IV. Projectile Points from Hidden Cave (NV-Ch-16) Churchill County, Nevada

Norman L. Roust and C. W. Clewlow, Jr.

In the summer of 1951, the site of Hidden Cave was excavated by N. L. Roust and G. L. Grosscup, then of the University of California. This site, located 4104 feet above sea level in an arroyo at the southwestern extension of the Stillwater Range and some seventeen miles southeast of Fallon, Nevada, was chosen at the suggestion of Professor Robert F. Heizer and Dr. Roger Morrison, not only for the archaeological information to be gained, but also for the geological chronology—particularly for the record of Lake Lahontan fluctuation and deposition—it was anticipated would be revealed. While the excavations were rewarding both archaeologically and geologically, various circumstances have intervened so that the full report of the excavation has not yet been published, although the data are on file in the manuscript records of the Archaeological Research Facility, Berkeley (Roust and Grosscup n.d.).

There have been, however, a number of published reports on various aspects of the work accomplished. Preliminary information on the project was provided by Grosscup (1956:58-64). In 1967, an analysis of human coprolites from Hidden Cave and other sites in the Carson—Humboldt sink area was conducted and the results reported (Ambro 1967; Roust 1967). Two fish nets from Hidden Cave were described by Ambro (1966), and various references have been made to the projectile point sequence (Clewlow 1967; O'Connell 1967). It is the aim of this paper to present a full report on the point sequence at Hidden Cave as recorded at that time.

Since the Hidden Cave excavations were conducted in 1951, a considerable measure of progress has been realized in projectile point classification for the Great Basin. It is now possible to assign most of the Hidden Cave points to one or another of a number of named types which have been formally described and which have been identified at a number of other sites as having a time-type distinction (Heizer and Baumhoff 1961; Lanning 1963; O'Connell 1967). Due to the fact that some of the Hidden Cave points may occupy a critical position in the Great Basin projectile point sequence, and since, as is implied above, the site is blessed with a particularly clear geological stratigraphy, we feel that a more complete discussion of the points is in order. This is not to say that other cultural material, both perishable and perdurable, from Hidden Cave is not of great value and interest. However, since projectile points are at this moment the most important chronological typological indicators in the Great Basin, and since the unpublished pieces

from Hidden Cave have already figured in several interpretive discussions of the Great Basin sequence, we feel it is desirable to publish the relevant data on these points in advance of publication of the long-delayed Hidden Cave report.

Roust and Grosscup recovered 53 points from Hidden Cave. Of these, 12 were fragmentary or not typable. Upon close inspection, 2 were found to be probable small drills. The remaining 39 were assigned to eight different named types. Table 1 shows the distribution of these types within the culture-bearing strata at the site.

TABLE 1

Stratigraphic Occurrence of Hidden Cave Projectile Points

	Mud Flow Gravels	Aeolian Silts	32 Inch Midden	Surface Midden	Total
Humboldt Concave Base A	4	-	3	-	7
Pinto Square Shoulder	-	2	-	7	9
Elko Eared	-	-	2	-	2
Elko Corner-notched	-	-	1	4	5
Humboldt Basal-notched	-	-	-	4	4
Type I	-	-	1	-	1
Eastgate Expanding Stem	-	-	-	3	3
Rose Spring Corner-notched	-	-	-	8	8
Drill	-	-	-	2	2
No type	-	-	-	4	4
Total					45

In order to evaluate the positions of the points, a short discussion of the geology is in order. The mouth of Hidden Cave, which faces west at an elevation of some 160 feet above the floor of old Lake Lahontan, has probably been open—and therefore a recipient of certain geological clues from outside events—since the first major (Eetza) cyclic rise of Lake Lahontan, an event correlated to the Iowan-Tazewell substage of the Wisconsin glaciation (see Grosscup 1956:59; Morrison 1964:28-30). It was during this period that the

cemented gravels forming the floor and roof of the cave probably originated. A total of 11 geologically distinct stratigraphic units have been defined within the cave, the first being that just noted and the last being aeolian dust on the surface. These strata present a long geological history, centered primarily around lake fluctuation (Morrison 1961, 1964, 1965), into which man does not intrude until the sixth layer from the bottom. This stratum, the Mud Flow Gravels, occurs in a depositional context of late Sehoo Lake times, and is considered by both Antevs and Morrison to be "Pre-Turupah" or Anathermal in origin, having been deposited during one of the two high stages of the late Sehoo Lake (Morrison 1964:102; 1965:277-279).

