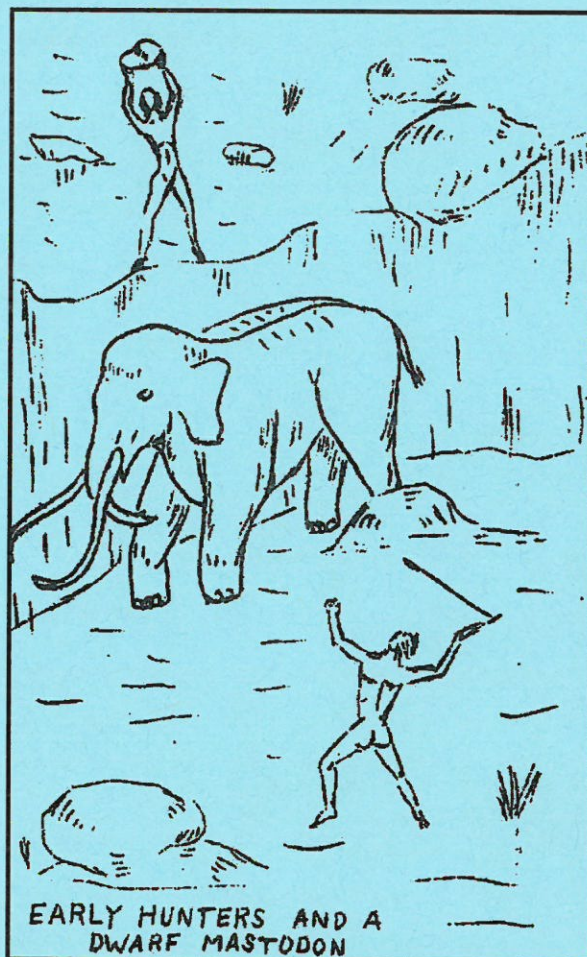
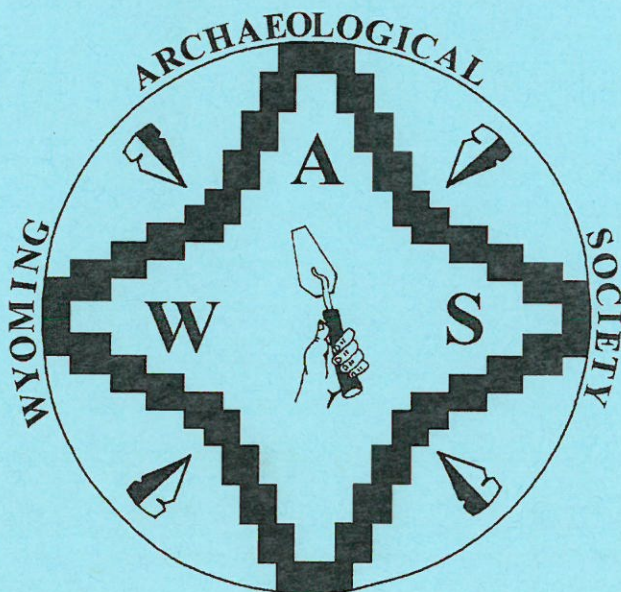


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## **BESANT-WOODLAND ARTIFACTS FROM THE CEDAR GAP SITE (48NA83) IN NORTHWESTERN NATRONA COUNTY, WYOMING**

by

**David G. Eckles, Jody A. Clauter, Mark E. Miller  
and Danny N. Walker**

The Cedar Gap site is located in extreme northwestern Natrona County, Wyoming, among the southernmost foothills of the Big-horn Mountain Range and eastern fringe of the Wind River Basin (Figure 1). Artifacts and features are found along an ephemeral drainage and on a nearby ridge and hill slopes and tops.

The site was brought to the attention of the Bureau of Land Management (BLM) by Henry Jensen of the Casper Chapter, Wyoming Archaeological Society in 1974. It was initially recorded by Daniel Hutchinson of the BLM in the summer of 1974 and a brief site form was prepared. The site is located on lands administered by the Wyoming Office of State Lands and Investments. It was described as consisting of a camp site containing stone circles, rock piles (cairns), Middle Period projectile points, cordmarked pottery and bison bone eroding from the bank of an arroyo.

