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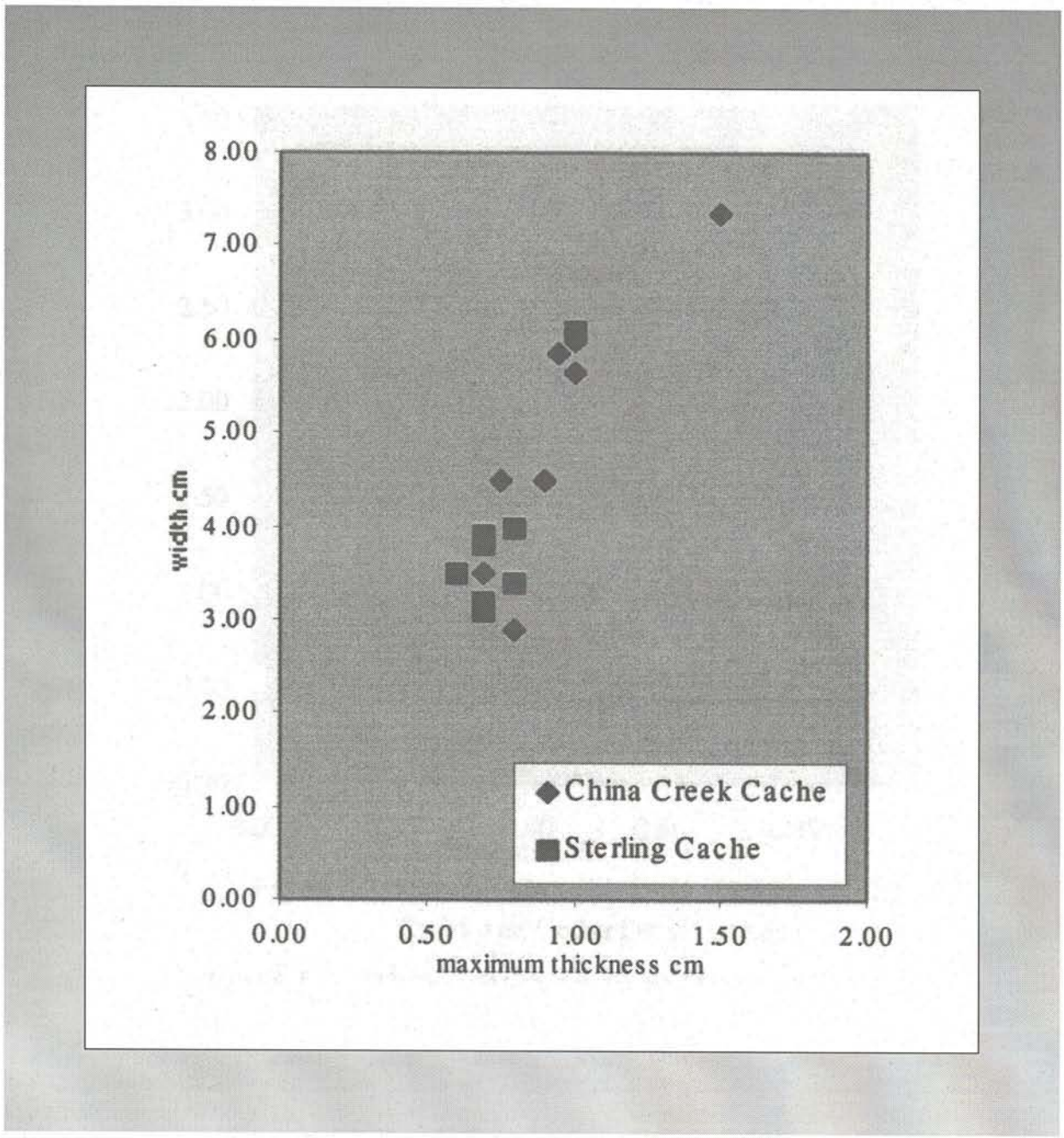

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Cover Photo: Plot showing width and thickness of China Creek and Sterling Cashes.

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THE CHINA CREEK CACHE

Steve Kohntopp

INTRODUCTION

In 1982, Joan and Gary Fay discovered the China Creek Cache at the confluence of China Creek and Salmon Falls Creek near the headwaters of Salmon Dam Reservoir (Fay, personal communication). This location is part of a larger area known as Browns Bench located approximately 32 km southwest of Rogerson, Idaho (Figure1). The China Creek Cache, not previously reported in the archaeological literature is analyzed here for the first time. The cache consists of seven cryptocrystalline bifaces, with three additional artifacts discovered nearby, including a small scraper, a broken biface blank, and a possible broken lanceolate point. The cache does not appear to be a utilitarian cache and may contain exotic material. An individual knapper in a single event manufactured the seven bifaces, and the material used originated from the same quarry source. The cache's exact purpose may never be understood; but due to its individual dimensions and morphology, may have been manufactured in the Late Plano or Early Archaic eras.