Immediately above the Mud Flow Gravels are heavy deposits of laminated aeolian silts, considered "Turupah" or Altithermal by Antevs (personal communication) as well as by Morrison (personal communication). These laminations are individually distinct, about 1 mm. thick, and at least 200 (by count) are visible. Near the base of this deposit occurs a layer of volcanic pumice 1 to 2 cm. in thickness which Dr. Howel Williams believes had a probable source in the Mono Craters in eastern California.

Superior to the laminated aeolian silts is the 32 Inch Midden, a unit which is assignable to human occupation sometime after the start of the Medithermal period and the subsequent rebirth of the Great Basin lakes. It is from this stratum that material for the coprolite studies mentioned above was obtained. Just above the 32 Inch Midden occurs a series of striated mud flows and silts whose members numer 45. These probably correspond to minor vacillations of the Medithermal lakes and are probably slightly later than the 3930 or 3950 foot lakes of post-Lahontan times, which in turn may correspond to the 32 Inch Midden, according to Morrison.

Next in the sequence are the Surface Middens, consisting of a composite deposit of bat guano intermixed with artifacts - floral remains, bone, shell, and feathers - ascribable to man. It was in this layer, which occurs throughout the entire cave, that most of the projectile points were recovered. It is the opinion of the original excavators (N. Roust and G. Grosscup) of the cave that the Surface Middens correlate to Transitional Lovelock times. Typological comparisons sustain this opinion.

Finally, a layer of Surface Aeolian Dust is found to a depth of one foot near entrance portions of the cave, but this disappears toward the central portion where its place is taken by the older Surface Middens. Its depositional pattern is similar to earlier aeolian deposits, and it is, in effect, the fine dust that even now enters the cave with each sporadic dust storm.

Dimensions, weights, and materials of the Hidden Cave specimens are shown in Table 2. As may be noted, the points show a general tendency to

TABLE 2

Dimensions, Materials, and Provenience of Hidden Cave Points
(Accession numbers are those of the Lowie Museum of Anthropology)

Type	UCLMA	Length (cm.)	Width (cm.)	Thickness (cm.)	Weight (g.)	Material	Provenience
Humboldt Concave Base A	2-32695	9.0	2.0	0.7	12.1	Obsidian	Mud Flow Gravels
	2-32696	7.7	2.5	0.6	12.8	do.	do.
	2-32698	2.5	1.7	0.6	2.3	do.	do.
	2-32697	4.0	1.8	0.6	4.8	Basalt	do.
	2-32405	4.3	1.5	0.6	3.5	Chert	32 Inch Midden
	2-32415	5.6	2.0	0.5	7.6	do.	do.
	2-32404	3.5	1.5	0.4	2.4	do.	do.
Type I	2-32762	3.8	1.5	0.4	2.8	do.	do.
Humboldt Basal-notched	2-32408	3.5	2.2	0.4	4.3	Obsidian	Surface Midden
	2-32611	6.0	2.5	0.5	7.6	do.	do.
	2-32751	5.0	2.4	0.5	5.9	do.	do.
	2-32734	8.6	2.4	0.5	10.0	do	do.
Drill	2-32440	6.5	2.0	0.6	7.0	Chert	do.
	2-32641	5.7	1.9	0.6	6.5	Obsidian	do.
Eastgate Expanding Stem	2-32749	2.5	2.5	0.3	1.3	do.	do.
	2-32640	3.5	1.9	0.3	2.0	Chalcedony	do.
	2-32485	4.0	2.1	0.3	2.3	Obsidian	do.
Rose Spring Corner-notched	2-32526	3.5	2.5	0.5	3.0	Chalcedony	do.
	2-32403	3.5	2.0	0.5	3.6	Obsidian	do.
	2-32747	4.0	2.0	0.5	3.6	do.	do.
	2-32509	3.2	2.2	0.5	3.2	do.	do.
	2-32584	4.5	2.0	0.4	3.3	do.	do.

