

**ARCHEOLOGICAL
ASSESSMENT**

Fossil Butte
National
Monument

ARCHEOLOGICAL ASSESSMENT
FOSSIL BUTTE NATIONAL MONUMENT

by
George M. Zeimens

In Accordance with
Purchase Order 6047-3-0102
Between the
U. S. National Park Service
and the
Department of Anthropology
University of Wyoming

U. S. National Park Service
Midwest Archeological Center
Lincoln
1976

Cover. View east across 48LN326. The site is covered by snow in the foreground.

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ACKNOWLEDGEMENTS

I wish to thank the numerous individuals who have supported me during implementation of this project. Initial coordination with the National Park Service was provided by Dr. George C. Frison, Wyoming's State Archeologist and Chairman of the Department of Anthropology, University of Wyoming. Student assistants from the University of Wyoming who were involved in various phases of the project are Charles Jefferson, Danny Walker, Mark Miller, Sandy Zeimens and Connie Robinson. The Fossil Butte National Monument staff, particularly Beth Ulrich and Bob Spears, were very helpful in locating park boundaries, pointing out access roads and acquainting the field crew with the monument. I would also like to thank the staff of the Midwest Archeological Center for their assistance in the final editing and reproduction of this report.

INTRODUCTION

The Fossil Butte National Monument archeological survey was conducted by University of Wyoming, Department of Anthropology personnel during the fall months of 1973. The purpose of the project was to locate all archeological remains within the limits of the park's boundaries; to assess the potential of these remains, in terms of the National Register of Historic Places Criteria of Significance (36 CFR 800), for contributing to the archeological record and to make recommendations for protection of all remains under the monument's resource management program. The study also included a literature search to review other documented sites in the general area. Local collectors and amateurs were contacted for information concerning undocumented sites on, or in the vicinity of, the monument. Then a thorough foot inspection of all monument lands was conducted. As requested, no actual excavations were attempted although one site was promising enough to tempt an eager field crew.

Three prehistoric-period and two historic-period sites were found. These latter were not investigated or described because Fossil Butte National Monument Naturalist Bob Spears has compiled a research file for these remains.

THE AREA

Fossil Butte National Monument lies in a transitional zone between the Green River Basin and Wyoming Red Desert country to the south and east and the mountainous regions to the west and north (Fig. 1). This