The cache was located on a sandy beach below an escarpment on the south side of China Creek and the west side of Salmon Falls Creek at approximately 1555 m ASL (Figure 2). A large irrigation dam built downstream in 1910 placed the site underwater – except in the early spring and again after the irrigation season in the fall. The site was personally inspected on October 29, 2000 with anthropologist James C. Woods of the Herrett Center for Arts and Sciences. The site is located on a low slope providing a view northward up China Creek, and up and down Salmon Falls Creek. According to Gary Fay (personal communication) this is the only good crossing of Salmon Falls canyon for several miles and could possibly have been a migratory path for the Paleo-Americans. Bowers and Savage (1962:18) stated, "The broad valley in which Salmon Falls Creek is located must have been desirable as a route of travel for early man between the Great Basin to the south and the Snake River plains on the north."

According to Gary Fay, the first lithic biface, (CC-1) was found lying on the margin with approximately 1/3 of the base exposed at an angle to the surface (Figures 3 and 4). Directly beneath the first biface, another biface (CC-7) was found on margin. Both bifaces were pointing southeast. The Fays excavated to a maximum depth of 20 cm. Below 13 cm the brown clay was mixed with .6 cm aggregate of sand. Joan Fay discovered a cache of three bifaces pointing to the southeast – each lying flat on top of each other and 7.5 cm below the surface. The upper (CC-2) and lower (CC-4) blanks were a moss color with a white blank (CC-3) in the middle (Figures 3 and 4). Another blank (CC-5) was retrieved 6.2 cm below the surface. The biface was lying at an angle pointing toward the southwest. A biface (CC-6) was discovered lying five cm below the surface. Gray in color, it also pointed toward the southwest. Seven lithic bifaces were found in the cache. These are exhibited in the illustration in Figure 5. Nearby, a broken biface blank (CC-9), a small scraper (CC-10) – dark red in color, possibly made from chalcedony or jasper – and a gray chalcedony or chert biface (CC-8) resembling a lanceolate point were discovered (Figures 6 and 7). An illustration of the three artifacts is presented in Figure 8. Even though these artifacts were not directly located with the rest of the cache, it is not conclusive that they are not part of the original cache. Except for the scraper, I have elected to include these artifacts in this analysis.

MEASUREMENTS AND DESCRIPTION OF CACHE

Length, width, and maximum thickness measurements of the China Creek Cache are presented in Table 1. The morphology of the original seven bifaces appears to be somewhat similar (Figure 5). The distal ends are broad except one blank that is more obtuse (CC-5). The nine artifacts appear to be made from either chalcedony or chert (Overstreet 1999:16). All the bifaces are translucent. The lateral margins of each blank are asymmetrical, except for CC-6 and CC-8, while the bases are generally straight. According to Woods (personal communication) the straight basal form is unusual for this region. The Braden Cache (Muto1971: Figure 24) and Weston Canyon Rock Shelter (Figure 30) show blanks with straight bases, while the nine Sterling Cache biface blanks exhibit straight bases in almost all of the artifacts (Pavesic 1966:57). In Muto (1970:116), illustrations of the Spring Creek Cache depict several blank/preforms with almost straight bases.

Generally, biface bases are concave or convex, but the area cache examples shown above seem to indicate otherwise.

The largest biface in the China Creek Cache (CC-1) is white beige in color and appears to be made from chalcedony. The surface has a wax-like luster and is translucent, typical of chalcedony (Crabtree 1972:51). The waxy luster may reflect thermal alteration (Crabtree 1972). Under magnification, a reddish residue was noted on the surface. The same residue is evident on bifaces CC-3 and CC-7. It is possible that this residue is red ochre (iron oxide), or heating the artifact may have caused the redness (Wiseman et al.1994:68). There is no evidence of pressure flaking along the margins, only collateral flaking and a few minor step fractures. On side B, a pearl-like inclusion protrudes near the distal end (Figure 4). It is evident that the knapper attempted to remove the inclusion. One strike from the margin at an approximately 45° angle ended in a step fracture. The manufacturer's failure to remove this inclusion leaves the area nearest the distal end thicker by .30 cm than the balance of the blank. The entire surface is pitted with small vesicular cavities and multiple white circular spots. Side A exhibits signs of patination (Figure 3). On side A the knapper successfully removed the embedded inclusion near the distal end.

