Cultural Resource Reports: This series disseminates the results of cultural resource investigations resulting from contract and small grants activities of the Center for Applied Archaeological Science (CAAS).
ARCHAEOLOGICAL EXCAVATIONS AT COW CREEK, IDAHO, (10-CA-1075)

Mark G. Plew and Christopher A. Willson

Center for Applied Archaeological Science
Boise State University

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Mark Plew
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INTRODUCTION

At the request of Mr. John Lytle, Archaeologist, Bureau of Land Management, and under formal agreement with Burley District Bureau of Land Management, Boise State University conducted an archaeological evaluation of Cow Creek Rockshelter in June, 2007. The site, which is situated south of Albion, Idaho, had been previously vandalized. As part of the Bureau’s investigation the university was asked to conduct an evaluation of the property and determine whether there remained any intact deposits and if such deposits required data recovery.

ENVIRONMENTAL SETTING

Cow Creek Rockshelter (10-CA-1075) is located approximately two miles south of Albion, Idaho, on the east side of Cow Creek along a rhyolite cliff-face approximately two meters above the stream course. The cliff face forms a narrow and restricted overhang (Figures 1 and 2). The shelter floor is comprised of a 3 x 9 meter terrace that is eroding into Cow Creek at a 40 degree slope. The surrounding area is characterized by sagebrush, grasses, and juniper with riparian vegetation along Cow Creek. The site deposit is comprised of degrading rhyolite, alluvial silts, and aeolian sediments that have accumulated over an extended period of time. The site upon initial inspection appeared to be severely damaged and largely destroyed. There is within the central portion of the rockshelter evidence of extensive excavation. Backfill from this activity(s) is slumping into the creek. Noticeable along the rear face of the shelter are piles of stones averaging 10-20 cm in length that appear to have been discarded by the vandals. Small areas of approximately two square meters at the north and south ends of the shelter deposit appear on initial inspection to be intact.

Figure 1. Map Showing General Location of 10-CA-1075.
PREVIOUS ARCHAEOLOGICAL RESEARCH

Few archaeological investigations have been conducted in the vicinity of Cow Creek Rockshelter, the exception being recent survey work conducted by Brooke Arkush from Weber State University. Occupations of the general area are known to include sites dating to Paleoindian and Archaic time frames (Butler 1978; Plew 2000). The earliest occupations in the area are documented at Wilson Butte Cave near Dietrich, Idaho (Gruhn 1961a) dating to approximately 10,000 years ago. To the northeast, Kelvin’s Cave contained late Pleistocene fauna associated with prehistoric cultural materials (Meatte, Titmus and Woods 1988). At the Dean site on Brown’s Bench, Scottsbluff-like and other Plano type points may date as early as 10,000 years ago (Bowers and Savage 1962).

Archaic occupations are better known within the area. At Wilson Butte Cave, the Wilson Butte II assemblage contains evidence of large parallel-flaked lanceolate points, processing tools, and the first use of modern bison in the area (Gruhn 1961a). In part providing the basis for Swanson’s description of the South Hills Culture (1972), Rock Creek, located south of Twin Falls, Idaho, provides evidence of Early and Middle Archaic occupations (10,500-4500 B.P.) and is argued to be the earliest evidence for upland exploration in the area (Green 1972). Of particular note is the occurrence of collaterally flaked “Little-Lake” series projectiles. Located near the base of the South Hills, the Kueney site produced a rich assemblage of artifacts that included groundstone and bone tools. Of note was the recovery of Humboldt, Little-Lake series points, Pinto, Northern Side-Notched, and Elko-Eared types. The site also contained evidence of a fire hearth and a cache of red-ochre stained manos.

At Malad Hill, Swanson and Dayley (1968) report Bitterroot Side-Notched, Elko and Pinto series points in deposits that include evidence of bison, deer, elk, and pronghorn procurement. To the east, Miller (1972, 1999) has documented extensive exploitation of mountain sheep at Western Canyon. Late Archaic use of the area is documented by the Dietrich Phase at Wilson Butte Cave (Gruhn 1961a, 2006) where later period pottery and other artifacts is thought to represent a Fremont presence in the area (Cockle 2006). At Kwahadu Rockshelter in the Snake River Canyon near Twin Falls, Idaho, Titmus and Woods (n.d.) document an assemblage characterized by an almost exclusive use of pronghorn. An unusual technique of battering of bone is noted. Similar in the near exclusive use of one species and the use of battering processing technique is Baker Cave III near Minidoka where the remains of 17 bison are associated with the mid-winter occupation (Plew, Pavesic and Davis 1987). To the east, Arkush (2002) documents extensive Late Archaic use of pronghorn at Rock Springs. Perishable materials appear more common in the Late Archaic and are well represented in assemblages from Willson Butte Cave, Kwahadu Rockshelter, and Pence-Duerig Cave (Gruhn 1961b) along the Snake River at Twin Falls.