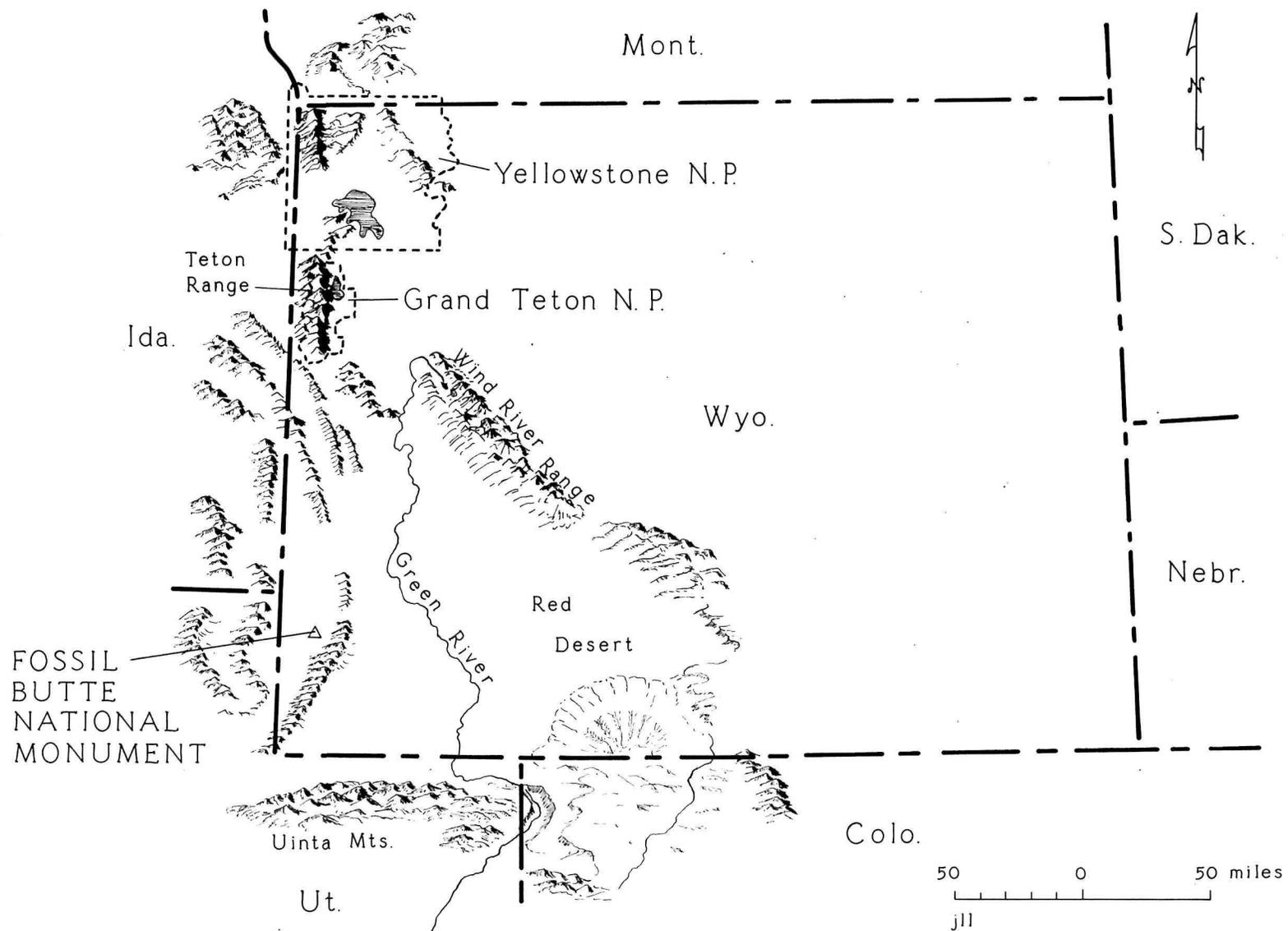


Figure 1. Location and regional topography, Fossil Butte National Monument.

is a semi-arid region characterized by ridges and buttes that are broken by steep arroyos and intermittent streams. The vegetation mainly consists of shrubs and short grasses and is sparse except at springs and along streams. The extreme variation in temperature, ranging from sub-zero in winter to the high nineties in July and August, which is accompanied by periods of intense wind creates a very harsh and unpleasant climate during much of the year.

The monument itself is approximately ten miles due west of Kemmerer, Wyoming and rises 1000 feet from the valley floor to an elevation of 7500 feet. The Kemmerer area receives 8.72 inches of precipitation annually. The average annual temperature is 37.9°F. (Flowers 1960:8). Springs in the monument which seep from the contact zone between the Wasatch and Green River Formations produce abundant trees and other vegetation, but the remainder of the butte, like the surrounding country, is sparsely covered with shrubs and grasses. The springs are also favorite feeding areas for mule deer, elk, moose, antelope, wild horses and black bear. Several species of small animals such as coyotes, bobcats, rabbits and a variety of rodents and birds also frequent the springs.

ARCHEOLOGICAL BACKGROUND

Archeological understanding of southwestern Wyoming is poor. It has been suggested that the area served as a natural corridor between the Great Plains and Great Basin culture areas (Mulloy 1954; Sharrock 1966; Jennings 1957; Aikens 1966; Day and Dibble 1963). Topographically this is feasible, and some evidence exists to support this interpretation. However, no evidence has been presented from which to infer the

existence of established trade networks or major population movements between the two areas. Rather, contact probably involved marginal groups working back and forth for the purpose of exploiting various ecological zones. In all probability such contact resulted in a certain amount of cultural diffusion over a long period of time.

Past studies carried out in the general area were of an inventory or salvage nature. For example, pre-construction work at Fontenelle Reservoir produced eight historic and twenty-two prehistoric-period sites (Dibble and Day 1962) and a survey of the Flaming Gorge Reservoir area yielded 121 prehistoric sites (Day and Dibble 1963). Reconnaissance in the Big Sandy Reservoir area revealed the presence of fourteen prehistoric sites (Davis 1956). Recent archeological survey along the route of a Pacific Power and Light Company transmission line through the area yielded forty sites (Wilson 1973). Unfortunately, in most cases these inventory projects were not followed by excavation; therefore, the potential of many sites reported is not fully known. In many instances the sites have been lost to vandalism, natural erosional processes or inundation. In summary, although it has been demonstrated that this area contains an abundance of archeological resources, no comprehensive studies have been made.