	2-32506	3.2	2.0	0.3	2.3	Chert	do.
	2-32725	3.2	1.5	0.5	2.5	do	do.
	2-32557	3.5	1.5	0.5	1.9	Obsidian	do.
Elko Eared	2-32629	3.2	2.0	0.4	2.3	do.	32 Inch Midden
	2-32759	5.0	2.4	0.3	6.3	do	do.
Elko Corner-notched	2-32660	4.0	2.5	0.5	4.7	do.	Surface Midden
	2-32750	4.5	2.8	0.5	4.8	do.	do.
	2-32359	3.5	2.0	0.5	3.2	do.	do.
	2-32760	4.9	2.8	0.4	5.0	do.	do.
	2-32387	5.8	2.2	0.5	5.8	do.	32 Inch Midden
Pinto Square Shoulder	2-32639	5.9	2.8	0.5	6.7	do.	Surface Midden
	2-21906	5.8	2.5	0.6	5.0	Chert	do.
	2-21905	6.5	2.0	0.6	5.6	do.	do.
	2-32655	5.2	2.0	0.6	4.6	Obsidian	do.
	2-32638	4.7	2.0	0.4	3.3	do.	do.
	2-32761	4.3	2.5	0.5	5.3	Chalcedony	do.
	2-32481	3.5	2.1	0.4	2.9	Obsidian	do.
	2-32758	4.9	2.5	0.8	7.9	do.	Aeolian Silts
	2-32607	5.5	2.2	0.5	8.5	do.	do.
Gypsum Cave	2-34872	5.6	2.1	0.5	6.2	Basalt	Talus slope
No type	2-32752	6.0	2.0	0.6	7.9	do.	Surface Midden
	2-32357	6.5	2.0	0.6	7.5	Obsidian	do.
	2-32726	4.2	2.1	0.5	4.5	do.	do.
	2-32442	2.7	2.0	0.5	2.4	do.	do.

weigh less the closer they date to historic times—a trend which is not unexpected (Fenenga 1953). Table 1, a condensed chart, summarizes the stratigraphic occurrences of the various types of points within the deposits. Some discussion of the relative positions of these types is informative.

The four points recovered from the Mud Flow Gravels, three of obsidian and one of basalt, are designated as Humboldt Concave Base A specimens: all are essentially laurel-leaf shaped, tapered at the base, and possess prominent basal concavities. These specimens were found within a few inches of each other, and while this would suggest a cache, an examination of the aeolian laminated silts immediately superior revealed no evidence of disturbance or intrusion of any sort. Thus the conclusion is that the Humboldt Concave Base A type point was present in Anathermal times. Clewlow (1967:144-145) has implied that the type might have a temporal equivalence to the Pinto series points, and has noted formal similarities between the Humboldt and Pinto Shoulderless type points. The Hidden Cave evidence conclusively supports a modification of this premise, and substantiates the position that Humboldt Concave Base A points were made in the Great Basin in Anathermal times, an assumption which is difficult to make for the later Pinto types (see below). It must be pointed out, however, that although the Humboldt Concave Base A points originated in the Anathermal, the same form was in use throughout the Great Basin sequence, albeit in progressively more diminutive form. This fact is reflected in the terminology which segregates points at the type site (NV-Ch-15) into Humboldt Concave Base A and B types, with the B types being of the same form but smaller, and presumably later in time, than the A pieces (Heizer and Clewlow, this volume). Moreover, many Cottonwood Triangular points retain a basic shape, although in smaller size, which is similar to the basic Humboldt Concave Base A outline. Thus, even though Humboldt Concave Base A points may possess considerable antiquity, we would caution against assigning Anathermal age to surface finds of this type without significant corroborating evidence. It is unfortunate that the four Anathermal points were found in a section of Hidden Cave where the Mud Flow Gravels were only 6 inches deep, because it cannot be determined from this occurrence whether the pieces date from the middle or end of the period. The points are shown in Figure 1a-d.

