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ARCHAEOLOGICAL MANIFESTATION
on the Payette National Forest, Idaho

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The CASCADE PHASE is a cultural unit used by archaeologists in the Pacific Northwest. Cascade Phase people were hunters-gatherers and fisherers. Their social organization was probably at the band level, living in non-nucleated settlement patterns (Bense 1972:vi). Cascade Phase people exploited food resources as they became seasonally available, travelling from winter camps in the lower elevations to higher elevations in warmer months. The Cascade Phase consists of an assemblage of artifacts that exist within the long and enduring Archaic Period. Leonhardy and Rice (1970), defined the Cascade Phase for the Lower Snake River Region of Southeastern Washington. They perceived the Cascade Phase as two chronological subphases with certain types of diagnostic projectile dartpoints indicating horizon markers. The earlier subphase contains two diagnostic projectile point styles called the Cascade "willowleaf" which is bipointed, (Fig. 1) and the other is the Cascade lanceolate (Fig. 2 & 3), which has a rounded base (Butler 1961), (Bense 1972:86), and (Aikens 1993:96). The Cascade Phase name was derived from the characteristically defined willowleaf bipoint and lanceolate projectile dartpoints, (Leonhardy & Rice 1970:6). However, there is a later subphase that has a different dartpoint with side-notches.

This later subphase, called the Cold Springs Subphase, includes only one style of projectile dartpoint with side-notches (Butler 1961 and 1978:69). This large side-notched projectile dartpoint is also referred to in the literature as the Northern Side-notch (Aikens 1993:95), and the Bitterroot Side-notch (Aikens 1970:36-39). In this paper, the side-notched dartpoint found within the Cold Springs Subphase will be referred to as the Northern Side-notch. See Figures 4 thru 6. It is important to remember that the earlier Subphase lacks the side-notched dartpoint, and that the later Cold Spring Subphase lacks the willowleaf/bipoint and lanceolate dartpoints.

Two other dartpoint forms make their appearance during this phase and include the Elko (Series) Side-notch and the Humboldt (Series) Basal-notch. At this time, there is not enough information available to indicate when these forms appear within the Cascade Phase in west central Idaho.

The accompanying illustrations are intended to show some characteristic projectile dartpoints associated with Cascade Phase. The illustrations show contrast in style, size, and range between each subphase. See Figures 1 thru 6. All of the dartpoints, illustrated and drawn to scale by Jill Frye. All of the projectile points mentioned in this report are from the Payette National Forest (PNF).

Other kinds of artifacts associated with the Cascade Phase assemblage include well made lanceolate and triangular knives; tabular and keeled end scrapers; large and varied utilized flake tools; cobble tools; pounding and grinding stones; edge ground cobbles; and rare stone atlatl weights. Bone tools include atlatl spurs, split long bone awls, and needles of various sizes. Marine olivella beads are also part of the Cascade Phase artifact assemblage (Leonhardy and Rice 1970:9). Except for the side-notched dartpoints, associated in the later subphase, the artifact assemblages of the two subphases are identical (Leonhardy and Rice 1970:6).

The earliest radiocarbon determinations associated with the Cascade Phase date to approximately 8,000 years before present (BP). According to the archaeological work done by Leonhardy and Rice, the earlier subphase components have been found in geological deposits which predate volcanic ash from the eruption of Mount Mazama (Crater Lake) at approximately 6,700 years BP (Leonhardy and Rice 1970:11), (Jennings 1974:183). See Table 2.

Aikens (1993) states that the Cascade Phase dates from 8,000 to 4,500 years BP, and contains the horizon markers of the Cascade and Northern Side-notched dartpoint types (Aikens 1993:95). The Cascade Phase lasted for about 3,500 years during the Archaic Period.

Payette National Forest (PNF) archaeologists wanted to know if the Cascade and Cold Springs subphases existed in the area of the PNF. In order to make this determination, the collection of projectile points curated on the PNF had to be "typed."