Subsequent investigation was carried out in the spring of 1990 by George Frison, Mark Miller, and Don Davis of the University of Wyoming Anthropology Department and Office of the Wyoming State Archaeologist. Several surface artifacts, including a Besant point from the bison bone bed, were collected. A charcoal sample from the bone bed was also recovered. In the summer of 1992, a field school under the direction of Susan Hughes (University of Wash-

ington) spent about 10 days mapping the site, conducting a surface collection, and excavating test units. The bulk of the analysis herein derived from the results of the field school studies.

The site was nominated to the National Register of Historic Places in 1993 and was enrolled in 1994. Collections, field notes, and laboratory notes from 48NA83 are housed at the University of Wyoming Archaeological Repository.

Features found at the site include at least 68 stone circles, 34 stone cairns, a stone lined pit, a bison bone bed seen eroding from an arroyo cut, an extensive surface scatter of chipped stone artifacts, and a few ceramic sherds. Late Archaic period Besant points, probable corner-notched Pelican Lake points, and a Late Prehistoric arrow point were collected from the surface. Several cordmarked (Woodland) ceramic sherds were also collected. Probable Late Prehistoric to Protohistoric Crow pottery fragments were also found on the surface and in the area of one of the stone circles.

Test excavations by Susan Hughes and the field school were conducted within the bison bone bed, one of the stone circles, and in areas near the bone bed appearing to be processing locations. Block Area A included 14 test units placed on the east side of the arroyo opposite the bison bone bed. Block Area B included eight test units placed just north of Block Area

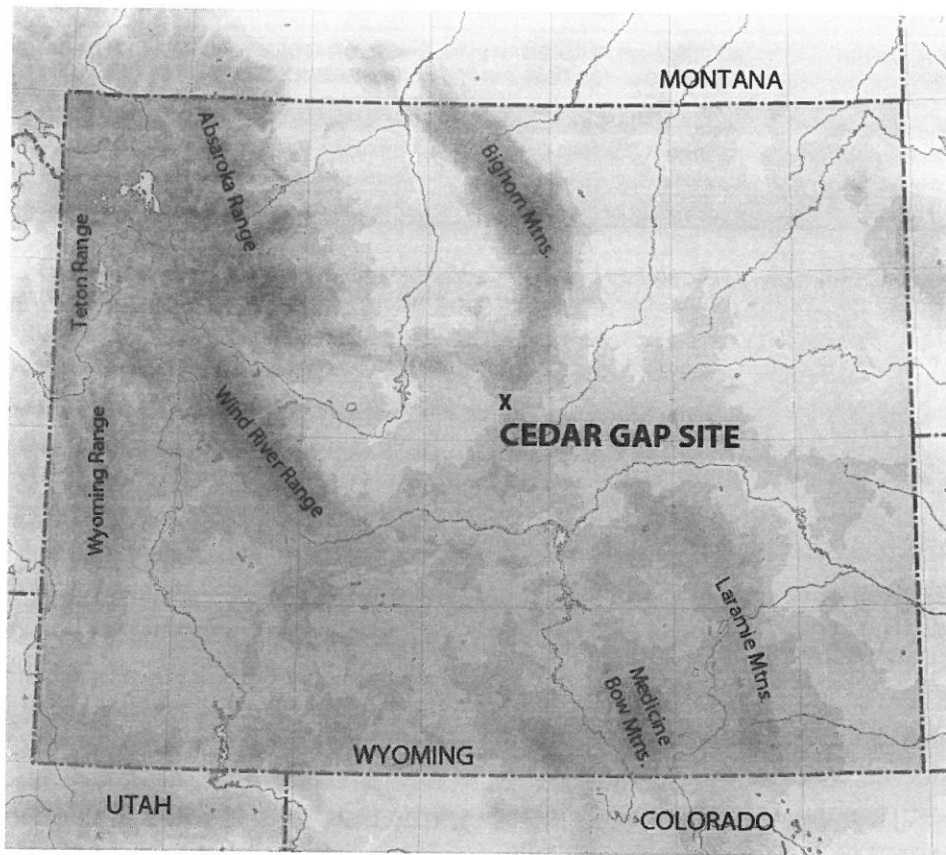


Figure 1: Map of Wyoming showing the location of the Cedar Gap Site.