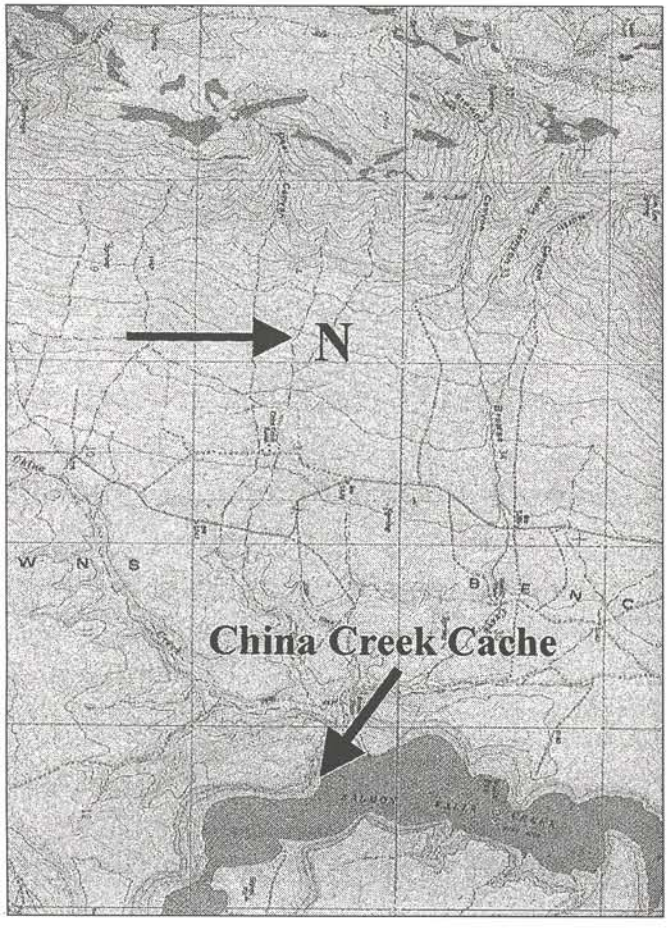

Figure 1. U.S. Department of the Interior Geological survey showing location of China Creek Cache site. Brown Bench, South Quadrangle. Idaho-Nevada 7.5 minute series Topographic 1977.

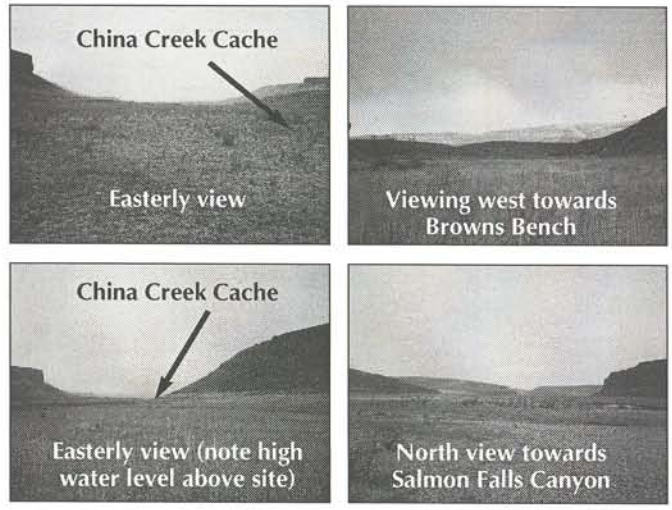

Figure 2. China Creek Cache Site.

Blank CC-2 shows no evidence of patina on either side and exhibits a grayish hue with dark-brown banding. The same minute white inclusions and pitting are evident over the surface. The distal end appears to show minimal evidence of pressure flaking. Approximately three-fourths down one margin near the base, a collateral flake was removed, resulting in a hinge fracture. The proximal end of the flake followed a straight fracture along the entire length of the flake leaving a large, almost vertical protrusion. The fracture crack, which extends through the blank for almost one cm, is most likely an incipient crack. A harder blow by the knapper may have destroyed the blank.

The blank CC-3 is almost pure white chalcedony with a waxy luster, exhibiting very few perceptual impurities. Patination is visible with a tint of red-like markings, which under magnification may be ochre residue. The residue appears to be on the surface of the artifact and not embedded (Woods, personal communication). Further examination is necessary to determine if this assumption is accurate. Serrated edges on both lateral margins of the biface appear to have been pressure flaked. The lateral margins extending from the distal end towards the base are asymmetrical with one margin more excurvated than the opposite margin. This blank exhibits a high level of craftsmanship.

Biface CC-4 is almost identical to CC-3 in shape, size, and thickness. This artifact is made of chalcedony with a grayish hue and dark-brown banding. A waxy luster is also evident on the surface. Side B exhibits serrated edges with a large shallow step fracture on the right margin near the corner of the base.

Biface CC-5 is made of white beige chalcedony similar to that of CC-1, CC-2, and CC-4. Side A has several small-embedded circular white inclusions with some minute pitted cavities. The distal end is obtuse and there is no evidence of pressure flaking. One lateral margin is straighter than and asymmetrical to, the excurvated opposite margin. Side B exhibits patina with several of the identical characteristics of side A (Figure 4).

Biface CC-6 is symmetrical and manufactured from a grayish chalcedony with small streaks of beige through

portions of the biface. This preform appears to be a partially completed projectile point without notching. Side A shows evidence of patina.

Two pitted inclusions are located near the right margin in the medial section. It appears that the knapper had difficulty removing flakes in this area, thereby leaving a high point on the surface of the preform and three step fractures. Near the base in the right margin the manufacturer removed several long flakes that extended past the center arrises. Near the distal end on the left margin is a nick in the edge. It is not known whether this was caused by the manufacturer or damaged at a later date.

Biface CC-7 is made of the same material as CC-6. The artifact exhibits a waxy luster with no apparent patination. The distal end is more acute, with side A showing what appears to be pressure flaking on the right margin. The right lateral margin is more excurvated than the left lateral margin. The left margin has a dominant hinge fracture at the medial section at a 90º angle with a step fracture located directly below at a 45º angle. Upon cursory examination, side B appears to have red ochre on its surface. The right margin does not appear to be pressure flaked, while the left margin is pressure flaked with a minute hinge fracture at the medial section.