TYPOLOGICAL COMPARISON AND CROSS DATING OF PROJECTILE POINTS

Typology is the analysis of classification. Cross dating is a cultural approach used by archaeologists in determining the age of specific artifacts. By classifying an artifact, identifying it to a type, the artifact can be tentatively dated through comparison to an artifact from a dated site. For example, when an artifact is found in buried archaeological context, next to a prehistoric hearth (firepit), that is dated by radiometric determination, that date can be correlated with the artifact in time and space (Stoddard 1996:1).

Many prehistoric archaeological sites on the PNF are identified as surface lithic scatters or open sites, lacking soil deposition, organic matter, and are often eroded. Such sites are considered as unsuitable for assay by radiometric determination. Approximate dates for these kinds of sites are established by comparison of projectile point types found at archaeological sites. The archaeologist can identify the diagnostic "typeable" projectile points and compare these points to similar points found in the archaeological literature. This is what the archaeologists call typological comparison and cross dating. The dated projectile points in the literature are compared to the projectile points found on the surface of archaeological sites.

The authors examined several hundred complete and fragmented projectile points curated in the collections of the PNF. About two hundred typeable projectile points within this collection were sorted and grouped according to type. The majority of the projectile points examined were previously documented and had provenience. Most of the projectile points were recovered from the surface of the ground, with the exception of a group of late period arrowpoints which came from buried archaeological context and will not be discussed within this report. Projectile point identification was based on variations in form, size, proportions, weight, lithic material, and flint knapping characteristics of diagnostic features appearing on each projectile point.

Projectile point analysis was based upon variations in form, size, proportion, weight, lithic material and flaking characteristics of diagnostic features appearing on each projectile point. No new projectile point typological names were created. Only existing typological names were used as derived from the archaeological literature.

Lithic materials used in the manufacture of the analyzed dartpoints include obsidian, basalt, and cryptocrystalline silicates (CCS). With the exception of obsidian, all of the other mentioned lithic materials can be found within the geology of the PNF. All obsidian found on the PNF was introduced by prehistoric people from sources in Idaho and eastern Oregon (Kingsbury 1996).

Cascade Dartpoints

Number of Specimens: 10 complete and 13 incomplete (N=23)

Description: Cascade dartpoints are generally long and well made. As a group, they are distinct from other dartpoints from the Archaic Period found on the PNF. There are exceptions to this statement in that some Elko Series dartpoints are as long, but not as narrow. Cascade dartpoints are basically of two types: willowleaf/bipointed and lanceolate with a rounded base. These points tend to be thick in proportion to their width and are usually thickest above the basal end. There is no evidence of basal nor edge grinding on these points. Some of the points are diamond-shape in cross section where as others are thinner. Flint knapping flaking techniques are random. There are exceptions to what was just described. However, for the most part, the Cascade dartpoints are not easily confused with other dartpoints from any other period in the archaeological record on the PNF.

Lithic Materials: Obsidian 8; Basalt 8; CCS 7.

Measurement Ranges:

Length	32.1	-	60.7	mm
Width	13.1	-	21.8	mm
Thickness	4.8	-	10.0	mm
Weight	3.58	-	8.75	gms

Comparisons:

Leonhardy and Rice 1970: Figure 4, a - d

Bense 1972: Figure B.1. Category 1-1, a - o

Pavesic et al. 1993: Figure 3, a - f and Figure 4, f - i

Aikens 1993: Figure 3.3 and 3.4

Stoddard 1996: Figure on page 7

Northern Side-notch Dartpoints

Number of Specimens: 1 complete and 16 incomplete (N=17)

Description: Northern Sidenotch dartpoints are also called Bitterroot Side-notch dartpoints. These large dartpoints are generally long with strait to convex lateral edges. These points can be wide with symmetrical, well defined side-notches. Notches can be placed from 1/5 to 2/5's above the base. Bases are concave to straight. The deep side-notches create ears on the bases of some specimen. Through time, these points become smaller and more elongated. Notches are well formed, and bases are as wide or wider than the shoulders.

Lithic Materials: Basalt 14; CCS 3.