A. Block Area C included four test units and was located within a stone circle. Block Area D included three test units and was placed on the west side of the arroyo just south of the bison bone bed and west of Block Area A. No site map is currently available.

The depth of excavations in each of the block area units rarely exceeded 50 cm below surface; some units reached only 25-30 cm below surface. Regardless of depth, a relatively large quantity of broken animal bone (mostly bison and a few small mammals), chipped stone artifacts (mostly debitage), ceramic sherds, and fire altered rock were recovered from Block Areas A, B, and D. Remnants of hearths were noted in Block Areas A and B. Cordmarked (Woodland) sherds were found in all three of these excavation blocks. In fact, pottery fragments were found in nearly all levels excavated. Besant points were recovered from the upper

and lower levels of Block Areas A and B. The remains found in these block areas appear to be similar to others which are associated with bone processing.

Radiocarbon dates from the various investigations are presented (Table 1). Based on laboratory notes associated with the 48NA83 collection, the 1820 B.P. and 1960 B.P. dates are considered to be associated with the Besant-Woodland component; the 2540 B.P. date is likely too early for this component and may be inaccurate or dates to an earlier, unrecognized occupation.

Relatively few remains were recovered from Block Area C (stone circle). They include probable Crow pottery fragments, chipped stone debitage, and weathered bone fragments. A small tri-notched arrow point was found on the surface of the site and may be associated with this component. The date of 185 B.P. indicates



Table 1: Radiocarbon dates from the Cedar Gap Site (48NA83). All dates are uncorrected.

LOCATION WITHIN THE SITE	MATERIAL SAMPLED	RADIOCARBON DATE B. P.	LABORATORY REFERENCE NO.	COLLECTOR AND DATE
Bison bone bed	Charcoal	1820+/-130	Beta-37559	Frison, Miller and Davis, 1990
Block Area B	Charcoal	1960+/-60	QL-4724	Hughes, 1992
Block Area A	Charcoal	2540+/-130	Beta-62486	Hughes, 1992
Stone Circle, Block Area C	Charcoal	185+/-30	QL-4725	Hughes, 1992

a terminal Late Prehistoric or early Protohistoric association for the tested stone circle.

### BESANT POINTS AND OTHER FORMAL TOOLS

The distinctive Besant point was first described by Wettlaufer (1955) at the Mortlach site in southern Saskatchewan. It has since been recognized in many Northern Plains components, from south-central Canada, the Dakotas, Montana, Wyoming and possibly Nebraska, Kansas, and northeastern Colorado (Hughes 1981:23). Besant points are typically lanceolate side-notched projectile points with a straight base. In general, they have convex body edges with sharp to rounded obtuse shoulders (Reeves 1970:42). Slightly convex and concave bases are present; a few specimens exhibit a deeply concave base. Side-notches are usually twice as broad as they are deep (Epp and Dyke 1983:115). Length ranges from just under 30 mm to just over 80 mm, width from 18-25 mm, and hafting distance across the neck from 10-20 mm (see Hughes 1981:77; Epp and Dyke

1983:115).

Several projectile points from the surface and excavated contexts at 48NA83 clearly fall into the category of Besant (Figures 2 and 3; Table 2). While there is some variation in morphology, these points generally conform to the attributes commonly associated with Besant. Few are complete and several show indications of re-working.

The projectile point of Phosphoria formation chert (Figure 3e) found in Block A, Unit 1 appears to be a corner-notched, eared variety. It is somewhat smaller in overall size and generally thinner than the side-notched Besant points. It is roughly similar to corner-notched points found at the Ruby site (Frison 1971:82).

It should be noted the point from Block A (Figure 3d) made of Knife River Flint has a rather deep concave base which is not usually characteristic of Besant. Two specimens from the Muddy Creek site also exhibit deep convex bases (see Hughes 1981:Plate III, Plate VIII), and one of the points from the Ruby site (Frison 1971:82) has a moderately deep basal concavity.

Table 2: Besant Component Projectile Points from the Cedar Gap Site (48NA83).