Cultural material from the Early or Paleo-Indian Period (12000 - 6500 B.C.) occurs on the surface in all parts of the region. This is readily apparent from studying amateur collections. Paleo-Indian Period manifestations have been documented from two sites, the Pine Spring Site (Sharrock 1966) and the Finley Site (Howard, Satterthwaite and Bache 1941). The former is a stratified site with components ranging in age from 7750 B.C. to A.D. 1200. The Finley Site is a Cody

Complex buffalo kill and camp. Both sites produced evidence indicating that large-game animals were exploited. Both are in areas that were, for unknown reasons, also very attractive to peoples of subsequent time periods (Satterthwaite 1957).

Altithermal Period (6500 - 2700 B.C.) occupation (Bryson, Baerreis and Wendland 1970) has not yet been recognized in the area. However, cultural horizons from this period of climatic desiccation in western Wyoming do occur in adjacent areas and, hypothetically, exist here (Frison 1976a, 1976b).

The majority of surface finds and the majority of sites located as the result of past surveys probably represent the Middle Period (2700 B.C. - A.D. 500). Most of these sites are small, superficial, single-component Archaic manifestations and have been conspicuously ignored by those searching for more extensive and attractive stratified sites.

Recent investigations in the Green River Basin have yielded a Late Prehistoric Period (A.D. 500-1800) buffalo trap and butchering site (Frison 1973) and a Shoshonean campsite (Frison 1971). Two other Late Prehistoric antelope traps have been reported from that area but remain to be fully investigated. A large number of additional Middle and Late Prehistoric Period sites are known to exist in the region but have not been subjected to professional investigations and are not documented in the literature.

Remains from the Historic Period are also plentiful (Purdy 1959). Famous pioneer routes such as the Cherokee Trail, Oregon-California Trail and Mormon Trail mark the arrival of early European settlers. The region was also important to early fur traders who used it

extensively. Two early outposts, Fort Bridger and Fort Supply, and the famed mining complex at South Pass City are also of historic interest.

THE FOSSIL BUTTE SURVEY

Specific areas to be covered each day were plotted on a project map and systematically investigated until the entire study area had been surveyed. Sites were permanently recorded on the Wyoming State Register and materials were taken to the University of Wyoming to be catalogued, analyzed and stored. Vehicles used for the survey remained on established roads and the entire reconnaissance was accomplished on foot.