Artifact CC-8 appears to be a partially completed lanceolate biface of unknown type (Figure 6 and 7). According to Joan and Gary Fay, it was discovered within 30 m of the cache. It appears to be manufactured from translucent gray chalcedony and exhibits a more grayish hue than the rest of the cache. Since it was not found directly with the cache, it is possible that it may not have been part of the original cache. It is the narrowest and one of the longer artifacts even without the missing proximal end (Table1). The proximal end has been broken off diagonally from the lateral margins. The distal end is obtuse and the surface is embedded with minute circular white inclusions similar to the other cache artifacts indicating it may have been quarried from the same chalcedony source. Side A shows some minor areas of patination (Figure 6). Above the medial section of the right lateral margin is a hemispherical notch that appears to have been unintentional. No pressure flaking is evident on the artifact. The manufacturer appears to have been experienced by removing several sizable flakes to the piend and beyond. The large collateral flake removal is somewhat indicative of the technique used in manufacturing a Clovis point. While excavating at the Dean site on Browns Bench near Cedar Creek, Bowers and Savage discovered points with concave bases, basal thinning and collateral flaking, reminiscent of Clovis technology (1962:Figure 8, numbers 24A, 25A, and 26A). The lanceolate point closely resembles both in width and flaking technique the Intermountain Lanceolate points illustrated in Figure 7 (Bonnichsen 2000:10). According to Bonnichsen (2000:7), Intermountain Lanceolate points are located primarily in the Intermountain West and Great Basin. Bonnichsen (2000:8) indicates that, "Radiocarbon dates for Intermountain Lanceolate sites span a great depth of time, starting in Clovis times but persisting into much later periods." The China Creek lanceolate point also resembles lanceolate points from

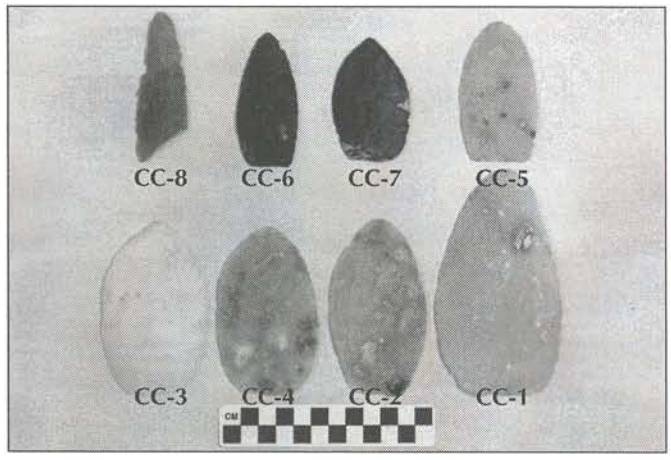

Figure 3. China Creek Cache side A

Figure 4. China Creek Cache side B

the Cougar Mountain typology, particularly one located in northwest Nevada near the China Creek site dating between 10,000-9,000 B.P. (Overstreet 1999:882). Neither the material used nor the morphological typology of this point appears to be related to the rest of the cache (Figure 9). It is evident that the manufacturing style is different from that of the remainder of the cache and may be isomorphic to the Intermountain Lanceolate and Cougar Mountain points.

Biface CC-9 is most likely made of a reddish chalcedony or jasper (Figures 6 and 7). It appears to be a scraper. This artifact was found approximately 5.5 m outside of the cache site. Upon examination and comparison with the other bifaces in the China Creek Cache it is more probable that this artifact was intended to be included as part of the cache when it may have been accidentally fractured by the knapper. When included in the overlay tool illustration with the rest of the cache, its dimensions compare closely to artifacts CC-2, CC-3, and CC-4 (Figure 9).

ANALYSIS AND MEASUREMENTS

Although the China Creek bifaces vary in length and width, they are similar in their method of manufacture, except for the lanceolate point. The China Creek Cache

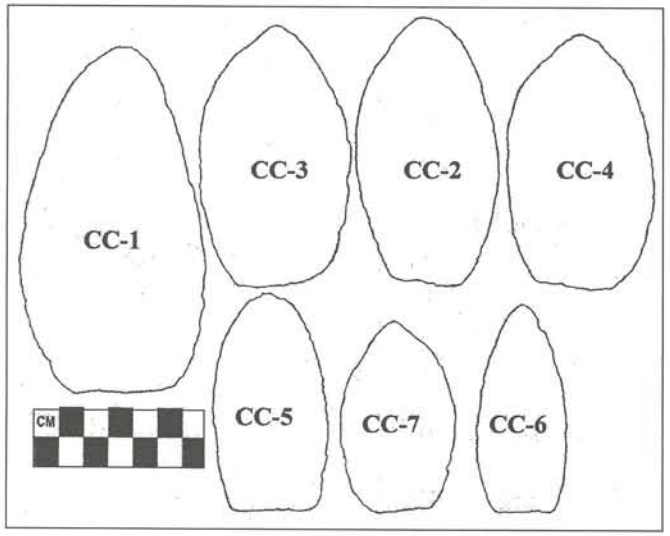

Figure 5. Tool outline drawing of China Creek bifaces.

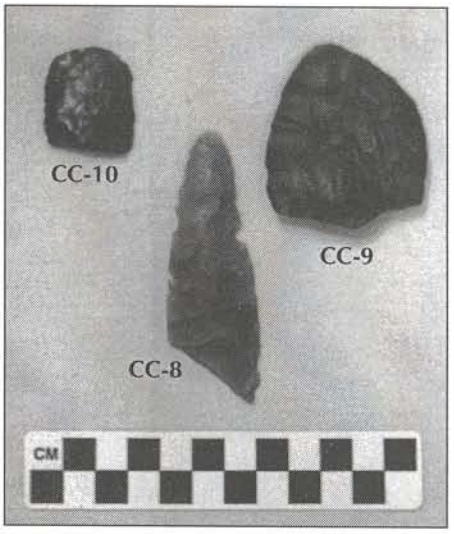

Figure 6. China Creek Cache fragments side A.