PROVENIENCE	PORTION	RAW MATERIAL	BASE FORM	COUNT	FIGURE
Surface	Nearly complete	Chalcedony	Straight	1	2a
Surface	Tip missing	Quartzite	Concave	1	2b
Surface	Tip missing	Quartzite	Straight	1	2c
Surface	Tip missing	Quartzite	Concave	1	2d
Surface	Nearly complete	Dendritic chert	Straight	1	2e
Surface	Complete	Dendritic chert	Straight	1	2f
Surface	Midsection	Blue-white Opaline chert?	Undetermined	1	not shown
Surface	Base	Quartzite	Straight	1	not shown
Surface	Midsection	Chalcedony	Undetermined	1	not shown
Bone bed	Tip missing	Blue-white Opaline chert?	Concave	1	3a
Block B	Nearly complete	Quartzite	Straight	1	3b
Block B	Complete	Dendritic chert	Straight	1	3c
Block A	Base, midsection	Knife River Flint	Concave	1	3d
Block A	Nearly complete	Phosphoria Fm. chert	Concave	1	3e

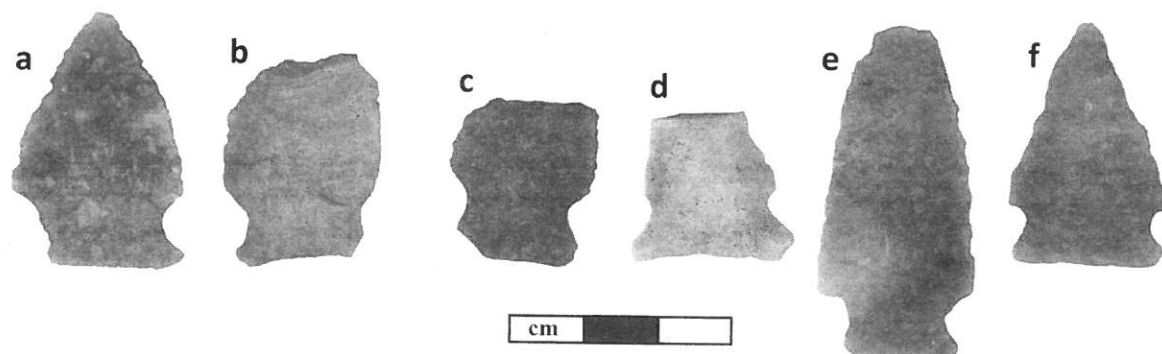


Figure 2: Besant points from surface contexts at 48NA83.

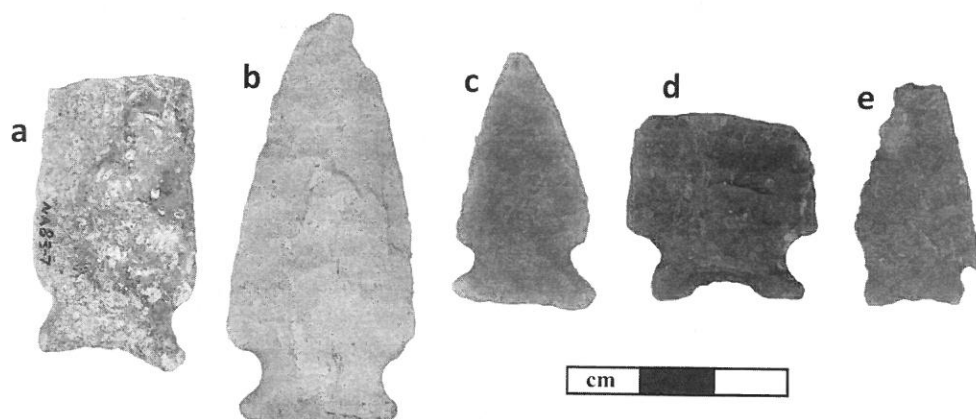


Figure 3: Besant points from excavated contexts at 48NA83.

