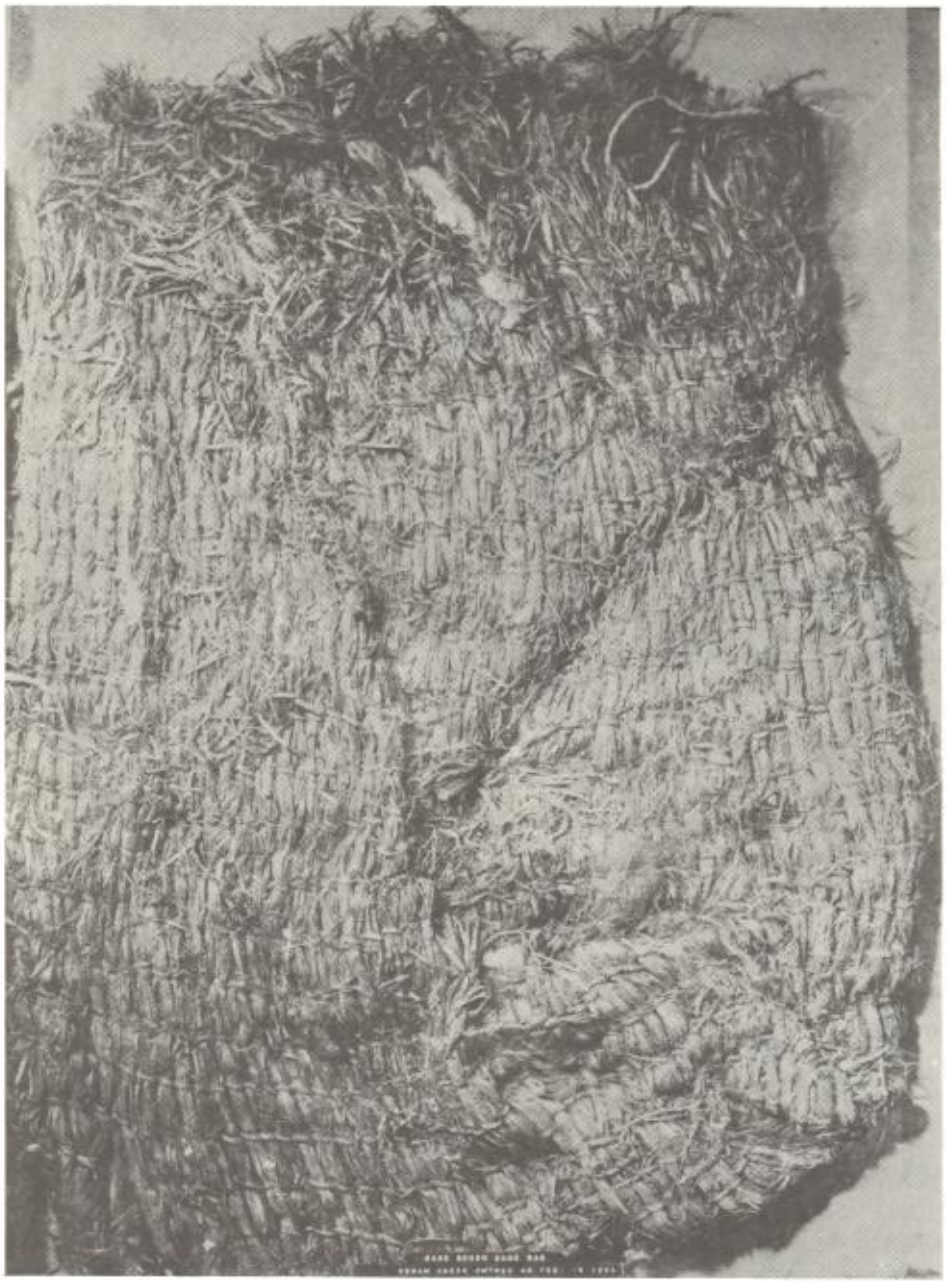
IDAHO ARCHAEOLOGIST



COVER PHOTO by Everett Clark. Sagebrush bark bag found on Squaw Creek, Owyhee County, February 16, 1964.

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NOTICE TO AUTHORS

All manuscripts should conform as nearly as possible with the style established by the Society for American Archaeology. (See page 13, Vol. III, No. 1 and page 1, Vol. II, No. 2, *Idaho Archaeologist)* Manuscripts should be typed double-spaced with 1½-inch margins and submitted in the original and two copies. The *Idaho Archaeologist* will publish articles concerning archaeology in Idaho and those parts of abutting states and provinces included in the Columbia drainage and the Great Basin.

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ALL WE FOUND WERE LITHICS

By
Miranda Warburton
and
John A. Hanson

ABSTRACT

This paper presents results of the initial phase of a Class II (sampling) inventory conducted on a portion of the Bureau of Land Management's Shoshone, Idaho District. The on-ground inventory was completed during the 1979 field season, but results have not yet been analyzed. What is reported here are preliminary results from one season's work including tentative thoughts and some recommendations applicable to future projects of this sort.

Washington State University
Pullman, Washington
September, 1979

Shoshone District
Bureau of Land Management
Shoshone, Idaho
September, 1979

INTRODUCTION

The Shoshone District Office manages over two million acres (810 thousand ha) of public land from American Falls to King Hill (east-west boundaries) and from Ketchum-Sun Valley to the north rim of the Snake River (north-south boundaries). The study area for the inventory lies in the northern portion of the District and is locally known as the Sun Valley Planning Area (Maps 1 West and East). It is comprised of three Planning Units and includes approximately 243 thousand acres (98.3 thousand ha) of public land. The study area is in a transitional topographic zone between the Snake River Plains and Sawtooth Mountains and includes those portions of the Camas Prairie (in the Fairfield area) which remain in Federal Ownership. Many of the total acres are in areas of high relief, both in the foothills and lower reaches of the Sawtooths. Elevation ranges from 1433 m to more than 2745 m. The Sawtooth National Forest forms the northern boundary of the study area. Craters of the Moon National Monument forms the eastern boundary and the Boise BLM District borders the area on the west.