METHODS

A primary datum was set at the southwestern edge of the overhang 23 cm above the terrace, near a rhyolite rock face that boundaries the western edge of the site rock face in a small niche (Figure 2). A total of five 1x1 meter test units that were excavated in blocks and were excavated to depths ranging from 50 cm to 130 cm. In addition, five auger probes were conducted along a baseline that was used to form a grid system of 1 meter intervals. The baseline runs parallel to the rock face from the primary datum point. The probes were extended to a depth of 60-70 cm before encountering bedrock. Excavations employed standard methods of subsurface data recovery, including shovel shoving, hand-trowelling with all sediments were passed through 1/8th inch hardware mesh, with artifacts and ecofacts bagged separately by unit and level.
STRAITGRAPHRGY AND SITE FORMATION

Initial assessment of the site suggested that the northern and southern margins of the overhang were relatively intact. These areas have been formed by alluvial deposition eroding into the creek below. The central portion of the deposit has been badly vandalized. The extent of the damage partially indicated by a clearly delineated area which is distinctly lighter in color than the remaining wall surface that extends upward.
approximately 60 cm from the existing ground surface and is horizontally uniform across the lower rock face. In other words, approximately 60 cm of the original deposit have been removed. A total of 10 cores were placed within the central portion of existing shelter surface. These encountered bedrock at 20-30 cm below this surface. Taken together, it appears that the maximum original extent (depth) of the deposit was approximately one meter.

Unit 2-4 E, 1-2 N was initially opened as a 1 x 1 m unit but was expanded to allow the exposure of a cross-section the rockshelter deposit. Stratigraphy shows the upper 10 cm of surface consisting of decomposing organic debris and an apparent consolidation of alluvial sediments. The deposit was found to slope east toward the creek at approximately 20 degrees, a reflection of the angle of alluvial deposition forming the site. Unit 0-2 E, 8-9 N was characterized by an upper lens of unconsolidated, mottled sediment that has intruded into rhyolite that has exfoliated from the rock face and back fill from previous episodes of looting (Figure 4). Our assessment of the disturbance in both areas is based upon examination of size gradients and distribution of rocks within the deposit, grain size, and variable degrees of compaction and observations of horizontal and vertical mottling. This is important as it suggests that the most recent disturbances are probably of sediments that were at some earlier time previously sorted.

![Stratigraphic Profile Unit 0-2 N, 2-4 E.](image)

No cultural features were located although the presence of ash and charcoal was noted in the stratum on the northeastern extent of the site. These sediments consist of dark sediments intruded with ash indicating the presence of extensive cultural use. However, the loosely compacted materials, and an apparent reversal of the stratigraphy, further suggest that the area has been highly disturbed by looting. Several rhyolite fragments were noted in the area closest to the rock face, and contained a range of material size gradients from 2-3 cm to greater than 10 cm in size. This unnatural sorting further supports a disturbance in the site (Figure 4).
Figure 4. Overview and Stratigraphic Profile of 0-2 E, 8-9 N, 50 cm Level.

Figure 5. Stratigraphic Profile of 2-4 E, 1-2 N, Depth of 100 cm.
MATERIAL CULTURE

A total of eight artifacts were collected during the excavation. Three projectile points, two bifaces, two cores, and a worked cobble were recovered.

**Projectile Points** (Figure 7, a-c)

**Elko-“Type” Point**

*Catalog Number:* A1

*Form:* Specimen A1 has a triangular blade, with drooping tangs that are greater than the width of the blade and small narrow base less than the width of the blade. This item is Elko-like in form but is relatively small.

*Manufacture Technique:* Pressure

*Average Size Range:* 3.8 cm L x 2.2 cm W

*Material Type:* Cryptocrystalline

**Corner-Notched Point**

*Catalog Number:* A5

*Form:* A5 is a small, shallow corner-notched specimen. The notches are shallow, resulting in a wide neck. A8 is a bifacially worked fragment with a single notch and is broken along both of the margins.