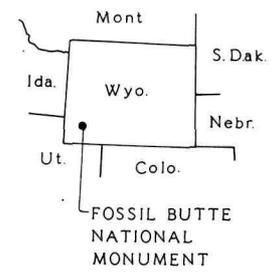
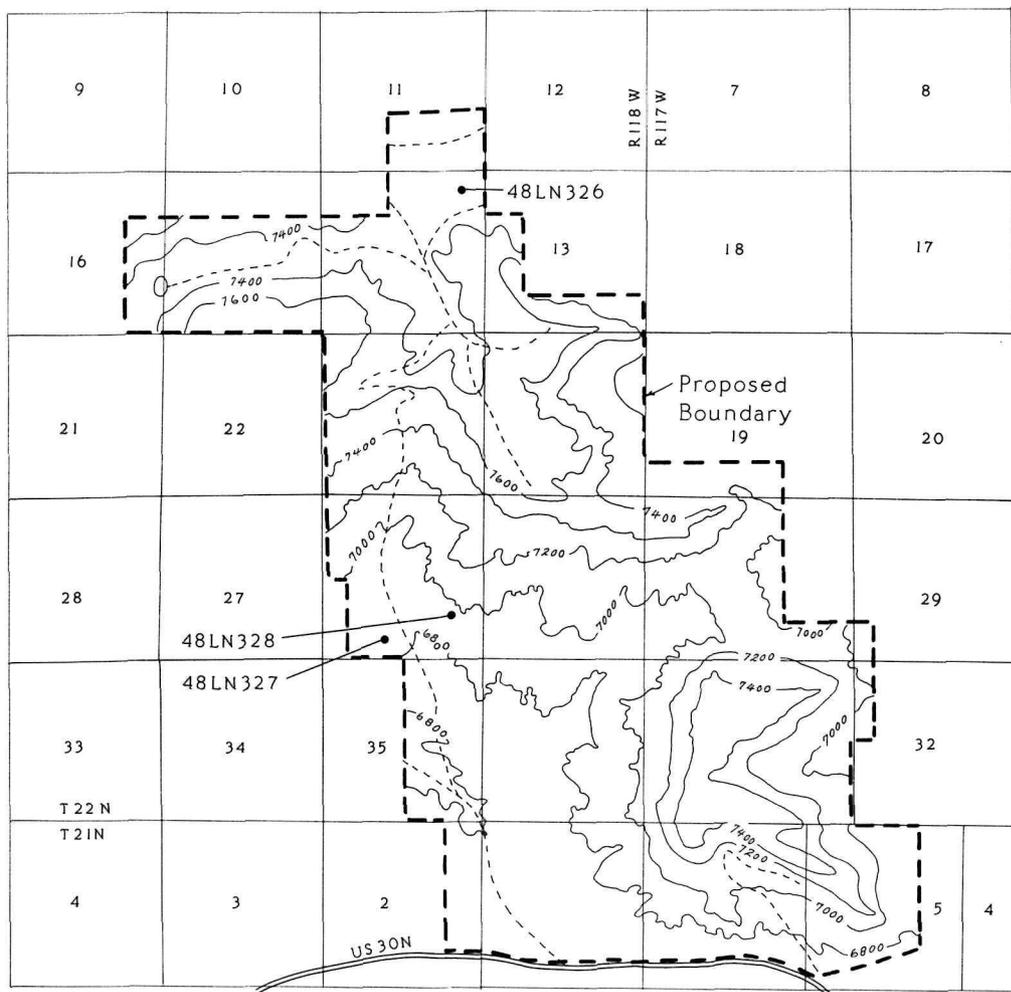
Surface materials were scattered throughout the monument. Although these isolated finds indicate past utilization of the area, it was not considered necessary to mark each individual artifact location. The inability to extract meaningful data from these surface materials, found without significant cultural context, does not negate their importance. Rather, it reflects a weakness in present methodology.

Only three sites were located (Fig. 2).

48LN326

A large campsite was found in the N.E.¼ of section 14, T. 22 N., R. 118 W. (cover). Bones, projectile points, grinding stones and large quantities of debitage were eroding out of a talus slope near a spring. Neither the precise spatial nor temporal extent of the site could be determined without test excavations, but it appears to cover several acres and may have considerable depth.

Five projectile points (Fig. 3a, b, c) were found ranging from nearly complete to very fragmentary. These are corner-notched points



FOSSIL BUTTE NATIONAL MONUMENT



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Figure 2. Monument map and archeological site locations.