Prior to initiation of the 1978 investigation, there had been no systematic inventory accomplished on the public lands in the project area. The land status (ownership) pattern is a logistical nightmare. In the majority of the project area public land is irregularly interspersed with private and State-owned lands. Most of the Camas Prairie, a known high site density area, is privately owned and farmed and was thus outside of our domain. Only in the eastern portion are there reasonably sized blocks of contiguous public land, and much of it is virtually inaccessible.

A literature search conducted prior to the field inventory revealed little concerning cultural resources on the public lands. The general area has been occupied by Euro-Americans only for about 110 years. The initial non-native settlers farmed and ranched, but by 1880, the first of the famous Wood River Mines had begun operation and population increased rapidly. Much of the historical record for the project area is devoted to discussions of the mining activity. Many historic cultural resources are being recorded and/or validated by District geologists during mineral inventories.

THE RESEARCH DESIGN

The cultural resource inventory was designed as a discovery rather than validation process. There was information to indicate a long period of aboriginal occupation (Butler 1963) culminating within the last century (Steward 1938; Murphy and Murphy 1960). However, there was little site-specific information available.

We reasoned that time and labor constraints precluded an intensive investigation of the entire area and that some priorities had to be set prior to initiating field work. We decided to confine our efforts primarily to areas of low to moderate relief. Based on Hanson's past field experience in the area, the ethnographic record, and previously recorded sites in the general area, the discovery potential was judged to be greater in the areas of low to moderate relief than in those of high relief. This is a different situation than in some other areas of Idaho where high relief characterizes large geographic areas.

The work was based on certain biases and assumptions that were made explicit in the form of a research design before field work began. We felt that by clarifying and making explicit statements, not only would we be able to be consistent in evaluating our own data, but that future investigators would also be able to do so.

The project area was stratified using drainage–non-drainage and the above-mentioned relief categories (high, moderate, and low). In this semi-arid area water was, and continues to be, an important natural resource and, as we were later to confirm, an important site location predictor. Due primarily to land status (ownership) patterns and logistical and access considerations, the inventory was conducted on 40-acre tracts with a survey search interval not exceeding 50 meters. Cultural resources were identified from surface survey. No sub-surface testing was undertaken.

The assumptions upon which the inventory was predicated were as follows: (1) that the present-day environmental factors are indicative of the prehistoric resource potential of the area; (2) that surface materials are indicative of prehistoric adjustments; (3) that the aboriginal subsistence pattern was characterized by a migratory seasonal round; (4) that settlement was based on resource availability and/or desirability during specific seasons; (5) that there were no *substantial* changes in the seasonal round activity patterns until historic times; (6) that variability in tool kits is representative of different activities; and (7) that there was little or no change in basic chipped and ground stone technologies until historic times.

An aboriginal cultural resource site in the project area was defined within the following parameters: scatters of cultural debris such that there were a minimum of five artifacts (including debitage) within a one-meter radius; scatters of cultural debris (including debitage) in which artifacts occur at a minimal average rate of one per square meter within a twenty-meter radius; any structure or cultural feature visible on the surface; petroglyphs and/or pictographs which occur singly or in groups without other cultural debris necessarily present; and lithic source areas which may or may not exhibit direct evidence of utilization. The use of minimal numbers of artifacts in a given measured unit (e.g., one-meter radius) to define cultural resource sites has been recently criticized in a thought-provoking article by Plog, Plog and Waite (1978).

Isolated finds were recorded as to their presence. They were not recorded as cultural resource sites.

INVENTORY RESULTS

The inventory of 1978 covered approximately 3700 acres (1497 ha) or 1½ per cent of the approximately 243 thousand acres (98.3 thousand ha) of public land in the project area. An additional 8,900 acres (3602 ha) (3.7%) was inventoried during the 1979 field season.

Following completion of one season's work, we realized that at a general level, the sites discovered and recorded could be labeled surface "lithic scatters," a category well recognized (Butler 1978) as constituting the greatest number of sites in the general region. However, from close examination of the surface assemblages we were able to categorize the sites into four broad groups as follows:

(1) **Quarries**: Two lithic source areas, or quarries, were discovered and recorded. Both sites were ignimbrite quarries. One contained some obsidian on the surface, but we are not certain that its presence was a natural occurrence. The ignimbrite does occur naturally in the general project area. The site with the obsidian was also characterized by a distinctive gray ignimbrite with light inclusions that often resemble snowflakes. It does not, however, appear to be "snowflake obsidian." Flakes of this or a very similar material were also found less than one kilometer away at a large

campsite. The larger of the two quarries, on Timber Butte, immediately east of Fish Creek Reservoir, had black ignimbrite of indeterminant quality, along with very high quality brick red/brown ignimbrite.

Neither quarry site contained any finished tools, with the exception of one possible side scraper. Only small nodules were observed at both sites. If these are representative of other local, but currently undiscovered, quarries, the presence of only small nodules would limit the size of flakes which could be struck from them as well as the size of the eventual end product. From both the lack of end products (finished tools) at the quarries and the general morphology of the flakes and degree of cortex, it appears that blanks were being fashioned there, to be made into finished tools as time allowed or circumstance dictated.

