. Given variances in the samples, some occupations may be as recent as the mid-18th century. This is important since the assemblages may provide insights to the nature of assemblage variability and site types for the period, and may provide a comparative basis for examining the transitions between Late Archaic, Protohistoric and Historic/Ethnographic periods. The recovery of bifacially worked 19th century bottle glass suggests that the area continued to be used by native peoples into the Historic period.

(2) Technological diversity in artifact classes suggests highly generalized activities. While the assemblage is

relatively rich in the range of materials there is a relative unevenness in individual tool types, classes and functional categories. The chipped stone assemblage suggests multiple procurement and reduction strategies using generalized tools. Analysis of lithic debitage indicates that the assemblage is characterized primarily by late stage flakes, which we interpret as reflecting a greater emphasis upon retooling than manufacture. Many of the formed tools made from obsidian were probably brought to the locality since little evidence of their production is indicated by the presence of manufacturing related debitage. Manufacture which did occur on site appears to reflect a biface reduction strategy. The production of expedient tools from basalt and CCS is reflected in the number of small exhausted basalt cores (N=31) and early-to-late stage basalt flakes recovered. As it seems unlikely that large basalt cores or blanks would have been transported over any distance to the location, the small cores most probably represent reduction of small basalt pieces that were acquired locally.

(3) The faunal analysis suggests a pattern emphasizing deer and large canids with a lesser and probably seasonal use of anadromous fish. The majority of the fish remains are from Chinook salmon though many smaller individuals may represent trout. Relatively extensive charring of approximately 30% of the fish remains suggests consumption and disposal of remains by burning. Though fish are present, there is little evidence that fishing was the major subsistence focus of peoples using the location. A preliminary MNI assessment indicates a population of ca. 250 individuals. The greater optimality of larger species is suggested by the riverine diet breadth and documented by the recovery of archaeological fauna. Of interest are the battering and smashing of deer and canid metapodials for apparent extraction of marrow. The resource use pattern does not appear to reflect the abundance implied by most accounts of Late Archaic use of the riverine setting in which resource intensification is seen to result in greater socio-economic development (i.e. Pavesic and Meatte 1980). The pattern most probably reflects seasonal variations in use, or unrecog-

nized economic strategies of the very Late Archaic or Protohistoric period. These changes may reflect alteration or devolution of the floral and faunal communities and may be associated with the introduction of the horse or greater utilization of the riverine context for a variety of yet unidentified reasons.

(4) The lack of formal features other than open fire hearths and two possible roasting pits suggests periodic but apparently significant use of the area. The absence of house features, storage pits, and processing areas suggests that use of the area was probably short term. This may indirectly suggest that the location was not a wintering area as might be suggested by ethnographic records.

(5) Excavations at Area A1, 10-GG-1, are informing as to the nature of assemblage variability on the Middle Snake River. The evidence from 10-GG-1 seems to conform to the isomorphic pattern described by Gould and Plew (1996) for sites between Glens Ferry and Hagerman, Idaho, in which assemblage variability is reflected only in the differential frequencies of the same functional elements. Recently, this pattern has been described for a number of additional sites between Marsing and Grandview, Idaho (see Plew and Sayer 1995; Sayer, Plager and Plew 1996; Sayer, Plew and Plager 1997). Understanding that variation is determined by prey selection and encounters, it appears that few specialized tools were produced to exploit specific resources. Archaeologically this suggests a pattern of *direct feeding* similar to what Binford (1980) and Stephens and Krebs (1986) associate with foragers and in this instance reflecting harvest and processing of fish and terrestrial mammals using the same items or tools.

Though our analyses remain preliminary, we believe our findings and yet to be reported analyses of vertebrate fauna and lithic source materials will serve to address the nature of Middle Snake River subsistence, particularly as it may inform us regarding the foraging-collecting continuum of the region in Late Archaic/Protohistoric times.

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