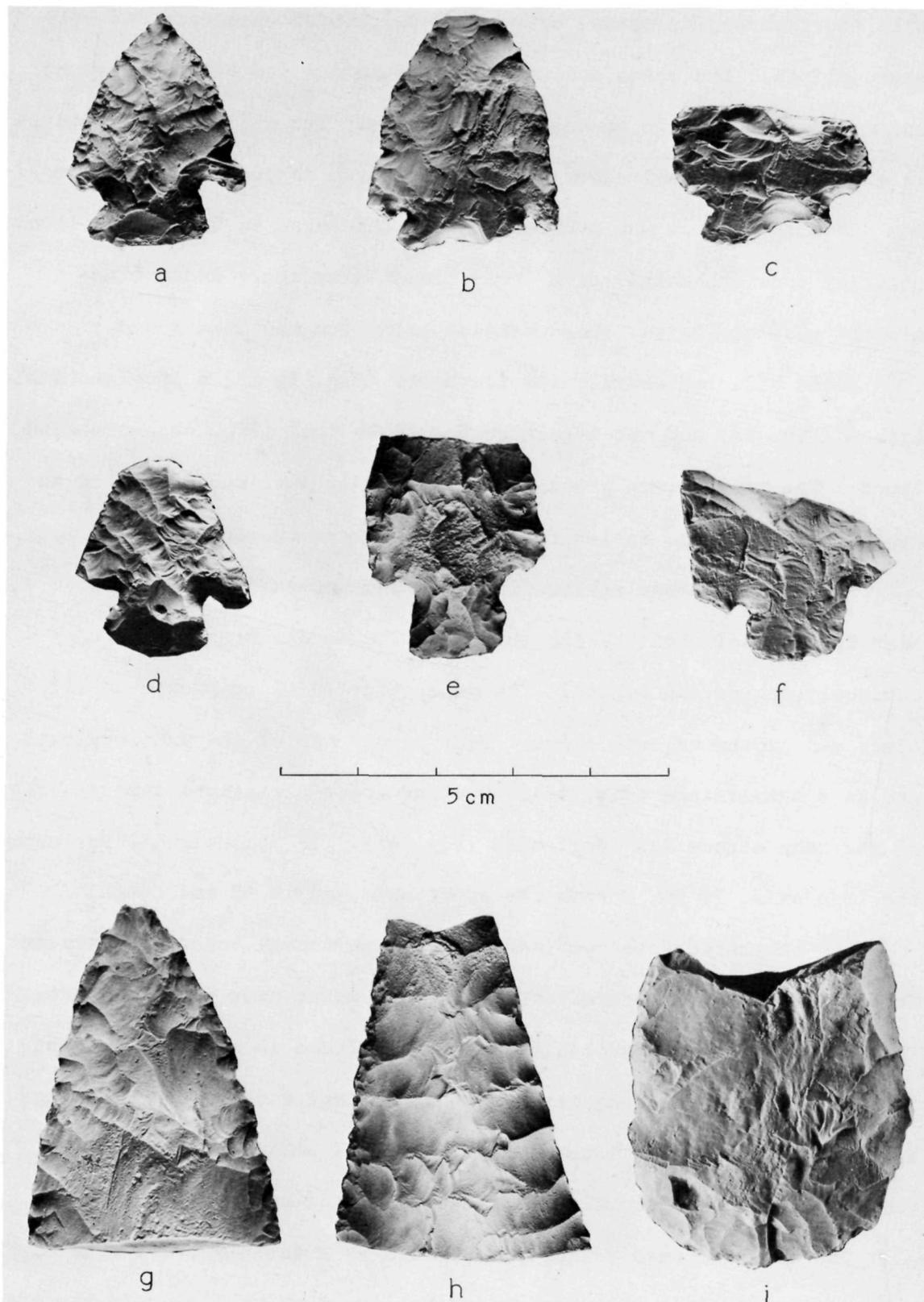


Figure 3. Artifacts from 48LN326 and 48LN327. a-c, projectiles, 48LN326; d-f, projectiles 48LN327; g-i, bifacial knife fragments, 48LN326.

with short expanding stems, convex bases, rounded shoulders and very sharp points. The bases and stems of the points are slightly ground but no grinding exists on the lateral edges. The points are bi-convex in cross section; their average maximum length is 33 mm., average maximum width is 24 mm. and average maximum thickness is 6 mm. The lithic material consists mainly of a local bluish-grey chert and a fine-grained grey quartzite. One obsidian point fragment was found.

Three bifacial chert knife fragments (Fig. 3g-i), a problematical biface (Fig. 4a) and one use-retouched flake tool (Fig. 4b) were also found. The knives were probably triangular in outline, unnotched and approximately 80 mm. in length before they were broken.

Several sandstone metate fragments and one sandstone mano were also found eroding out of the surface. The metate fragments are obviously pecked and ground. The mano (Fig. 4d-f) is pecked on all edges and ground on both sides. Wear on one end of the mano suggests use as a hammerstone (Fig. 4d). Obvious cross-striations indicate use of the mano across its short axis (Fig. 4f). It measures 131 mm. across the long axis, 79 mm. across the short axis and is 42 mm. thick.

Two butchered antelope (*Antilocapra americana*) bones were present. The distal end of a mature left tibia was broken near the mid-shaft. The bone is scorched, probably from being placed in a fire. A right acetabulum bears chopping marks at the proximal ends of the ilium and ishium and cuts on the lateral side. Several smaller bone fragments were scattered throughout the site but were not collected.

The site has been slightly disturbed by a vehicle trail running north and south below the spring and by livestock wallowing in the area.