Measurement Ranges:

Length	18.9	-	46.3	mm
Width	14.2	-	23.8	mm
Thickness	3.1	-	7.2	mm
Neck Width	0.74	-	1.50	mm
Weight	1.71	-	9.11	gms

Comparisons:

Aikens 1970: Fig. 19 g-1, Bitterroot Side-notch

Aikens 1993: Fig. 3.4, Top row: Northern Side-notch

Bense 1972: Fig. B.2, Category 1-2 (a-o)

Homer 1978: Fig. 9, a-1

Pavesic 1993: Fig.2, a-b

Plew 1985: Fig. 5, b-d

RESULTS OF THE COMPARATIVE TYPOLOGICAL ANALYSIS

The results of the typological analysis are insightful. A total of 23 Cascade dartpoints were identified from 16 archaeological sites and two isolated surface finds. A total of 17 Northern Side-notch were identified from 10 archaeological sites.

Another observation made from the comparative examination of these dartpoints is that at three surface lithic scatters, PY-0003, PY-0479 and PY-1099, have both Cascade and Northern Side-notch projectile dartpoints. At site PY-0003 there were found one Cascade point and three Northern Side-notch projectile points. At PY-0479 there were three Cascade and one Northern Side-notch dartpoints. At site PY-1099 there were three Cascade and five Northern Side-notched points. See Table 1. This observation suggests that during the long 3500 years of the Cascade Phase, these sites were probably reoccupied seasonally.

Based upon the assumption that a typed projectile point from an archaeological site is a horizon marker, the typological analysis suggest that as many as 23 archaeological sites on the PNF have components belonging to the Cascade Phase. All of these 23 Cascade Phase components/sites are situated within the montane ecosystem, and are associated with a source of water. One site is lacustrine. These archaeological sites range in elevation from 1,860 to 7,860 feet above sea level. The authors know of other lacustrine and Cascade Phase sites not found on the PNF. There is a unique Cascade Phase site adjacent to the PNF, found in Meadows Valley, Idaho.

This is the DeMoss burial locality where as many as 60 disarticulated human skeletons have been identified and associated with hundreds of stone artifacts. A radiometric date for this site is 5965 +/- 60 years BP (WSU3426) was obtained from a bone sample (Green et al. 1986:33). The DeMoss burials are considered part of the Western Idaho Archaic Burial Complex, (Pavesic et al. 1993:3). The Western Idaho Burial Complex sites are distinguished by an exceptional array of stone tools including turkey-tail points, large cache bifaces, Cascade dartpoints, and large side-notched dartpoints, obsidian preforms, pipes, micaceous shaft-smoothers, red ochre and olivella shell beads, (Pavesic et al. 1993:3). This artifact inventory associated with burials, suggest that Cascade Phase people, 6000 years ago had a belief system that included "life after death." It is likely that the Cascade Phase people returned repeatedly to the DeMoss burial locality to inter their dead over a period of generations.

When did the Cascade Phase end and the next Tucannon Phase begin? That remains a mystery yet to be solved. Archaeologists have observed that there is a hiatus in the archaeological record at about 5,000 years BP, (Leonhardy and Rice 1970:11). Where did the prehistoric people go to during that period of time? Maybe nowhere. Maybe the prehistoric people continued to occupy the area of the PNF and that archaeologists need to continue searching for more evidence.

There are hundreds of prehistoric archaeological sites on the PNF not yet classified to an archaeological phase within time and space. Many of these sites contain more than one component. For the majority of these site, soil deposition is shallow to non-existent. In some cases, natural soil accumulation never took place.