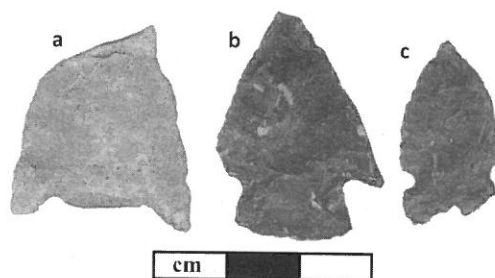


Figure 4: Other projectile points from 48NA83.

Other projectile points found at the site include two probable Pelican Lake varieties found on the surface (Figure 4a-b). As noted above, a tri-notched Late Prehistoric point of dendritic chert was found on the surface, near Block Area C (Figure 4c).

Other formal tools include a hafted drill (Figure 5) made of brown chert recovered from Block Area A, Unit 4A. The basal morphology is similar to a Besant Point. Chipped stone drills

were also recovered from the Butler-Rissler site (Miller and Waitkus 1989:14). Three end scrapers made of brown chert were found on the surface of the site. Two large ovate bifaces of gray quartzite were found on the surface while flake tools were found on the surface and in the excavation units.

Most of the chipped stone artifacts (including tools and debitage) are made of local cobble cherts and quartzites. These are predominantly





Figure 5: Hafted drill from Block A, 48NA83.

hues of gray, white, and brown. Many of the large flakes retain some cortex. One of the points appears to have been made of Knife River Flint (generally derived from western North Dakota sources) and one tertiary flake of this material was also noted. Both of these artifacts came from excavated contexts. These materials are also similar to a dark brown chalcedony called Scenic Chalcedony from Oligocene age White River Group deposits in western South Dakota (Hoard et al. 1993:700). Three of the Besant points are made of cherts containing manganese oxides (dendrites), which could have been derived from Mississippian age deposits in the Bighorn Mountains or Pennsylvanian age deposits in the Hartville Uplift (Miller 1991:461-463). Dendritic agates have also been reported from central Wyoming along the Sweetwater River (Root 1972:15; Hausel 2005). The corner-notched point is clearly of Phosphoria Formation (Permian age) chert. Source locations for Phosphoria Formation cherts are known from the Wyoming Bighorn Mountains and Pryor Mountains in Montana (Miller 1991:463).

Two of the points were made of an unusual opaque blue-white mottled chert with similarities to opals or opaline cherts found in the Oligocene age White River Formation deposits southwest of 48NA83. Hausel and Sutherland

(2005:10) describe opaque milky white and light blue opals in the Cedar Rim area near Riverton, central Wyoming. Some of these are translucent light-blue opals enclosed by milky opaque opal. These artifacts are also similar to a blue-white mottled agate reported by Root (1972:10) from the Pennsylvanian age Casper Formation in the Marshall area of northern Albany County. The remaining points and other formal tools appear to have been made from local cherts, quartzites, and chalcedonies.

### WOODLAND CERAMICS

During the surface recording of 48NA83, seven cordmarked ceramic sherds were noted and collected, including one with a small portion of the rim preserved (Figure 6). Another 120 cordmarked body sherds were recovered from excavation Block Areas A, B, and D. Most of the sherds are less than 60 mm in maximum dimension and most have extensive cord-roughened exteriors similar to several Plains Woodland wares (see Hill and Kivett 1941, Neuman 1975; Tibesar 1980; Miller et al. 1987; Miller and Waitkus 1989; Clark 2008).

Day (1996) provided a general descriptions of the pottery at the site. The pottery core has a laminar structure likely from paddle and anvil manufacture. Evidence of the anvil marks appears on the interior portion of some sherds. Temper consists of subangular to angular quartz sand grains measuring from 0.9-1.7 mm in



Figure 6: Woodland ceramic rim sherd from the surface at 48NA83.

diameter. Temper particles are unevenly distributed within the paste. Sherd thickness ranges from 6.9-9.1 mm. Hardness of the sherds ranged from 2.5-3.0 on the Mohs scale. The exterior surfaces were decorated with two-ply Z-twist cordage. Cordmarkings are from about 1.5 to 2.6 mm thick with spacing between marks about 2.0-2.5 mm. Cordmarkings are spaced about 4-5 strands per centimeter. Direction of the marks is vertical or slightly diagonal to horizontal. There is some overlapping of cordmarks. Smoothing of cordmarks from final surface treatment or usage is evident on some sherds.