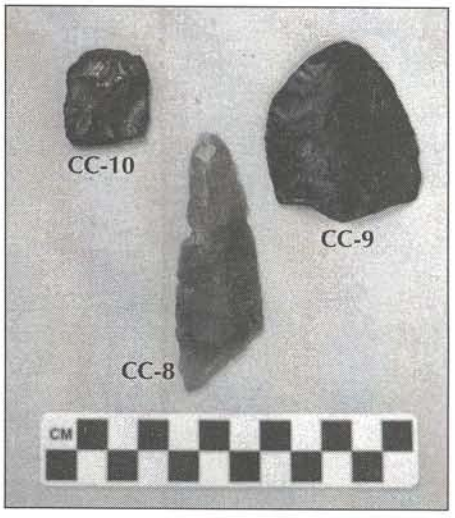

Figure 7. China Creek Cache fragments side B.

measurements of length, width, and maximum thickness are shown in Table 1. The means and ranges of the length, width, and maximum thickness indicate that the cache artifacts exhibit substantial variation, with the exception of bifaces CC-2, CC-3, and CC-4. The scattergram plot of the length and width also shows this variation (Figure 10).

The standard deviations are 1.71 for length, 1.36 for width, and 0.23 for the maximum thickness. The variance is 2.92 for length, 1.85 for width, and 0.05 for maximum thickness. The higher standard deviations and variances indicate the variability of dimensions exhibited within the cache. The paucity of sample size is statistically problematic. The tool outlines of the China Creek Cache (Figures 5, 8, and 9), and the photographs of the cache (Figures 3 and 6) also illustrate the variability of size within the cache.

The China Creek Cache appears to be closely related statistically to the Sterling Cache (Figures 11 and 12). According to Pavesic (1966:52-57), the Sterling Cache bifaces are made of welded tuff with the material sourcing 32 km southwest of the town of Sterling, Idaho. He estimates the blanks were probably made between 4,000 and 6,000 B.C. Pavesic suggested that the Sterling Cache blanks were intended to become Milnesand or Simonsen points (Pavesic 1966:54). The Milnesand point (11,000-8000 B.P.) shows a strong resemblance to the China Creek blanks.

One of the bifaces in the China Creek Cache (CC-5) is vaguely reminiscent of a Goshen-Plainview biface sans fluting (Bonnichsen 2000:9). Both bifaces exhibit obtuse distal ends, excurvated along the upper lateral margins and slightly incurvated below the medial towards the proximal end. This association is most likely isomorphic or is an anomaly with no supporting evidence. Closer examination by other lithic experts is recommended to explore possible associations with other culture groups.

CACHE AGE DISCUSSION

At the Dean site on Browns Bench near Cedar Creek Bowers and Savage (1962:14) recovered large, heavy, and broad-stemmed points resembling Scottsbluff Type II with concave, straight, and notched bases that resembled points discovered at Lime Creek in Nebraska that were carbon 14 dated to 9,524 ± 450 years. Overstreet (1999:858) places the age of Scottsbluff II points between 9,500-7,000 B.P. The morphology of these points (Bowers and Savage 1962: Figure 8; 46A, 47A, and 19A) bears some resemblance to the China Creek blanks, sans stems, particularly preform CC-6 and CC-7. Two bifaces, numbers 3C and 4C (Bowers and Savage 1962:Figure 10) are very similar to the larger bifaces in the China Creek Cache except their bases are not straight. Unfortunately, Bowers and Savage do not indicate the level at which these artifacts were discovered. The China Creek Cache artifacts also resemble the Late Plano points recovered from the Wasden site (Owl Cave) (as cited in Plew 2000:Figure 13 and Butler 1978), which were found in association with 8,000-year-old remains of *Bison antiquus*. Unless the cache was manufactured elsewhere from exotic material, it is likely that the China Creek Cache was produced sometime during the primary occupation of the area, possibly during the Altithermal between 7,000-4,850 B.P. (Green