(2) **Major Campsites or Villages**–One major campsite was recorded on the Western end of the Camas Prairie. Very large for the region, this site overlooks Wild Horse Creek and extends a minimum of 600 meters east-west and 150 meters north-south. There were large amounts of both chipped and ground stone and a wide variety of raw material present in the surface remains. The site appears to have some depth, and sub-surface features seem a distinct possibility.

This second category of "surface lithic scatter" can probably best be described as a "temporary-permanent" or "seasonal" occupation. It appears that the site was occupied each year for a protracted period of time but was not the product of a truly sedentary population.

Owing to post-occupation surface disturbances, including sheep herding activities and wildfire, it is not presently clear that the surface remains are indicative of the true extent of the site. Subsurface testing will be necessary to accurately delimit the site's dimensions.

(3) **Base Camps or Hunting Camps**–These sites vary in size, but although sometimes extensive, do not approach the size of major camps as described in number (2) above. They are characterized by flaked stone debris and occasional milling stones. The presence of milling stones may be indicative of women's gathering and processing activities. Conversely, when only flaked stone artifacts and debris are present, it may indicate a male hunting camp or way station. Because of the lack of archaeological evidence for root-digging activities, however, this interpretation should be tested by others prior to formally dichotomizing site functions.

(4) **Small Surface Scatters**–These occur predominantly on side slopes above presumed animal watering areas. They appear to represent an extremely temporary occupation in which one individual or very small group were waiting for big game.

OBSERVATIONS

Based on the assemblages, very few of these sites fall into any readily observable pattern. With the exception of the quarries, the sites consist of a high percentage (approximately 90%) of secondary flakes and a few primary flakes. These flakes are usually small (smaller than a quarter). Their size may have been dictated by the size of the raw material available or it may have resulted from the raw material procurement activities in which only blanks/preforms or other easily transportable raw material was brought to non-quarry sites for finishing.

On some sites readily apparent concentrations were observed, but on others this was not the case. Some of these concentrations appeared to be areas where an individual had engaged in flaking activities and then moved on. It should be stated, however, that the project area has been heavily impacted by agricultural, ranching and mining activities for many years. What the archaeologist perceives to be surface evidence of aboriginal activity areas may be the result of wildlife and livestock trampling combined with the destructive effects of vandals and illegal collection.

A much wider variety of raw materials (including cherts, jaspers, chalcedonies, etc.) was noted at the larger sites. This may be the result of trade or a larger site catchment area for raw material procurement and may indicate a more intensive occupation of these sites than the others i.e. either larger numbers of people, a longer period of occupation, or a combination of both. Possible intentional heat treatment in the chipped stone assemblages was noted at several sites, and while these observations were based on characteristic pot-lidding and crazing of the stone as well as some color change and glossiness, neither time nor facilities allowed for further testing. Future investigation should indicate more conclusively if this is the case. It is possible that the pot-lidding

and crazing of certain flakes resulted from exposure to range fires.

One facet of the inventory process was an attempt to provide BLM managers and resource specialists with site location predictors. Initially several natural environmental factors were deemed important for predicting site location. These factors included soil, presence of water, vegetation, and slope.

Preliminary results suggest that the least reliable of these factors is vegetation. Except at the higher elevations, on steep slopes, and in localized riparian zones, the dominant vegetation throughout the Sun Valley Planning Area is sagebrush (*Artemisia* spp.), which in many, but not all cases, has resulted from years of overgrazing by livestock. The other native plant species have been greatly disturbed by the intentional introduction of various seeded grass species (such as crested wheatgrass), as well as discing and reseeding operations for rehabilitation of the land after range fires. The dominant plant species present on virtually every site recorded was sagebrush.

A more reliable site location predictor, and one that may be indicative of past vegetation, is soil. Every site discovered (except the category scatters) was characterized by rich, medium to fine textured soils. The soils on which surface sites are located exhibit a lack of gravel-sized particles. In fact, the inventory of one forty-acre (16.2 ha) tract in the North Camas Planning Unit revealed two low ridges equidistant from water. One had extremely gravelly soil while the other had fine-textured, deep soil. A site was located on the ridge with the deep soil but not on the ridge with the gravelly soil, and although this may have been fortuitous, most other sites were found in similar soil situations.

A second, significant site location predictor is the availability of water. All sites recorded except quarries were within 100 meters of a water source, either a creek or a spring. At the majority of sites there was running water during the summer months. In the other cases, water runs in the spring months and the creek beds appear recently cut, perhaps resulting from a drop in the water table.

The fourth natural environmental factor considered as a site location predictor was slope. Conjoined with water availability and soil, slope was an important constituent in site location. Except for the quarries, sites were not discovered on hilltops, mountain tops, high ridges, or, except as mentioned, on steep slopes. The Timber Butte quarry, for example, is located on a very high and fairly inaccessible butte. Most importantly, all sites (except the quarry and one of the small flake scatters) were located on slight rises just above water courses with little or no on-site slope.

The combination of three factors—water, soil, and slope— proved to be extremely useful for site location prediction in the field. As noted, present-day vegetative patterns were sorely deficient as predictors.

CONCLUSIONS

A general observation concerning aboriginal site location was generated. It appears from our preliminary investigations that many of the areas that were desirable for the native peoples have also been found desirable by the Euro-American populations. Many of the areas which are heavily populated or farmed today are thought to have contained the greatest densities of aboriginal sites as well. This has been a contributing factor in our lack of detailed knowledge concerning the prehistoric and protohistoric "lifeways" of people in the area.

Additionally, there were areas inventoried in which no surface cultural remains were observed but in which the three primary site location predictors were concordant, suggesting the high potential for subsurface cultural resource sites. In these areas, subsurface testing will be necessary prior to the implementation of surface disturbing project activities.