The rim sherd collected from the surface has slightly diagonal to horizontal cordmarks (Figure 6). The exterior appears to have been smoothed during manufacture, thus somewhat obscuring the cordmarks. The exterior surface is a buff to reddish-buff color. The interior surface is a light gray color and the paste is a darker gray color. A rim profile was not attempted given the small portion of rim remaining.

In Block Area A, cordmarked sherds occur at all levels with over half found near the lowest levels of the excavated units. They include three rim sherds and 61 body sherds. Two of the rim sherds fit together (Figure 7a). The third rim sherd is in a fragile condition, but appears similar to the two refitted sherds. While it does not refit with the two rim sherds in Figure 6b, it is likely from the same vessel. All have slightly diagonal to horizontal exterior cordmarks. One of the refitted sherds contains remains of a round perforation extending through the sherd. This perforation has been smoothed (almost countersunk) on both the exterior and interior. All three have a rounded lip. These three rims and all the body sherds from Block Area A are jet black to dark gray. These rim sherds retain encrusted carbon residue, especially near the lip and this causes the dark color.

In Block Area B, cordmarked sherds occur in the upper two levels. They include four rim sherds and 49 body sherds. Two of the

rim sherds refit (Figure 7b). One of these rims is quite small and is not illustrated. The two refit sherds exhibit a straight rim, rounded lip, and vertical cordmarks on the exterior. The exterior and interior surfaces of these two rims are a buff to reddish-buff color and the paste is a light gray color. Block Area B also produced a rim with a flat lip with horizontal to slightly diagonal cordmarks (Figure 7c) and another rim with vertical cordmarks and a slightly thickened upper rim with a round lip (Figure 7d). These two rims, as well as most of the body sherds, from Block Area B are jet black to dark gray on both surfaces. They also retain a small amount of encrusted carbon residue.

In Block Area D, only four body sherds were recovered in the upper levels of the excavated units. These sherds have jet black to dark gray surfaces and cores. No carbon residue was observed.

It was determined five vessels are represented based on rim forms and the orientation of exterior cordmarks. They include the surface rim sherd (vessel 1; Figure 6), the two refit rims sherds from Block Area A (vessel 2), the two refit pointed rim sherds with vertical cordmarks from Block Area B (vessel 3), the squared rim with horizontal cordmarks from Block Area B (vessel 4), and the thickened rim sherd with vertical cordmarks from Block Area B (vessel 5).

### **OTHER ARTIFACTS**

A fragment of freshwater shell was recovered from Block Area A (Figure 8). It is a highly weathered specimen with no apparent cultural modification. The hinge area is not present so identification to species was not attempted. The fragment is similar in general morphology to shell artifacts recovered from the Butler-Rissler site southwest of Casper (Miller and Waitkus 1989). These were identified to the genus *Lampsilis*, one of three genera of the family Unionidae (riverine bivalve mollusca) occurring in Wyoming (Beetle 1989:638).