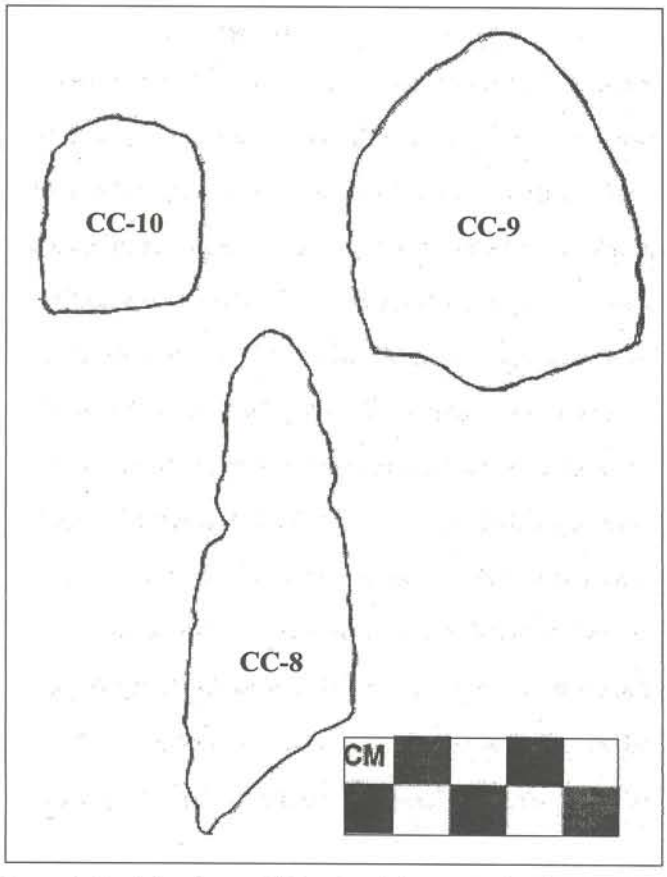

Figure 8. Tool drawings of China Creek fragments found at or near cache site.

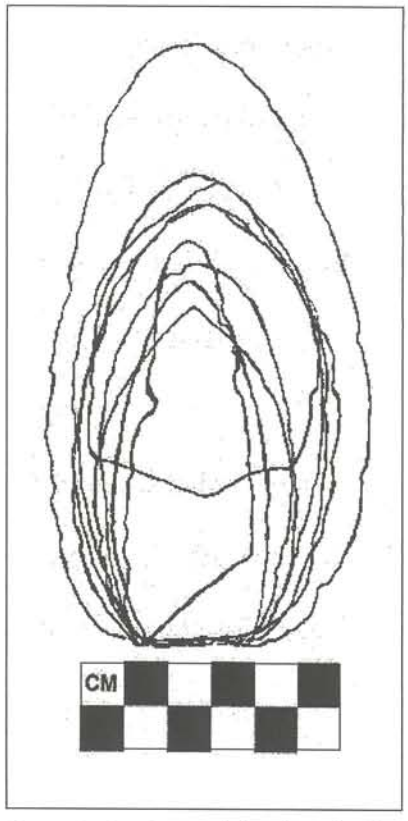

Figure 9. Overlay tool drawing of China Creek Cache excluding CC-10.

1972:138). Due to the size and morphology of the artifacts, it is estimated that their age would most likely fall between the Early Archaic and the late Plano periods.

CONCLUSIONS

The photographs show the variability of color indicating that exotic material may have been used in manufacturing this cache. Within the same area, the same selection for raw material sources is observed. During the excavation of the Dean site, Bowers and Savage (1962:13, Figure 4) believed the points recovered from below 1.82 m level to be over 10,000 B.P. and the non-obsidian artifacts to have been exotic and transported to the site. It is also possible that the chalcedony material was procured for the China Creek Cache within proximity of the cache site, or from the nearby Owyhee area (Huntley and Plew 1993:19). This type of behavior has also been observed in other parts of the world. For example, at the Puntutjarpa Rock Shelter in the Western Desert of Australia, it was found that even though technically superior stone was readily available locally, non-local chert was used for tool-making purposes (Gould and Saggers 1985:118). The source of the material used in the China Creek Cache will never be known without accurate sourcing of nearby quarries.

Except for the lanceolate point, this analysis demonstrates that a single knapper in a single event likely manufactured the China Creek Cache. The number of minor manufacturing errors (step and hinge terminations) is consistent from biface to biface. The general morphological attributes, such as flaking technique, tool outline, and basal form are similar, and the materials, even though varying somewhat in color, all appear to be from the same quarry source as shown by the small, vesicular inclusions and consistency of luster.

It would appear that the manufacturer of the China Creek Cache had something more significant in mind

China Creek Cache

Specimen Number	Length (cm)	Width (cm)	Maximum Thickness (cm)
CC-1*	13.20	7.35	1.50
CC-2	10.10	5.65	1.00
CC-3	9.90	6.00	1.00
CC-4	9.60	5.85	0.95
CC-5	8.35	4.50	0.75
CC-6	7.90	3.50	0.70
CC-7	7.90	4.50	0.90
CC-8	8.80	2.90	0.80
Maximum	**13.20**	**7.35**	**1.50**
Minimum	**7.30**	**2.90**	**0.70**
Mean	**9.39**	**5.03**	**0.95**
Median	**9.20**	**5.08**	**0.93**
Mode	**#N/A**	**4.50**	**1.00**
Range	**5.9**	**4.45**	**8.80**
Standard Deviation	**1.71**	**1.36**	**0.23**
Variance	**2.92**	**1.85**	**0.05**

* Without inclusion near distal end thickness would be 1.20 cm.

Table 1. Shows measurements and calculations of the China Creek Cache bifaces (excluding CC-9 & CC-10).

than replicating identical blanks for later reduction to the same type of projectile point. The possibility of red ochre on three bifaces, and uncommonly large size within the cache indicates that the China Creek Cache was intended to have been used for purposes other than a retrieval cache. The China Creek Cache exhibits substantial variability in dimensions (Table 1). This indicates the cache does not contain utilitarian bifaces for the ultimate manufacture of a single type of projectile point.