Many of the conceptual and technical problems encountered during the first season's work remain unresolved. These include, but are not necessarily limited to:

(1) **Dating surface sites**—Without as yet well-developed dating techniques for ignimbrite (the most common raw material found on sites in this area), and lacking diagnostic artifacts, it is difficult to place surfaces sites in a temporal framework. Do surface sites in the area, for example, range over the entire temporal span of human occupation, or are they more likely manifestations of the recent end of that span?

(2) **Sample evaluation**—How does the archaeologist with extremely limited time and money resources evaluate a sample based solely on surface sites? In the case of this particular project, we had too little time, too little money, and too many acres.

(3) The "ethnographic analogy" problem– Although certainly not confined to this area and project, this problem has continued to puzzle us. Are there differences between what we know from the ethnographic record and what came before that record was available to us? Is it reasonable to expect that historic Shoshoni-Bannock patterns held for prehistoric Shoshoni groups, and further, for cultural groups which exploited the area prior to the ethnographic Shoshoni? In our opinion, it is very easy to fall into the trap (not necessarily consciously) of immersing oneself in the written accounts, examining the resources in the field (without being able to date them precisely) and evaluating the resources from the known ethnographic patterns. Is this or can this be justified? How did hunter/gatherers of 7000 years ago differ from hunter/gatherers of 150 years ago? Did they differ? How does the archaeologist know?

We consider these to be important substantive issues that will not be easily resolved.

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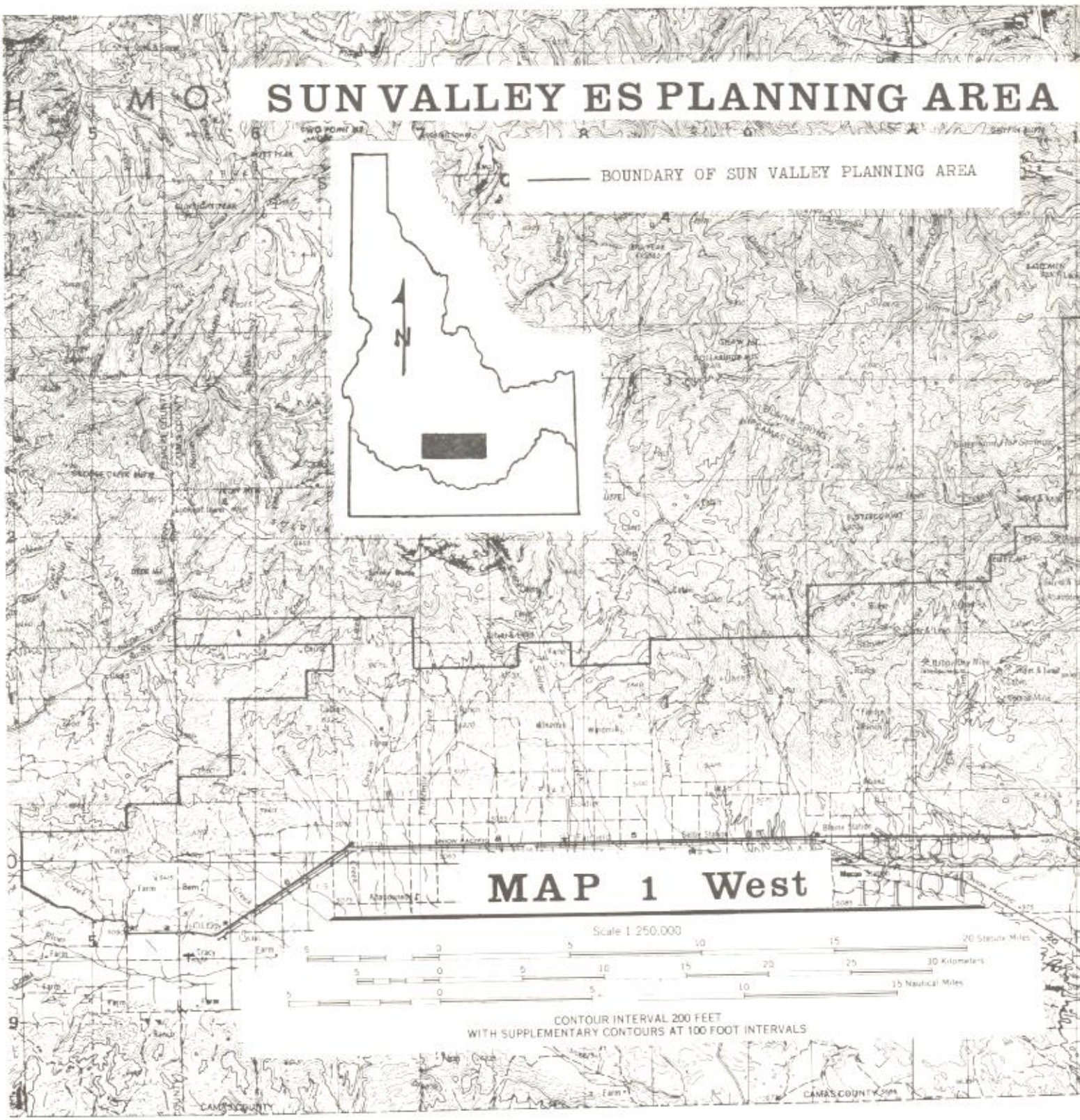
SUN VALLEY ES PLANNING AREA
BOUNDARY OF SUN VALLEY PLANNING AREA
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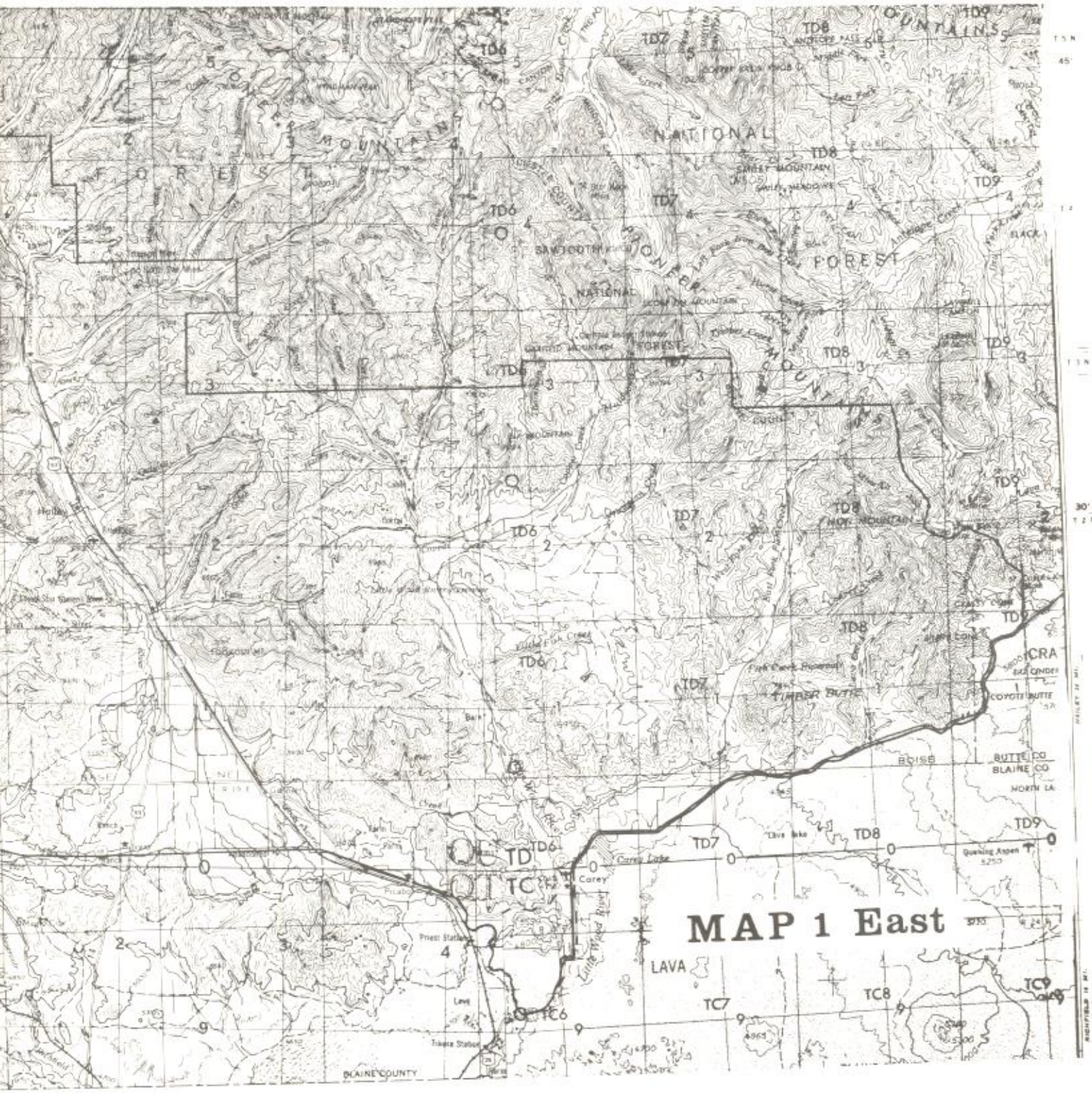
CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
CAMAS COUNTY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LAVA
Carey
Carey Lake
Little Wood River
BLAINE COUNTY
BUTTE CO
BLAINE CO
BOISE
TIMBER BUTTE
COYOTE BUTTE
NATIONAL
FOREST