Two points were recovered from the upper portion of the laminated aeolian silt layer. Both of them are made of obsidian, and both are of the Pinto Square Shoulder type (fig. 2h, i). While there has been considerable discussion concerning the temporal position of Pinto points in the Desert West (Lister 1953; Wormington 1957:180; Susia 1964:30-31), the bulk of the evidence seems to show that most of the pieces post-date the Altithermal (Harrington 1957:72; Lanning 1963:277-280; Clewlow 1967:145), and

the two Altithermal points recovered from Hidden Cave do not contradict this assumption. Their position at the top of the laminated aeolian silts, and the fact that the remaining Pinto points from the cave were found in Medithermal contexts, argue strongly in favor of it.

Seven projectile points were recovered from the 32 Inch Midden. Of these, three were Humboldt Concave Base A (fig. 1e-g), two were Elko Eared (fig. 2j, k), and one was an Elko Corner-notched point (fig. 2p). The Elko series begins during the middle portion of the Medithermal sequence (O'Connell 1967) and falls within its expected temporal context at Hidden Cave. The remaining point from the 32 Inch Midden is relatively small, with a broad, thick stem and rounded base. It corresponds closely to Type I points from NV-Ch-15 (Heizer and Clewlow, this volume). This point is shown in Figure 1h.

The majority of projectile points, as well as the majority of all artifact types, were recovered from the Surface Midden. Of the 32 chipped specimens from this layer, two are drills (fig. 1m, n) and four (fig. 1r-u) are incomplete and are not typed. Four of the classifiable points are Humboldt Basal-notched pieces (fig. 1i-l). All four are of obsidian and show very well-controlled diagonal ripple flaking. They are thin and quite finely made. One of the pieces is bound around the base with what is probably fiber used in hafting (fig. 1j). The Humboldt Basal-notched type, which was first identified at the Humboldt Lakebed site (NV-Ch-15), is notable for its superb workmanship. Seven Pinto Square Shoulder (fig. 2a-g), four Elko Corner-notched (fig. 2l-o), eight Rose Spring Corner-notched (fig. 2q-x), and three Eastgate Expanding Stem points (fig. 1o-q) were also found in the Surface Middens. It is interesting, though not unexpected, that Eastgate and Rose Spring types appear only in this layer. Unfortunately, a certain amount of disturbance and mixing at this level makes further stratigraphical refinement impossible.

In addition to the pieces found in Hidden Cave during excavation, one incomplete Elko Corner-notched point was found outside the cave, at the base of the guano miners' talus slope, in the summer of 1950. It is made of white chert and is probably from the Surface Midden. One Gypsum Cave point was found on this talus slope in the fall of 1965. The dimensions of the latter are given in Table 2, and it is illustrated in Figure 2y.

Explanation of Illustrations

[Accession numbers are those of the Lowie Museum of Anthropology]

Figure 1

a-g Humboldt Concave Base A projectile points
- a. 2-32695
- b. 2-32696
- c. 2-32698
- d. 2-32697
- e. 2-32405
- f. 2-32415
- g. 2-32404

h Type I projectile point
- h. 2-32762

i-l Humboldt Basal-notched projectile points
- i. 2-32408
- j. 2-32611
- k. 2-32751
- l. 2-32734

m,n Drills
- m. 2-32440
- n. 2-32641

o-u Eastgate Expanding Stem projectile points
- o. 2-32749
- p. 2-32640
- q. 2-32485
- r. 2-32752
- s. 2-32357
- t. 2-32726
- u. 2-32442