Kingsbury once found an exposed Paleoindian component on a Montana mountain top near Lemhi Pass. This Paleoindian site was unique. The remaining cultural material consisted of a crescent basalt rock alignment extending for a length of three meters. This rock alignment may represent an open-ended hut, similar to paleolithic huts found in Europe's Magdalenian period ranging in age from 13,000 to 8,000 years ago. In association and adjacent to the crescent rock alignment, there was one obsidian and several chert fragments of broken Hell Gap Phase spearpoints. The Hell Gap Valley is in southeastern Wyoming and is the "type site" for Hell Gap style lanceolate spearpoints. Charcoal samples associated with Hell Gap spearpoints have produced radiometric dates that range from 10,000 to 9,500 year BP (Irwin-William 1973:48). While in Cody, Wyoming in the spring of 1986, Kingsbury showed George Frison Ph.D., the broken spearpoints. Frison agreed that the stone artifacts looked like broken Hell Gap spearpoints. What is amazing about finding a 9,000 to 10,000 year old site on a mountain top is that the only natural deposition obscuring the ancient artifacts from view were lichens growing on the stone tools and the crescent rock alignment. It is predicted that such ancient sites exist on the PNF. The exposed Cascade Phase sites on the PNF tentatively date from 4,500 to 8,000 years ago. Older sites will likely be found. It is important to note that few prehistoric sites on the PNF have been studied. Much yet remains to be discovered in the archaeological record on the USDA Payette National Forest, Idaho.

TABLE 1

CASCADE SUBPHASE AND COLD SPRINGS SUBPHASE PROJECTILE DARTPOINTS
FOUND ON THE PAYETTE NATIONAL FOREST, IDAHO

SITE NUMBERS	NUMBER OF CASCADE SUBPHASE		NUMBER OF COLD SPRINGS SUBPHASE	
	PROJECTILE	DARTPOINTS	PROJECTILE	DARTPOINTS
PY-0001	10AM47	1		0
PY-0003	10AM49	1		3
PY-0023	10AM53	1		0
PY-0036	10AM61	0		1
PY-0331	10AM108	1		0
PY-0403	10AM138	1		0
PY-0479	10WN203	3		1
PY-0536	10WN318	2		0
PY-0591	10AM187	0		1
PY-0662	10IH1635	1		0
PY-0739	10IH356	0		1
PY-0855	10IH1873	0		1
PY-0870	10AM302	0		2
PY-0889	10WN410	1		0
PY-0899	10AM277	0		1
PY-0936	10AM257	1		0
PY-0965	10IH2001	1		0
PY-1074	10VY911	1		0
PY-1099	10AM342	3		5
PY-1106	10VY1040	0		1
PY-1172	10WN494	1		0
PY-1348	10IH	2		0
ISOLATED FINDS		2		0
TOTAL		23		17

TABLE 2

PROJECTILE POINT STYLES FOUND ON THE PAYETTE NATIONAL FOREST, IDAHO
 IN APPROXIMATE CHRONOLOGICAL ORDERING
RELATIVE AGE AND ARCHAEOLOGICAL PHASES/ MANIFESTATIONS ON THE PAYETTE NF

11,500 - 10,000 BP	Llano Tradition Clovis Fluted Lanceolate
11,000 - 8,000 BP	Plano Tradition Alberta Stemmed Lanceolate Eden (Cody Complex) Haskett Lanceolate
10,000 - 8,000 BP 8,000 - 4,500 BP	Windust Stemmed Cascade Willowleaf/Lanceolate Cold Springs Side-notch
8,400 - 650 BP	Elko Series (3 dartpoint types)
7,845 - 2,250 BP	Humboldt Series (3 dartpoint types)
7,400 - 1,000 BP	Northern Side-notch Bitterroot Side-notch
5,700 - 2,650 BP	Pinto Series (5 dartpoint types)
4,500 - 2,500 BP	Tucannon Series (2 dartpoint types)
2,500 - 700 BP	Harder (2 dartpoint types)
2,500 - 100 BP	Wallula
2,500 - 100 BP	Middle Columbia Basal-notch
1,500 - 500 BP	Rose Springs
1,500 - 500 BP	Eastgate Expanding Stem
700 - 100 BP	Desert Side-notch (includes the Sierra Type)
500 - 100 BP	Cottonwood Triangular

Windust, Cascade, Cold Springs, Tucannon, Harder, and Piquin are used to designate a projectile point type as well as to name a phase.