MORE INCISED COBBLES

by
J. Huntley and W. Nance

Two examples of incised cobbles from southwestern Idaho were discussed several years ago by Mark Plew (1976). Since that time, three additional examples have come to light and are discussed below.

Everett Clark recovered the first artifact at Coyote Lake, Malheur County, Oregon (Figure 1a). The flat gray cobble is 11.5 cm in length, 7.6 cm in width and 2 cm thick, exhibits multiple incised lines and small striated areas on both flat surfaces. The lines range from 1 mm to 8 mm in length and are of varying width, ranging downward from 1 mm. Although this cobble is incised, it differs from those discussed below because the incising occurs only along the edges rather than on the flat surfaces. The incising appears to have been caused by some utilitarian purpose, e.g., sharpening needles or some other similar activity. This cobble also exhibits some striation along the edges. These striations, too, may be the result of use since they are irregularly placed along the cobble edge and are of varying width and depth. Grinding appears to have caused the lines rather than a clean cut with a sharp tool.

The Huntley artifact (Figure 1b) is an incised, smooth, waterworn quartzite cobble, 9 cm in length, and 6 cm in width. It is essentially round, although slightly flattened. Eight lines are incised lengthwise into the stone on one flat surface. The lines are approximately 2 mm apart and are 3.5 cm in length. The artifact was recovered from a large unsurveyed campsite on a tributary of Washington Gulch, located in the Jordan Creek drainage. The fact that this cobble contains eight lines as does the Schaertl artifact is interesting, but it remains to be seen whether this is of significance or merely happenstance.