*Manufacture Technique:* Pressure

*Average Size Range:* 1.8-3.8 cm L x 1.7-2.2 cm W

*Material Type:* Obsidian

**Stemmed Point**

*Form:* A7 is obsidian, ovate in general form and is 3.8 cm in length and 1.6 cm wide near the base. It appears that the base may have been broken. It is bi-convex and bifacially worked.
Manufacture Technique: Pressure
Material Type: Obsidian

Figure 7. a-c, Projectile Points; d-e, Bifaces.

**Bifaces and Bifacially Worked Flakes**

Number of Specimens: 2 (Figure 8, d-e)

Catalog Numbers: A6, A8

Form: Specimen A6 is a cryptocrystalline, bi-convex and bifacially worked flake that is ovate in form. It is broken at the midsection. A8 is bifacially worked and broken on the margins at both the midsection and the base.

Manufacture Technique: Pressure, percussion

Average Size Range: 1.6 - 3.8 cm

Material Type: Obsidian, Cryptocrystalline

---

**Cores and Core Fragments**

Number of Specimens: 2

Catalog Numbers: A2, A4

Form: Angular, flaked on all sides. No evidence of use wear is visible.

Manufacture Technique: Percussion

Average Size Range: 2.39 - 7.28 cm

Material Type: Cryptocrystalline

**Groundstone** (Figure 8)

Number of Specimens: 1

Catalog Numbers: A3

Form: Relatively flat quartzite cobble with evidence of wear on one side

Manufacture Technique: incidental to use

Average Size Range: 15.6 x 15.3 2.7 cm

Material Type: Quartzite

---

Figure 8. Groundstone.
A total of 196 lithic items were collected. Of these, 165 specimens were obsidian, 22 were cryptocrystalline, and nine were basalt (Figure 9). Analysis of size ranges suggests a late stage reduction strategy. Only a few specimens were larger than 5 cm in size. A total of 116 flakes were recovered less than or equal to 1 cm in size and were primarily obsidian.

Of the obsidian collected, eight specimens, including four with visible cortex, were sent for geochemical analysis. X-ray florescence conducted by Craig Skinner at the Northwest Research Obsidian Studies Laboratory in Corvallis, Oregon, indicates that some of the obsidian originated from American Falls and Brown’s Bench source locations (Figures 10 and 11).

There are 30 known sources of volcanic glass located in Idaho and Southeastern Oregon. Based upon recent XRF studies by Willson (2004, 2005, 2007), and previous work by Plager (2001), Holmer (1997), and Sappington (1981) the obsidian materials found in archaeological sites located in Idaho typically originate from five main sources—Timber Butte, Owyhee, Brown’s Bench, Malad, and Big Southern Butte. Given the proximity to the site, the XRF results are not unexpected and may suggest a localized use of the region.

![Lithic Distribution by Material Type and Size](image-url)  
*Figure 9. Lithic Distribution by Material Type and Size.*
FAUNAL ANALYSIS

A total of 282 faunal remains were collected. Of these 256 were unidentifiable. Notably, 89 percent of the specimens recovered were charred. From the total collected faunal remains recovered, 16 were determined to be large mammal, possibly deer (*Odocoileus heminous*). The remaining 11 specimens are rabbit and small rodents. Of this category, the genera have been identified as rabbit (*lepus*) and woodrat (*neotoma*), neither of which are uncommon to the region (Figures 12 and 13).
CONCLUSIONS AND RECOMMENDATIONS

The investigation of Cow Creek Rockshelter suggests that site has been extensively vandalized on a number of occasions over a period of time. This assessment is based upon examination of size gradients and distribution of rocks within the deposit, grain size, and variable degrees of compaction and observations of horizontal and vertical mottling. This is important as it means that the most recent disturbances are most probably of sediments that were at some earlier time previously sorted. The recovery of so little cultural material may also be indicative of long-term vandalism of the site area. The material recovered does allow us to suggest that the site was used primarily during the Late and possible Middle Archaic periods,
that obsidians were derived from local sources and that obsidian tools were not being manufactured on the site, the latter indicated by a greater frequency of late stage or tertiary flakes typically associated with retooling or re-sharpening activities. The presence of a single cryptocrystalline core and fragment may indicate production of expedient tools from locally available toolstones. Faunal remains indicate the use of species commonly used throughout the Archaic in the region. We are reluctant to offer any specific arguments about primary site function on the basis of such limited data.

Based upon the results of our investigation of 10-CA-1075 we recommend no further evaluation of the property. We believe that the extent of our recent test excavations have fully examined remaining intact deposits, finding all areas within the site to be extremely disturbed by vandalism. In fact, as noted, we believe that the site has been vandalized several times prior to the recent events.
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