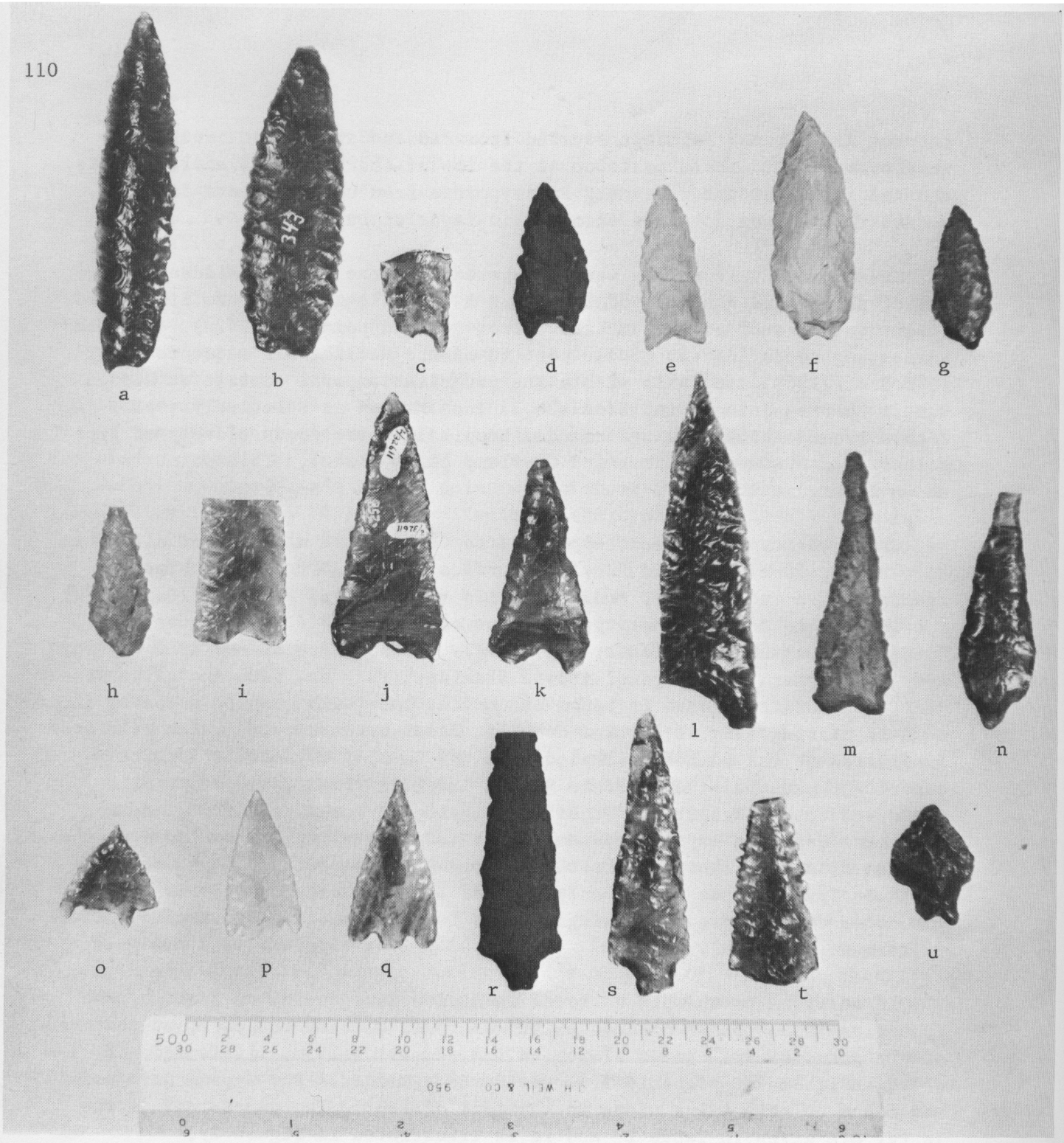

Figure 1

Figure 2 a-i Pinto Square Shoulder projectile points
- a. 2-32639
- b. 2-21906
- c. 2-21905
- d. 2-32655
- e. 2-32638
- f. 2-32761
- g. 2-32481
- h. 2-32758
- i. 2-32607