REFERENCES CITED

- Aikens, C. Melvin
 1993 Archaeology of Oregon. USDI Bureau of Land Management, Oregon State Office, Portland.
 1970 Hogup Cave. University of Utah Anthropological Papers, No. 93. Salt Lake City.
- Bense, Judith Ann
 1972 The Cascade Phase: A Study in the Effect of the Altithermal on a Cultural System. Doctoral dissertation, Washington State University, Department of Anthropology, Pullman
- Butler, B. Robert
 1961 The Old Cordilleran Culture in the Pacific Northwest. Occasional Papers of the Idaho State Museum, No 5. Pocatello.
 1978 A Guide To Understanding Idaho Archaeology (Third Edition): The Upper Snake and Salmon River Country, Idaho State Historic Preservation Office, Boise.
- Green, Thomas J., Max G. Pavesic, James C. Woods and Gene L. Titmus
 1986 The DeMoss Burial Locality: Preliminary Observations. Idaho Archaeologist 9:31-40.
- Homer, Richard Newton
 1978 "A Mathematical Typology for Archaic Projectile Points of the Great Basin." Doctorial Dissertation, University of Utah.
- Jennings, Jesse D.
 1974 Prehistory of North America, 2nd RD. McGraw-Hill Book Company, New York.
- Leonhardy, Frank C., and David G. Rice
 1970 A Proposed Cultural Typology of the Lower Snake River Region. Southwestern Washington, Northwest Anthropological Research Notes, 4:1-29.
- Pavesic, Max, Susanne J. Miller, Patricia A. Gamel, and Thomas J. Green
 1993 The DeMoss Site: A Material Culture and Faunal Update. Idaho Archaeologist, 16 (1): 3-15.
- Plew, Mark G.
 1985 Test Excavations At The Kueney Site (10-TF-527): A Middle Archaic Site In The South Hills Country. Idaho Archaeologist, 8 (2):27-36.
- Stoddard, Steven E.
 1996 A Projectile Point Typology for the Payette National Forest, Idaho. Heritage Program, Payette National Forest, USDA Department of Agriculture, Intermountain Region, McCall.
- Irwin-Williams, Cynthia, Henry Irwin, George Agogino, and C. Vance Haynes
 1973 Hell Gap: Paleo-Indian Occupation on the High Plains, Plains Anthropologist 18: 40-53.