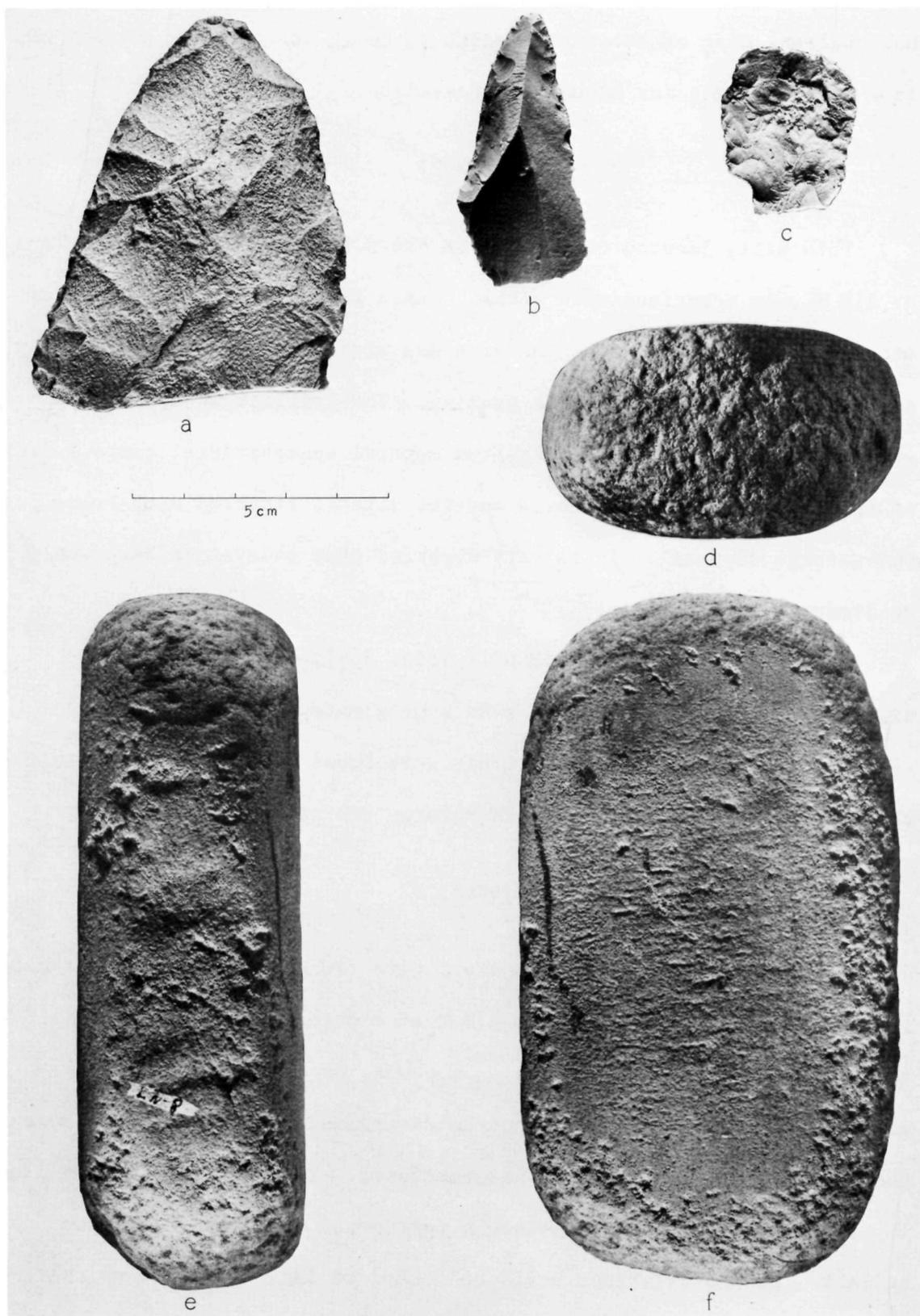


Figure 4. Artifacts from 48LN326 and 48LN327. a, problematical stone tool, 48LN327; b, use-retouched tool, 48LN326; c, bifacial blade, 48LN327; d, end-view of mano/hammer, 48LN326; e, side-view, mano, 48LN326; f, top-view, mano, 48LN326.

Nonetheless, most of the site appears to be in its original context and is a good prospect for extensive excavation.