Additionally, the China Creek Cache may possibly indicate a sequence display of late-stage biface reduction (Kelly 1988:724; Muto 1970:112; Woods and Titmus 1985:8, Figure 7). The stage reduction of bifaces pictured in Figure 5 of the Spring Creek Cache, located near Spring Creek's exit into American Falls Reservoir, appears to be very similar to that of the China Creek Cache (Muto 1970:112).

According to Mr. and Mrs. Fay (personal communication), bifaces CC-2, CC-3, and CC-4 were discovered *in situ* lying on margin similar to the Warner Valley Cache (Weide and Weide 1969:28) with the white biface (CC-3) exhibiting possible ochre residue on its surface. The white chalcedony biface discovered between the two almost identical darker stones may have ceremonial or religious implications as it is known that white chalcedony was a stone of significance to many Indians who used the material for ceremonial purposes (Gibson 1994:152).

The China Creek Cache appears to be a deliberate cache site and not an on-site lithic reduction and tool manufacture site. The Fay family reported no debitage, and very little debitage was discovered by a personal survey of the surface area of the site. Furthermore, the artifacts were discovered near one another and within a restricted distribution area. The China Creek site could be a burial location, though no osteological evidence has been recovered with which to substantiate this assertion.

Analysis of lithic caches such as China Creek provide important evidence of early human exploitation of lithic resources that may be sourced to specific quarry locations and provide useful insights regarding acquisition, transport and caching strategies of aboriginal groups in southern Idaho. These insights should provide archaeologists with increased knowledge of trading networks, and document the movements of ancient peoples across the landscape.

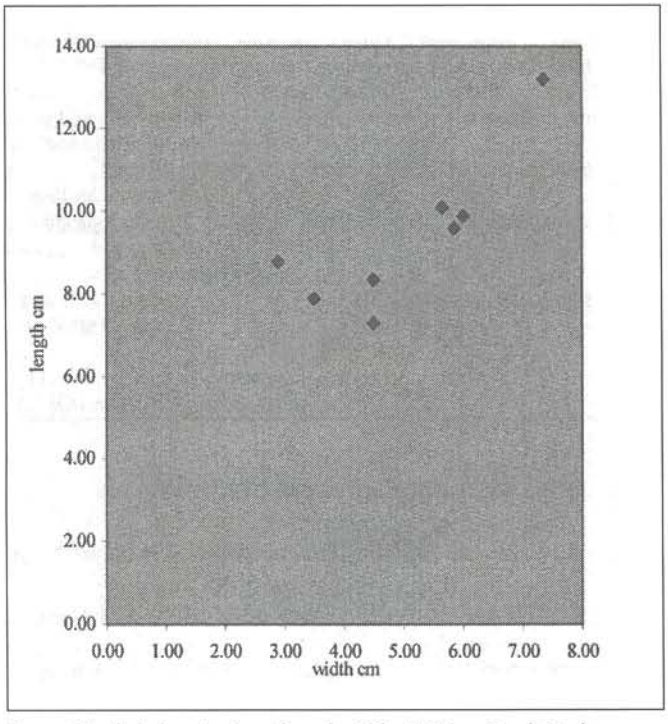

Figure 10. Plot showing length and width of China Creek Cache.

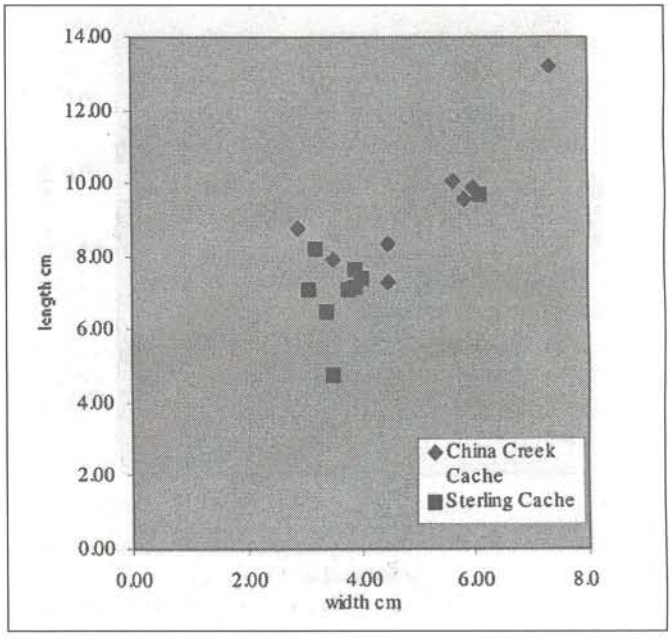

Figure 11. Plot showing length and width of China Creek and Sterling Caches.