The Nance artifact (Figure 1c) was recovered on a low gravel terrace located in the middle of Bennett Creek drainage in Elmore County. This area has in recent years been subjected to intensive agricultural use and was recovered as a result of a potato digging operation. The site had also been worked to a depth of one (1) meter in the course of a subsoiling operation, so exact provenience is difficult to determine, except within rather broad (½ hectare) limits. The artifact is a very dense, fine grained, naturally-rounded, elongated semicylindrical cobble. It is gray-brown with dark, naturally occurring banding and is very highly polished. The incising is in a roughly rectangular design of a 10 by 13 line crosshatched area. The incised area is 5 cm long and 3½ cm wide. All the lines are cut or etched into the stone at a uniform depth of somewhat less than 1 mm. The method of engraving appears similar to that exhibited on the Huntley cobble. The incising technique is not based upon pecking or grinding, but, rather, the lines seem to be cut into the stones in a very precise manner with some type of sharp cutting tool.

The type of manufacturing method employed for the Plew and Schaertl cobbles in comparison with the Huntley and Nance items is undetermined at this time. The Clark cobble also exhibits the small incised lines, but they are of varying dimensions and do not show the fine definition exhibited by the incising on the Huntley and Nance cobbles.

The incised cobbles described, except the Clark item, are from drainage systems emptying into the middle Snake River. The Nance cobble, however, appears to be the only incised stone of this type to be from the north side of the Snake River.

The function of these incised cobbles is unknown. It was suggested by Plew (1976) that they may have been utilized as gaming devices. It is here suggested that their use in charm or medicine activities should also be considered.

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1976 Notched Stone Cobble from Southwestern Idaho. *Idaho Archaeologist* 1(2)10-11.

EDITOR'S NOTE:

We would appreciate hearing from anyone who has a stone or cobble such as those described in the foregoing article. Write a short description and describe where found in as much detail as possible and include a good black and white photo or scale drawing in ink. The photo or drawing should be 8" x 10" in size.

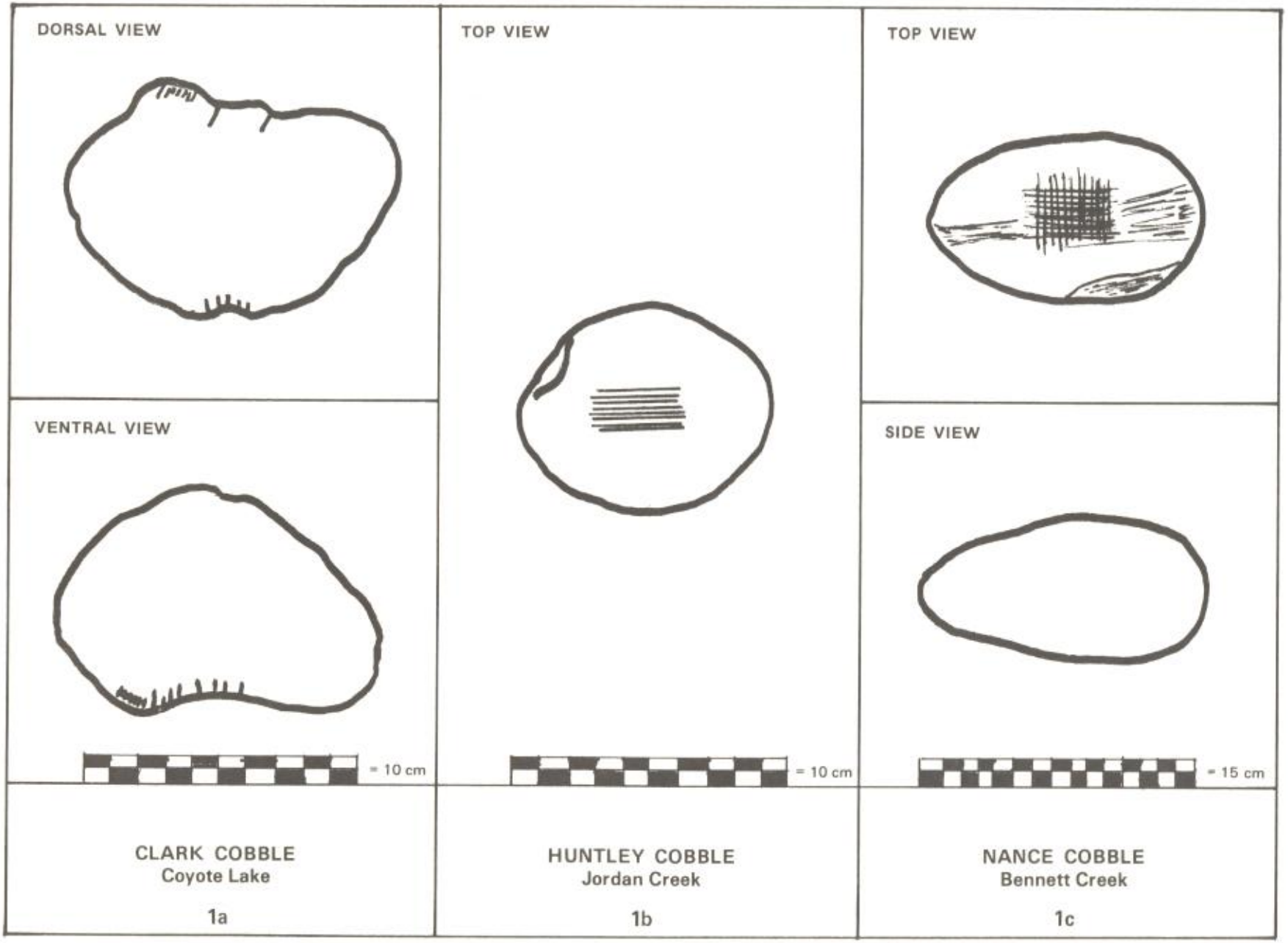

FIG. 1 INCISED COBBLES

AN ATLATL WEIGHT FROM THE BLACKFOOT RESERVOIR, SOUTHWESTERN IDAHO

By
B. Robert Butler
Idaho Museum of Natural History
Idaho State University
May, 1979