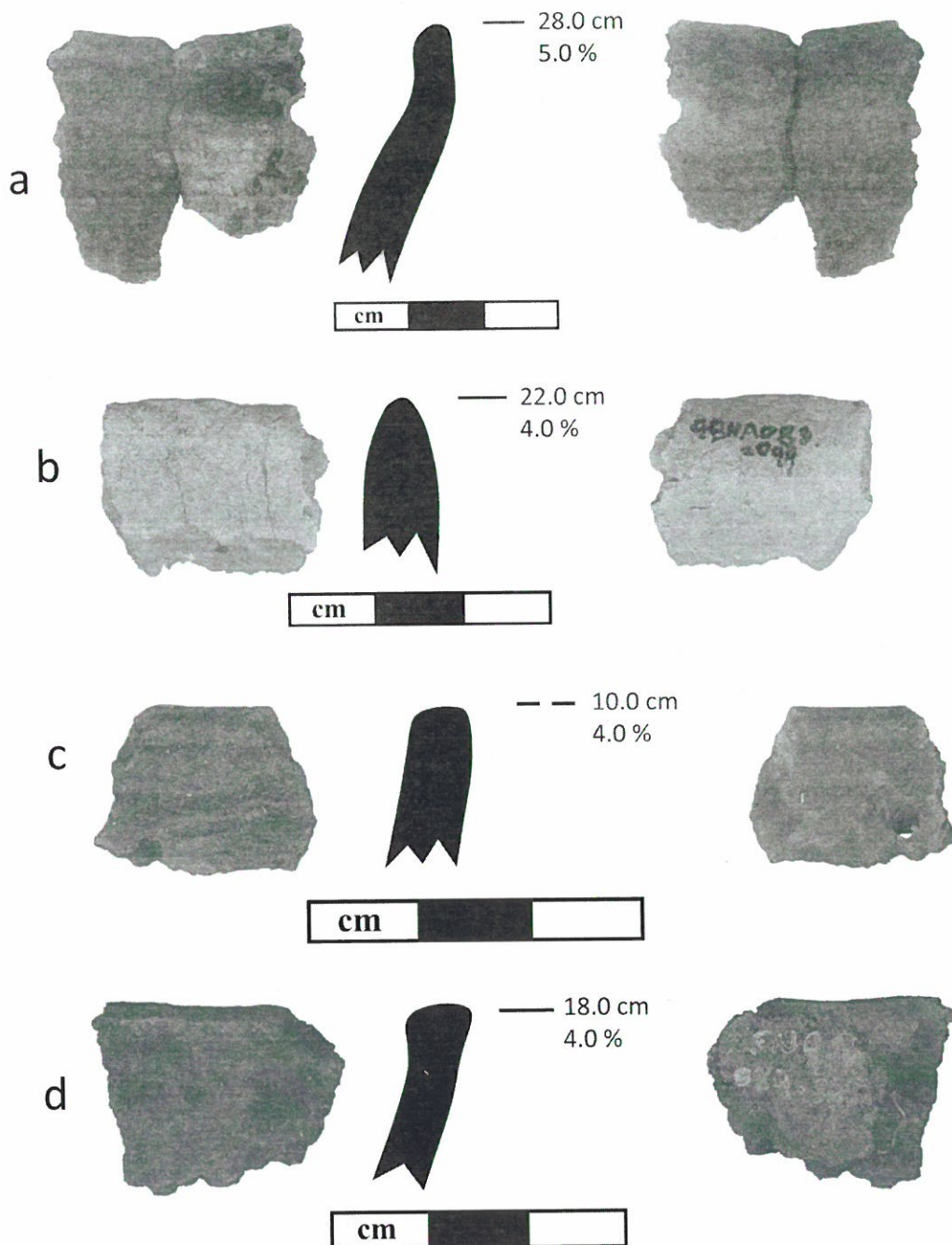


Figure 7: Woodland ceramic rim sherds from excavated contexts at 48NA83.

### DISCUSSION

The Cedar Gap site contains the remnant of a bison bone bed which may have been an arroyo trap or pound and bone processing areas containing both Besant projectile points and Woodland ceramics. This makes the site quite

significant as relatively few sites in Wyoming have yielded both Besant points and Woodland pottery. Five other sites have been recorded in the state with Besant points and Woodland ceramics in dated components (Table 3). Of these, the ceramics usually occur at camp and processing areas, but have not been found within

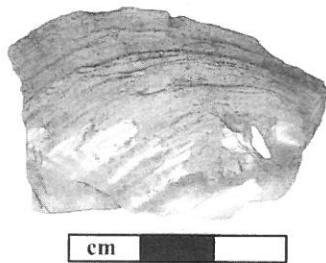


Figure 8: Mussel shell fragment from Block A, 48NA83.

the bison (or elk) bone beds. A recent analysis of dated Besant sites in southeastern Montana indicates a similar pattern (Clark 2008:31).

All of the sites with dated Besant/Woodland components in Wyoming are located in the eastern half of the state. They occur in the Powder River Basin of northeastern Wyoming (Campbell and Johnson Counties), the Laramie Basin (Albany County) and Shirley Basin of southeastern Wyoming (Carbon County), and the Denver-Julesburg Basin and Hartville Uplift

of east-central Wyoming (Platte and Goshen Counties). The two sites in Natrona County are closer to the central portion of the state and appear to represent the westernmost presence of Besant in Wyoming. The Butler-Rissler site is located southwest of Casper on the North Platte River and the Cedar Gap site is located at the southern end of the Bighorn Mountains. Surface finds of Besant points and Woodland ceramics indicate a similar pattern. Most artifacts identified as Besant/Woodland occur in southeastern, northeastern, and east-central Wyoming (data from SHPO Cultural Records).