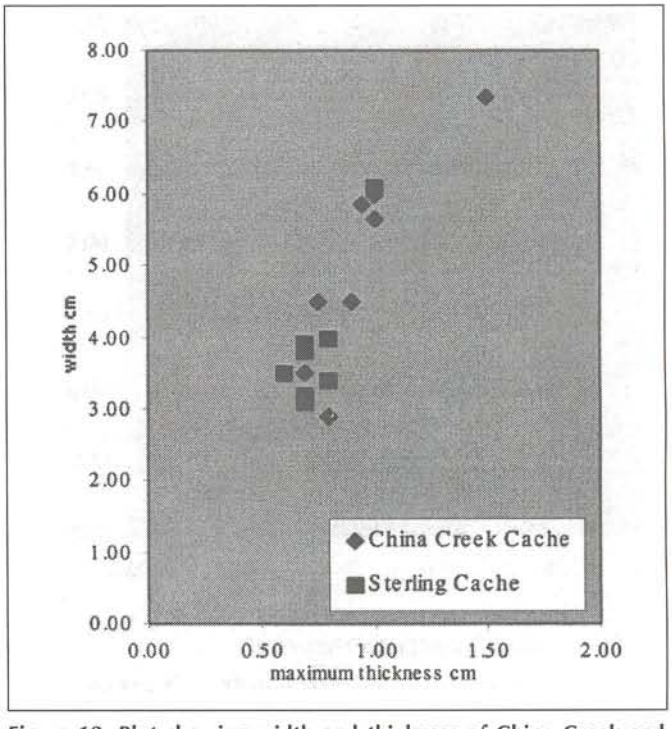

Figure 12. Plot showing width and thickness of China Creek and Sterling Caches.

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SHORT CONTRIBUTIONS

BOOK REVIEW

INDIGENOUS ARCHAEOLOGY: AMERICAN INDIAN VALUES AND SCIENTIFIC PRACTICE

by Joe Watkins, AltaMira Press, Walnut Creek, California, 2000,
220 pages, softcover, no price given, references, index.

Reviewed by Mark G. Plew

As the often confusing debate regarding repatriation and tribal consultation continues, the publication of *Indigenous Archaeology* is indeed timely. This book provides a much needed and comprehensive review of issues and debates surrounding repatriation while focusing upon the need to balance the requirements of scientific archaeology with American Indian values. In this regard, Watkins brings a unique perspective to the work through the lessons of his Choctaw heritage and his training in academic archaeology at the University of Oklahoma and at Southern Methodist University. The book is organized simply and includes an Introduction, and two Parts entitled "Issues" and "Cases" and a final chapter entitled "Indigenous Archaeology." Part I provides through five chapters, an overview of issues relating to the dialogue between American Indians and archaeologists, ethics and protection. Part II includes case examples of how American Indians have chosen to adapt the American model of historic preservation in attempts to influence archaeology within their boundaries.

The Introduction and Chapter 1 provide an historical overview of the history of the relationship between archaeologists and American Indians. The chapter while reviewing the early history of the relationship focuses with balance upon the ways in which American Indian scholars (Deloria and Otiz) and archaeologists (Sprague, Zimmerman) have framed aspects of the debate and challenged the archaeological community to engage in respectful exchange. Chapter 2 provides an interesting review of the history of the development of ethics in anthropology and archaeology. Most interesting is Watkins' observation that ethics have more typically referred to the "proper" conduct of scientific practice than to the "proper" practice of science in social context. Chapter 3 reviews the historical development of cultural resource legislation while Chapter 4 discusses recent repatriation legislation including NAGPRA. An interesting corollary to the consideration of issues relating to legislation are results of a survey of archaeologists' attitudes presented by Watkins in Chapter 5. Based upon the data collected for his doctoral dissertation assessing archaeologists' attitudes toward their relationships with American Indians the discussion suggests that while archaeologists express no cultural bias in situations where the wishes of two ethnic groups are in opposition to one another, that they tend to see land ownership as more important in determining impacts to human remains than to the wishes of descendants.

Part II of *Indigenous Archaeology* consists of five chapters detailing ways in which American Indians have attempted to work within the parameters of the American model of historic preservation. In this regard, Chapter 6 details the Navajo model of historic preservation while Chapter 7 reviews the experiences of the Pawnee tribe in attempting to close the Salina Burial Pit in Kansas. In a somewhat different vein, Chapter 8 examines the situation surrounding the East Wanatchee Clovis Cache where the Colville and other local groups worked closely with local archaeologists in opposition to an archaeologist considered by all to be an outsider, in this instance challenging ethics more than science. Chapter 9 is a detailed and balanced review of the Kennewick case. Of interest is Watkins' summary of Amanda Horn's assessment of the legal issues surrounding NAGPRA. Finally, Chapter 10 reviews the repatriation from a global perspective, examining relationships between natives and archaeologists in Canada, Australia, New Zealand and Scandinavia. The chapter implicitly suggests that the status of the dialogue between archaeologists and native peoples is at various levels of development. Notable too is the divergence of views among native peoples and archaeologists regarding repatriation. The final chapter of the book nicely summarizes the intent of the "Issues" and "Cases" sec-

tions of the work and addresses a number of issues relevant to the development of an "Indigenous Archaeology." Among these is the need for archaeologists and cultural groups to educate one another about purposes and values as the basis for effective communication. A second issue relates to the common concern of American Indians and archaeologists to preserve and protect the cultural heritage, specifically, the need of all to recognize that different responsibilities accompany ownership and stewardship. Watkins' call for an "Indigenous Archaeology" should be seen as a challenge to archaeologists to share history in a way which is empowering to American Indians. Finally, Watkins observes that a truly indigenous archaeology must see the training of tribal individuals as archaeologists qualified to conduct and manage archaeological investigations so that native peoples control not only their physical cultures but also their "preservation."

Indigenous Archaeology is an extremely valuable book. Sufficiently detailed, the book is an easy read and one which leaves the reader with a good sense of the issues and problems regarding repatriation. Its scope and balance will ensure its use by a number of audiences. In particular, the book will be a valuable teaching aid.

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