Published descriptions of atlatl weights from the upper Snake and Salmon River Country are relatively few in number and confined mainly to surface finds made in the area lying between the Snake River a few miles below the American Falls Reservoir on the west and the Blackfoot Reservoir on the East (Butler 1961, 1965; Miss 1974). Only one atlatl weight is known from north of the Snake River Plain. It was found by an amateur at a site at Hood Gulch in the Salmon National Forest in 1959 (reported in Butler 1961). Whether the published information reflects the general scarcity and geographical distribution of these objects is unknown. Atlatl weights of the types reported for the Upper Snake and Salmon River Country occur widely in the Intermountain West and on the High Plains (Butler and Osborne 1959; Newman 1967), but in the Pacific Northwest are found mainly along the Columbia River below its confluence with the Snake, possibly indicating an association with riverine resources in that region (Butler and Osborne 1959).

The specimen illustrated here was found at a site generally underwater at the southwestern end of the Blackfoot Reservoir, but which became extensively exposed during the unusually dry summer of 1977. It is a type II atlatl weight (Butler 1961) made of a soft stone, possibly argillaceous shale, that measures 13.2x1.9x1.5 cm and weighs 76 grams. The finder did not observe any other cultural materials associated with this find. However, I collected the remains of a secondary burial from the same vicinity during the same period of time (summer of 1977) and indications of other burials had been noted earlier by amateurs in the same vicinity (Miss 1974). Chipping detritus, mostly of siliceous minerals, is commonly found at low water in this part of the reservoir, along with finished chipped stone implements. Most of this material is picked over and up by beachcombers and collectors encamped at the nearby Dike Lake campground. Hence, it is difficult to ascertain the full range of prehistoric activities represented at this locality. Burials are obviously one of the activities represented here, but whether the atlatl weight in question was associated with a burial can not be determined at this time.

As with so many poorly documented surface finds, the one described here offers only a tantalizing glimpse of the potential archaeological record in the Upper Snake and Salmon River Country.

ACKNOWLEDGMENTS

A note of thanks is due Frances Forrest for her fine drawing of the atlatl weight and Linda Rohner for typing the manuscript.

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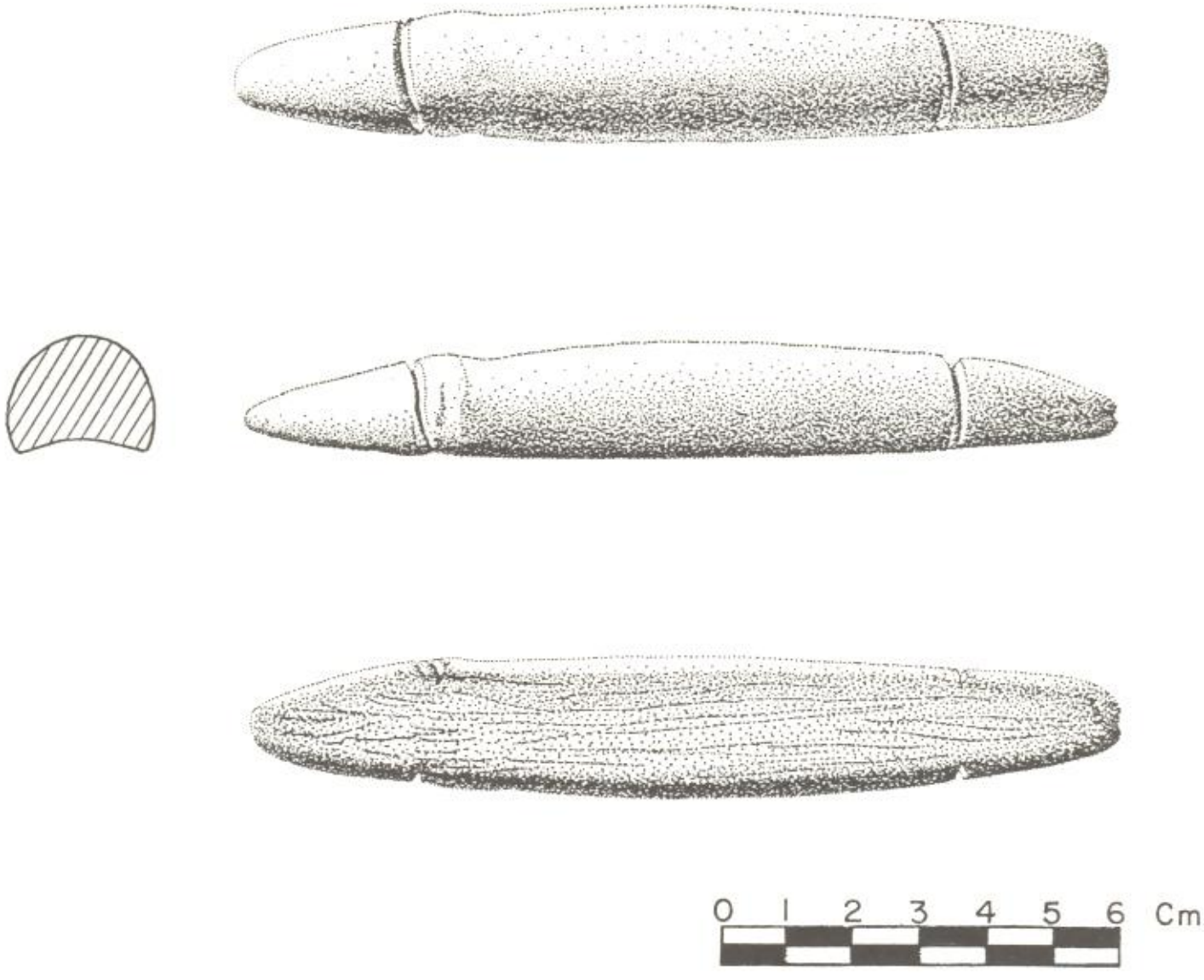