FIGURE 1. CASCADE WILLOWLEAF/BIPOINTED DARTPOINTS

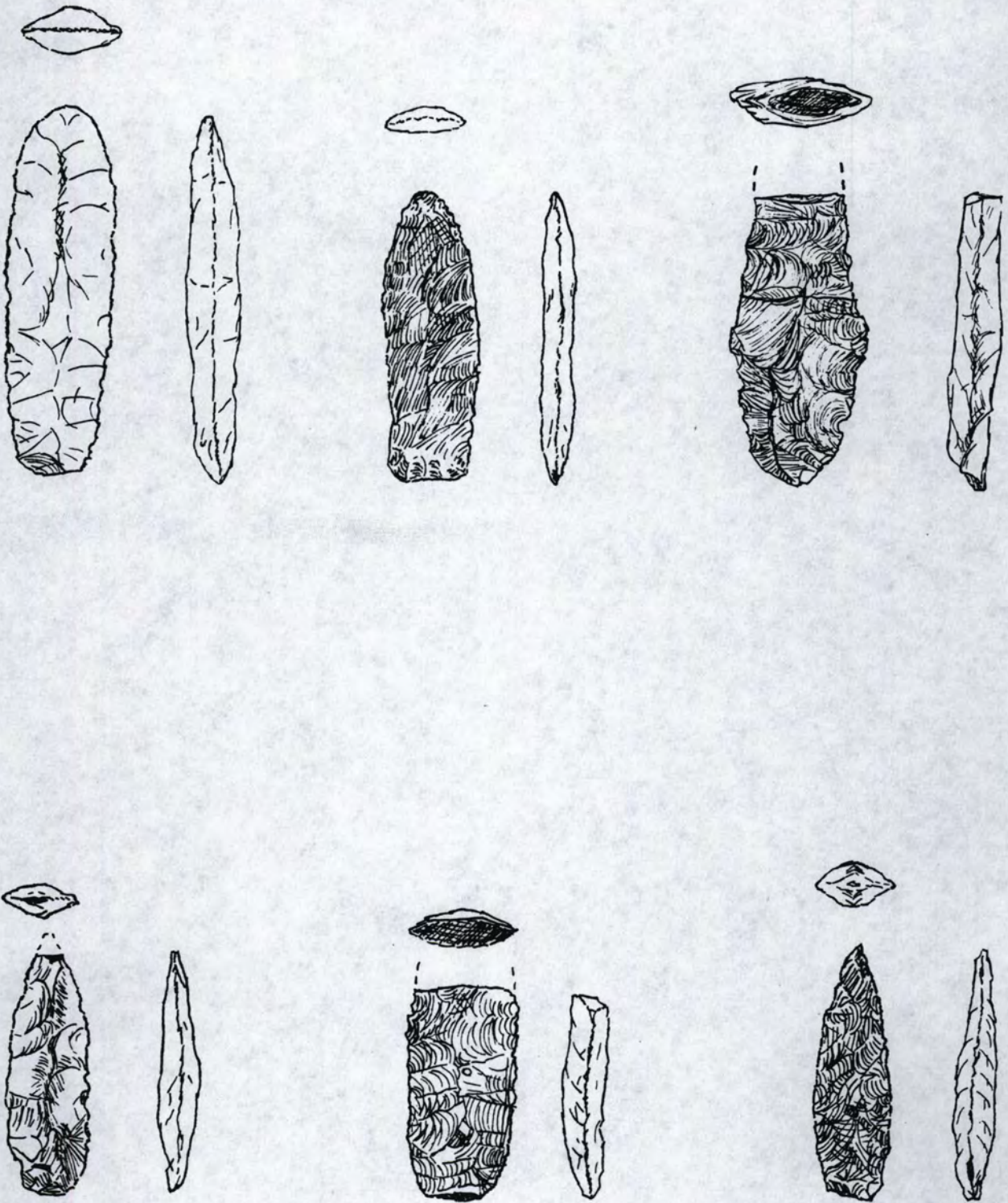


FIGURE 2. CASCADE LANCEOLATE DARTPOINTS

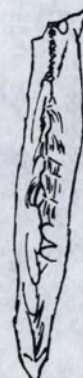