j,k Elko Eared projectile points
- j. 2-32629
- k. 2-32759

l-p Elko Corner-notched projectile points
- l. 2-32660
- m. 2-32750
- n. 2-32359
- o. 2-32760
- p. 2-32387

q-x Rose Spring Corner-notched projectile points
- q. 2-32526
- r. 2-32403
- s. 2-32747
- t. 2-32509
- u. 2-32584
- v. 2-32506
- w. 2-32725
- x. 2-32557

y Gypsum Cave projectile point
- y. 2-34872

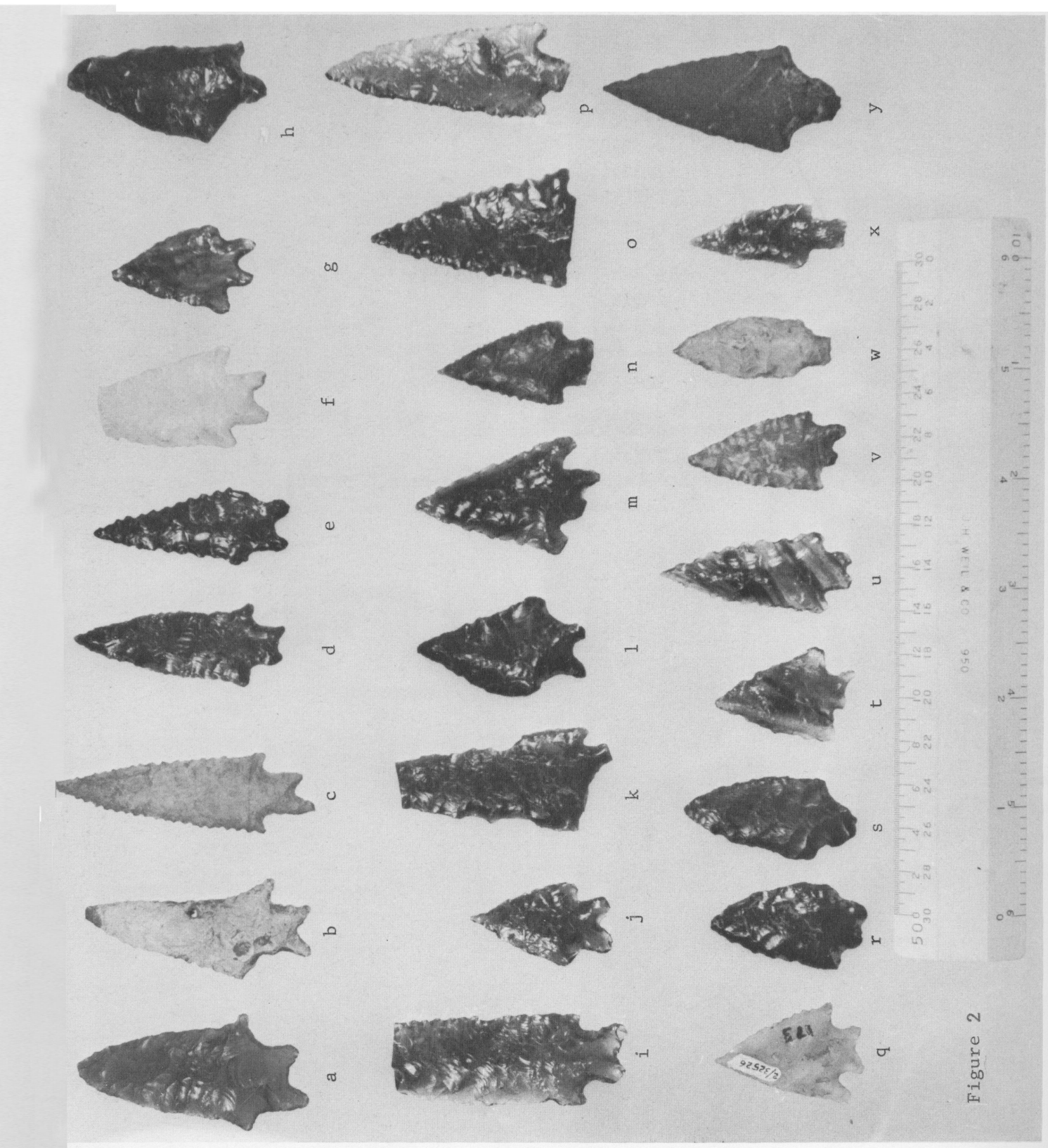

Figure 2

Bibliography

Ambro, Richard D.
1966 Two Fish Nets from Hidden Cave, Churchill County, Nevada. Univ. Calif. Arch. Sur. Report No. 66:101-135, Berkeley.

1967 Dietary-Technological-Ecological Aspects of Lovelock Cave Coprolites. Univ. Calif. Arch. Survey Report No. 70:37-48, Berkeley.

Clewlow, C. W., Jr.
1967 Time and Space Relations of Some Great Basin Projectile Point Types. Univ. Calif. Arch. Survey Report No. 70:141-149, Berkeley.

Fenenga, Franklin
1953 The Weights of Chipped Stone Objects: a Clue to Their Function. Southwestern Jour. Anthrop., 9: 3:309-323, Albuquerque.

Grosscup, G. L.
1956 The Archaeology of the Carson Sink Area. Univ. Calif. Arch. Survey Report No. 33:58-64, Berkeley.

Harrington, M. R.
1957 A Pinto Site at Little Lake, California. Southwest Museum Papers, No. 17, Los Angeles.

Heizer, Robert F. and M. A. Baumhoff
1961 The Archaeology of Wagon Jack Shelter. Univ. Calif. Anthrop. Records, 20: 4:119-138, Berkeley.

Heizer, Robert F. and C. W. Clewlow, Jr.