48LN327

This site, located on a ridge in the S.W.¼ of section 26, T. 22 N., R. 118 W., is a surface site without depth (Fig. 5a). Several obscure stone circles are present. The area has also been highly disturbed by a graded road and by livestock grazing. The artifact materials are scattered and mixed with debris from several sheepherders' camps. Many of the stones have been removed and the site is littered with holes dug for garbage disposal. It is very doubtful that excavation here would be productive.

Projectile points from 48LN327 (Fig. 3d-f) are typologically similar to and probably of the same approximate age as those from 48LN326. Although other stone tools were found (Fig. 4c), it is unlikely that subsurface exploration would enlarge the artifact sample.

48LN328

Buffalo bones (*Bison bison* ssp.) were found protruding from a cut-bank along Chicken Creek in the S.E.¼ of section 26, T. 22 N., R. 118 W. at a depth of two feet (Fig. 5b). However, no associated cultural material was found. It could not be determined from the exposed bone if the animal(s) had been killed and butchered. The bone was left in place. It is definitely bison and probably represents one or possibly two animals. Test excavations would be needed to determine whether cultural manifestations are present or if the animal died from natural causes.

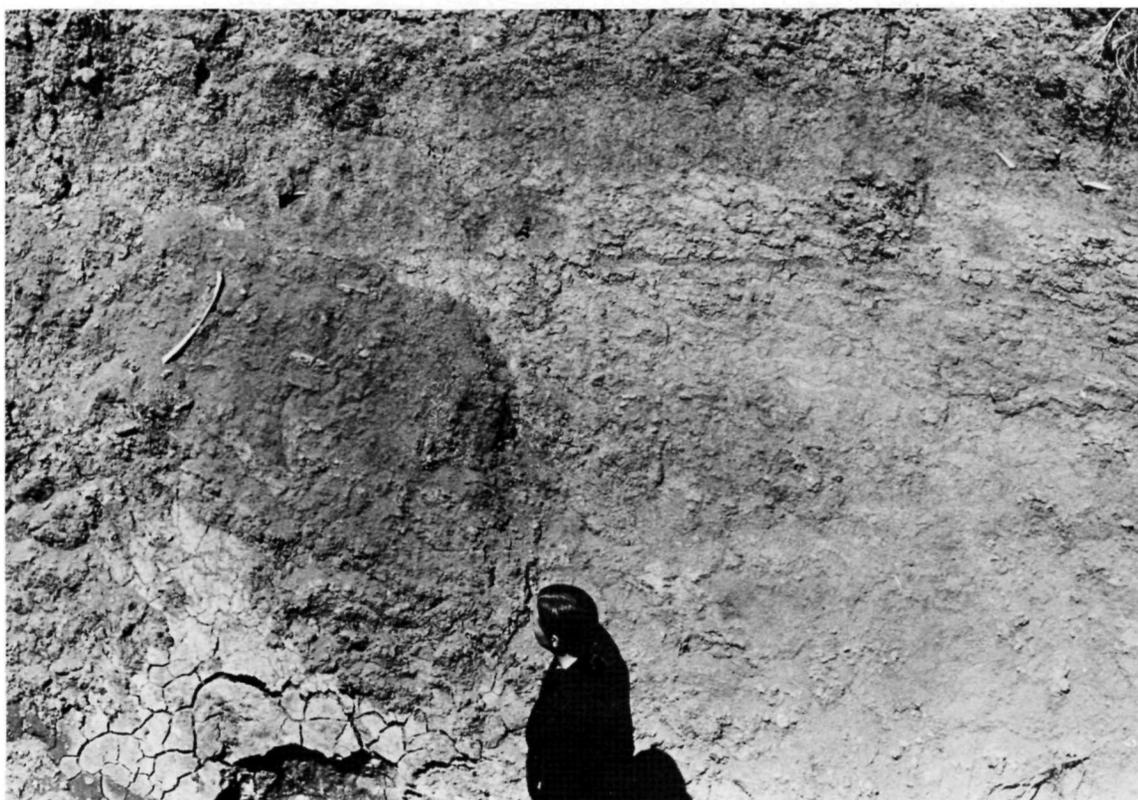


Figure 5. Sites 48LN327 and 48LN328. a, view east across 48LN327; b, bison remains eroding out of cut bank, 48LN328. Author in the foreground.