FIGURE 3. CASCADE LANCEOLATE DARTPOINTS

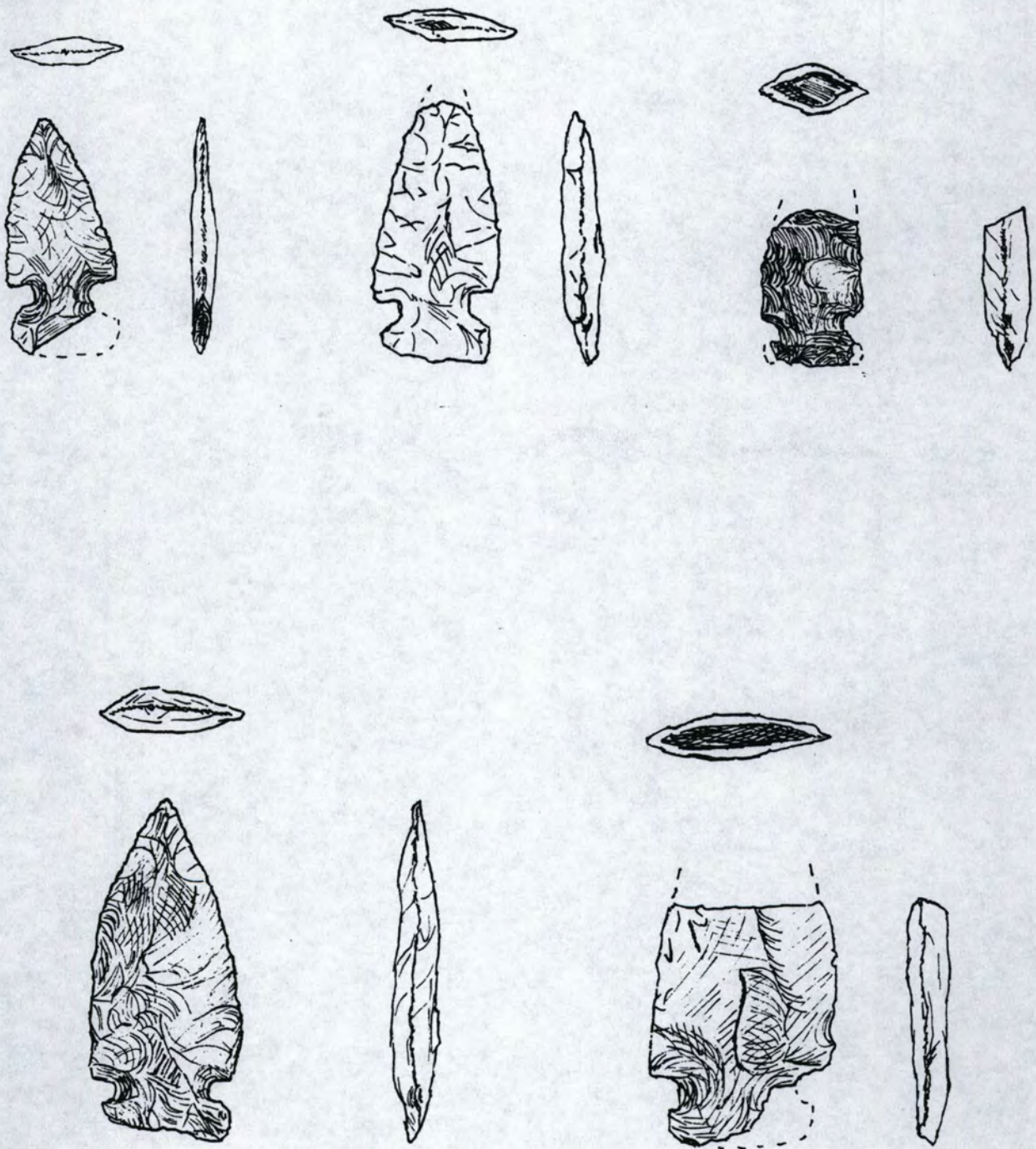


FIGURE 4. NORTHERN SIDE-NOTCH DARTPOINTS