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BOOK REPORT

An Introduction to Environmental Archaeology. JOHN G. EVANS. Cornell University Press, Ithaca, New York, 1978. xiii + 154 pp., illus. $4.95.

Reviewed by Richard R. Harrison, Idaho State Office, Bureau of Land Management, United States Department of Interior.

This book is one of those uncommon works that is of value to the professional and amateur archaeologist alike. John G. Evans, a noted British archaeologist, states his purpose in writing the book as follows:

> This book is intended as a simple introduction to theoretical aspects of [environmental archaeology], and has been written specifically for the first and second year university students reading archaeology and related subjects such as environmental studies. It is also intended for extra-mural students, and for both professional and part-time archaeologists, particularly those engaged in their own excavations (xiii).

With a crisp, concise style Professor Evans has written a very readable primer of exceptional clarity. His general treatment of the array of techniques and methods from numerous scientific fields that can contribute to archaeological analysis from an environmental perspective is straightforward, balanced, and, for the most part, avoids complex, technical language. After reading Evans' book with care, the serious student and amateur—particularly the "dirt" oriented individual—will have gained the basic knowledge to proceed to more specialized works in environmental studies in archaeology.

The professional archaeologist will find Professor Evans' book useful because it provides a single, convenient reference for the numerous specialized techniques and methods in scientific disciplines that are generally recognized in North American archaeology as "ancillary studies." Those archaeologists who also teach will find Evans' book an inexpensive, supplemental text for introductory courses in archaeological methods and techniques. Moreover, in these days of rising economic inflation, the professional, amateur, and student will greatly appreciate the fact that this well-written little book is one of the better buys on the market.

The organization of the book is as follows: Chapter 1 is a brief outline of the main factors of the natural environment that are related, directly and indirectly, to human life. Chapters 2 through 5 amplify many of the ideas presented in Chapter 1 with substantive information and definitions. Chapter 2 deals with the various methods and techniques by which plant remains can be analyzed for environmental data. Chapter 3 addresses the analyses of animal remains in archaeological contexts. Chapter 4 is a discussion of soils and sediments and Chapter 5 focuses on select natural features such as coastlines, river valleys, and lakes, among others, and the nature of the environmental data that these may yield. Chapter 6, the final chapter, is a description of specific types of archaeological sites and features such as middens, urban sites, buried soils, pits and post-holes, among others, that may produce data on past human environments. The book's 129 pages of narrative are complemented with 52 illustrations, 6 tables, an appendix, a glossary and a bibliography.

Professor Evans' lucid book, however, is not without some flaws, although they should not seriously diminish the overall quality of the work. Since Professor Evans is a British archaeologist, he is, of course, prone to present his ideas within the framework with which he is most familiar, namely, Great Britain and Continental Europe. North American archaeological and environmental references are limited to only a mere handful of examples. In the light of the book's value for the student and amateur in particular, this is unfortunate. It certainly would not have detracted from the book in the least if Evans had made use of some of the important research of North American specialists such as C. Vance Haynes, Peter Mehringer, and Wakefield Dort, to name a few. In terms of prospective book sales, one would think that a general, introductory book of this kind should have been designed with the growing market of American amateur archaeologists and students in mind as

well as British buyers. If this work were more relevant in terms of North America, in all likelihood it would be more of a success both technically and financially.

Another and more serious problem with the book is Professor Evans' presentation of the theoretical orientation of what he defines as "environmental archaeology." Evans states that his book is an introduction "to theoretical aspects of [environmental archaeology] (xiii)." Curiously, it is just this aspect of the book that is the weakest. Rather than present theory in the form of scattered, brief comments, Evans should have devoted a separate chapter to the subject. In my view, there is a real need for an explicit presentation of just how "environmental archaeologists" perceive the interrelationships between the natural environment and human behavior, particularly with respect to prehistoric culture change and continuity. Since Evans has chosen not to present any genuine theoretical explication, the reader cannot understand "environmental archaeology's" place in the broader context of current archaeological theory (cf. Clarke 1972; Watson, LeBlanc and Redman 1971). In other words, the relevancy of "environmental archaeology" to the mainstream of modern archaeological theory is a mute issue in this book.

Due to the book's theoretical shortcomings, it would appear that Professor Evans' statement that his work "is in no way intended as a field manual or practical handbook (xiii)" will, in all likelihood, be disproven in time. It is paradoxical that Professor Evans' book, in actuality, comes closer to being that which he claims it is not, rather than that which he believes it to be.

In spite of its imperfections, this is a good book that has a great deal to offer about a particular perspective in archaeology. Professor Evans has done a laudable service to all who have an interest in archaeology—students, amateurs and professionals—by bringing together the numerous "ancillary" fields that today add so much to archaeological analysis and interpretation in a single, cogent book. Insofar as substantive information is concerned, it is without equal as an introductory book and a real bargain as well.

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