DISCUSSION AND RECOMMENDATIONS

The region around Fossil Butte is transitional between the arid basin and the mountains. Such zones generally support a great variety of plant and animal resources and seem to have been especially important to prehistoric hunting and gathering nomads. During certain times of the year this ecotone provided foods essential to an economy based on seasonal availability of resources. Such areas are not conducive to food production or development of large sedentary populations. Instead, they can only support small nomadic bands that exploit the variety of floral and faunal zones as desired resources become available.

48LN326

This site has the potential to significantly contribute to the archeological record and has been nominated to the National Register of Historic Places. The site should be protected, and testing should be initiated in the near future to determine its spatial and temporal limits.

The site was probably occupied on a seasonal basis for many years. Grinding stones suggest the preparation of vegetable foods. Several edible plants occur close by today (Table 1). Most of these mature by mid-summer and are available until late fall and early winter (Beetle and Marlow 1974:37). From November to June the site is usually covered by several feet of snow. These factors suggest that it may have been occupied during late summer or early fall. Study of the faunal remains from the site should yield further seasonal data.

The presence of butchered and burned bone indicates that the presumed vegetal diet of the occupants was supplemented with meat. Hunting was probably carried out on an individual or small-group basis.

Table 1. Edible Plants Near Site 48LN326*

GRASSES	COMMON NAME
<i>Elymus cinereus</i>	wild rye
<i>Bromus marginatus</i>	mountain brome
<i>Bromus polyanthus</i>	brome
<i>Hesperochloa kingii</i>	king spikefescue
<i>Oryzopsis hymenoides</i>	Indian ricegrass
<i>Agropyron dasystachyum</i>	wheatgrass
<i>Agropyron smithii</i>	wheatgrass
<i>Agropyron repens</i>	quackgrass
<i>Agropyron spicatum</i>	wheatgrass
<i>Agropyron trachycaulum</i>	wheatgrass
<i>Poa fendleriana</i>	mutton bluegrass
<i>Poa pratensis</i>	Kentucky
<i>Poa secunda</i>	sandberg bluegrass
TREES	
<i>Pinus flexilis</i>	limber pine
FORBES	
<i>Balsamorhiza sagittata</i>	arrowleaf
<i>Linum lewisi</i>	flax
<i>Helianthella uniflora</i>	sunflower
<i>Helianthella multiflora</i>	sunflower
SHRUBS	
<i>Atriplex confertifolia</i>	shadscale saltbush
<i>Atriplex gardneri</i>	Nuttall's saltbush
<i>Shepherdia canadensis</i>	buffaloberry
<i>Ribes cereum</i>	currant
<i>Amelanchier alnifolia</i>	serviceberry
<i>Prunus virginiana</i>	common chokecherry
<i>Rosa woodsii</i>	wild rose

*Compiled by D. B. Marlow - Field Research Assistant, Range Management Section, University of Wyoming.

Communal kill sites appear to be rare in this area when compared to the large number of these sites found in other areas, such as the Powder River Basin and the Laramie Plains. Perhaps large herding animals were simply not available or Late-Archaic adaptations did not lend themselves to large-scale cooperative activities.

No date is available for the site, but the projectile points are typologically similar to those from the Late Middle Prehistoric Period. They compare favorably to points from the Shoshone Basin (Mulloy 1954: 65), dated at 1500 B.C.; from Glendo Reservoir (Mulloy 1967:1), dated at 50 B.C.; from Pine Spring (Sharrock 1966:25), dated at 1685 B.C. and from Magic Mountain (Irwin-Williams and Irwin 1966:216), dated at about 100 B.C. They are similar to Danger Cave materials believed to date about 200 B.C. (Jennings 1957:93).

48LN327

This site has been almost entirely destroyed and no further work is recommended. It is believed to be of the same age as 48LN326, based on similarity of projectile points.

48LN328

Testing will be needed to determine if this site is cultural or paleontological in nature; in the meantime, it should be protected.

CONCLUSIONS

Prior to this survey no sites were known from Fossil Butte National Monument. However, this work was only an inventory; no in-depth studies were made at any of the three sites found. Interpretations of 48LN326

were based on a very small artifact sample, are very tenuous and are of a preliminary nature. Hopefully, future plans for the monument will include considerations for study and interpretation of 48LN326 and for testing of 48LN328.

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