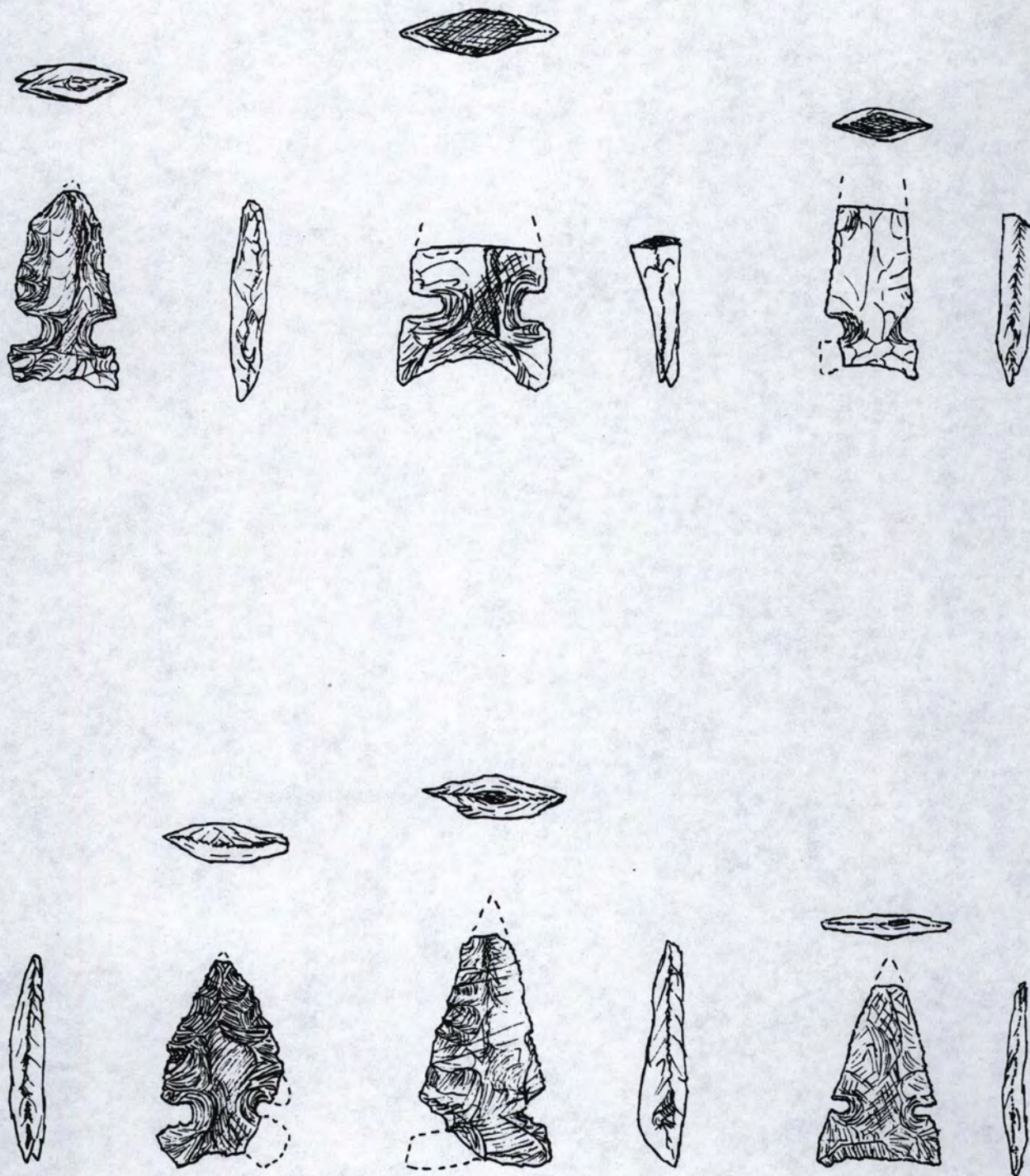


FIGURE 5. NORTHERN SIDE-NOTCH DARTPOINTS

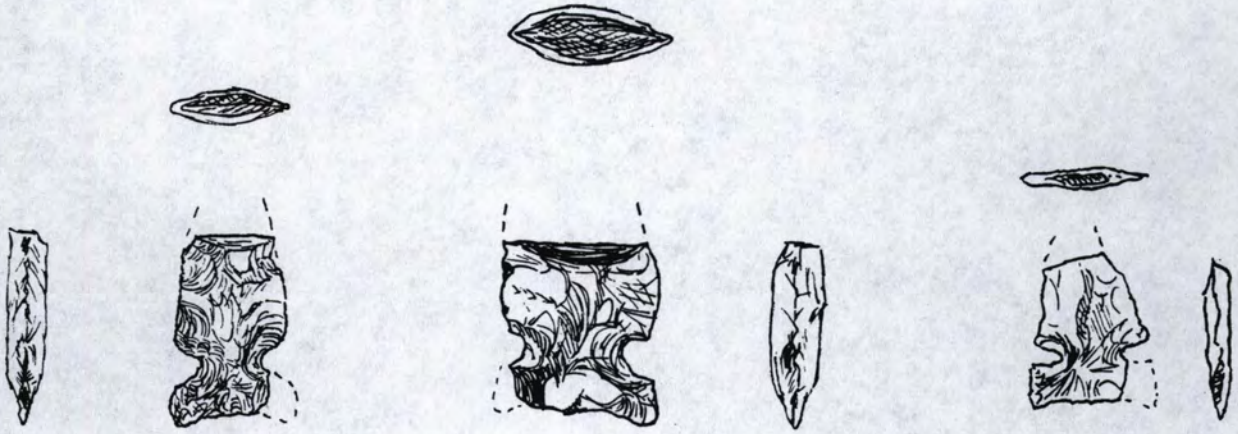


FIGURE 6. NORTHERN SIDE-NOTCH DARTPOINTS