The temporal range of Besant for Canadian sites has been suggested between 1200-2500 B.P. (Reeves 1983:8). An early manifestation of Besant in Canada comes from the Fincastle site in extreme southern Alberta. Most of the radiocarbon dates indicate site occupation from about 2500-2600 B.P. (Foreman 2010:33). A range of 1300-2000 B.P. has been suggested for southeastern Montana (Deaver and Deaver

Table 3: Probable Besant/Woodland site components in Wyoming. All dates are uncalibrated.

SITE	SITE TYPE	RADIOCARBON ASSAY (BP)	BESANT POINTS	WOODLAND POTTERY	REFERENCE
Willow Springs (48AB130)	Bison pound	undated	Yes	No	Bupp (1981)
Benick (48AB571)	Human burial	1400+/-60; 1510 +/-60; 2340+/-70	Yes	No	Davis (1992)
Joe Miller (48AB18)	Elk bone processing	1510+/-40 to 1780+/-40	Yes	No	Burnett et al. (2006); Kornfeld et al. (2010)
Ruby (48CA302)	Bison pound	1670+/-135; 1800+/-140	Yes	No	Frison (1971) Frison (1991)
Mooney (48CA104)	Bison kill	2040+/-90	Yes	No	Frison (1991)
Rourke (48CA130)	Bison pound	1870+/-120	Yes	No	Zeimens et al. (1978)
Muddy Creek (48CR324)	Bison pound	1720+/-110	Yes	No	Reher (1987)
Muddy Creek (48CR325)	Village, Burial mound	1720+/-120	Yes	Yes	Reher (1987)
48JO938	Camp	1810+/-70	Yes	Yes	Bower et al. (1991)
Cedar Gap (48NA83)	Bison trap/ pound; bone processing; Camp	1820+/-70; 1960+/-60; 2540+/-130	Yes	Yes	Frison (1991) and this article
Butler-Rissler (48NA1000)	Camp	1660+/-90; 1800+/-100	Yes	Yes	Miller and Waitkus (1989)
Grayrocks (48PL65)	Camp	1750+/-110; 1890+/-120	Yes	Yes	Tibesar (1980)
Hell Gap (48GO305)	Bone processing?	1750+/-70	Yes	Yes	Shimek and Boyd (2013)



1988:100). Recent research by Clark (2008:33) indicates a range of 1100-2100 B.P. for Besant in southeastern Montana.

Besant/Woodland sites in Wyoming range in age from about 1400-2000 B.P., with most dating from about 1600-1900 B.P. At this time, dates exceeding 2300 B.P. appear to be too early for Besant occupations in Wyoming (Table 1) (also see Davis 1992).

### **SUMMARY**

Investigations at the Cedar Gap site (48NA83) resulted in the identification of a buried bison bone bed, buried bison bone processing areas, stone circles and stone cairns, and an extensive scatter of chipped stone artifacts along with pottery fragments. A Besant/Woodland component is present which includes the bone bed and processing areas. A Late Prehistoric to Protohistoric component is also present in at least one stone circle. The site contains one of the relatively few Besant components in Wyoming whose assemblages include both Besant points and cordmarked Woodland pottery.

### **ACKNOWLEDGMENTS**

The staff of the University of Wyoming Archaeological Repository was of great assistance with the 48NA83 collections and associated field and lab documents. The collections were well organized and cataloged and there were abundant field and laboratory notes and forms which Susan Hughes and her field prepared. The various field investigations were conducted under an archaeological research permit to Dr. Mark Miller by the Wyoming Office of State Lands and Investments. Great thanks also to Steven Sutter and Jeremy Planteen of the Wyoming State Historic Preservation Office, Cultural Records Office for researching the site data base and producing a list of sites containing Besant points.

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