1968 Projectile Points from Site NV-Ch-15, Churchill County, Nevada. Univ. Calif. Arch. Survey Report No. 71:59-88, Berkeley.

Lanning, Edward P.
1963 Archaeology of the Rose Spring Site, Iny-372. Univ. Calif. Publs. Amer. Arch. and Ethnol., 49: 3:237-336, Berkeley.

Lister, Robert
1953 The Stemmed, Indented Base Point, a Possible Horizon Marker. Amer. Antiquity, 18: 3:264-265.

Morrison, Roger B.
1961 Lake Lahontan Stratigraphy and History in the Southern Carson Desert (Fallon) Area, Nevada. In Short Papers in the Geologic and Hydrologic Sciences: U.S. Geological Survey Professional Paper 924-D, pp. D125-D127.

1964 Lake Lahontan: Geology of Southern Carson Desert, Nevada. Geological Survey Professional Paper 401, Washinton, D.C.

1965 Quaternary Geology of the Great Basin. In Wright and Frey, The Quaternary of the United States, 265-285.

O'Connell, James F.
1967 Elko Eared/Elko Corner-notched Projectile Points as Time markers in the Great Basin. Univ. Calif. Arch. Survey Reports No. 70: 129-140, Berkeley.

Roust, N. L
1967 Preliminary Examination of Prehistoric Human Coprolites from Four Western Nevada Caves. Univ. Calif. Arch. Survey Report No. 70:49-88, Berkeley.

Roust, N. L. and G. L. Grosscup
n.d. The archaeology of Hidden Cave. MS 171 in the files of the Univ. Calif. Archaeological Research Facility, Berkeley.

Susia, Margaret L.
1964 Tule Springs Archaeological Surface Survey. Nevada State Museum Anthropological Papers, No. 12, Carson City.

Wormington, H. M.
1957 Ancient Man in North America. Denver.