31. WINSLOW CAVE, A MORTUARY SITE IN CALAVERAS COUNTY, CALIFORNIA

By William C. Gonsalves

The Site

Winslow Cave[1] is a limestone cavern in the western foothills of the Sierra Nevada Mountains about 1.25 miles northwest of Murphys,[2] Calaveras County, California. The mouth of the cave is at an elevation of 1880 feet on a steep and rugged hillside about 140 feet above the bed of San Domingo Creek. The density of the vegetation, the nature of the surrounding rock formations and the smallness of the cave opening itself make the cavern difficult to find. The natural environment is one of digger pine-covered hills with bare outcrops of limestone. Oaks and chaparral growth occur sporadically in the area.

The natural and only entrance to the cave is through a nearly rectangular opening in the ground, measuring 7 feet by 2.5 feet.[3] This opening, maintaining its dimensions as it descends vertically from the ground, continues as a limestone walled shaft to a depth of 52 feet to the floor of the main chamber. Since the walls of the shaft are smooth and vertical, descent must be made by means of a rope ladder. The main chamber has an irregular floor sloping downward at a slight angle from east to west and measuring 20 feet east-west by 8 feet north-south (Map 1). Two cone-shaped fissures extend laterally from the main room, one to the east and one to the west. The ends of these projections are accessible only by creeping on one's hands and knees. Two fissures rise from the ceiling of the main chamber and run parallel to the entrance shaft to a height of approximately 35 feet. Attempts at exploration, made in an attempt to locate possible ground openings to these crevices, were not successful due to the impossibility of moving several massive rocks on the surface.

The interior of the cave is cool and dark since little sunlight penetrates the entrance shaft. Infiltrating water, carrying lime, drips constantly from the ceiling and sidewalls and appears to be gradually enlarging the cavern and its opening. Although dripstone is being formed along the walls, sufficient soil and debris have been constantly washed in from the ground surface to prevent calcareous material from forming on the cave floor.

The excavation

Our excavation of Winslow Cave was necessarily of a limited and exploratory nature, due primarily to the time available for the project. During a period of three days, a 3 by 7 foot pit was excavated to a depth of 3 feet in the deposit of the main chamber.[4] The high concentration of artifacts and skeletal material found and the difficulty of working conditions encountered account for the small amount of excavation done. Exploration carried out in the east and west projections produced a few stray skeletal fragments. No excavation was undertaken in these two wings since the floors were of limestone and had no deposit material.

Screening was not possible in the cave because of the wet nature of the deposit and the confined working space. When extremely heavy concentrations of small artifacts, such as beads, were found, the encompassing deposit was collected in paper bags, dried, and later screened in the laboratory.

During the course of the excavation, the removal of deposit undermined several massive slabs of loose limestone and the hazard of falling rock prevented excavation to a depth greater than 3 feet. Before further work is undertaken in the cavern, these slabs must be braced against further slipping.

The archaeological deposit

At first entry, a large number of mineralized and dissociated human bone fragments were found lying on the surface of the cave floor.[5] These fragments, unlike the surface skeletal remains found in nearby Moaning Cave,[6] bore very little deposition of calcareous material. The continuous washing in of soil and debris from the ground surface was sufficient to protect both the cave floor and the skeletal material against limestone encrustation.

Although the lack of sunlight and the cool temperature in the cave are not conducive to the existence of plant life, a surprisingly large amount of growing vegetation, in the form of unidentified plant roots, was found on the surface and throughout the deposit. The roots appeared to be still alive and growing but no other surface growth was observed.

A small amount of charcoal was found scattered in the deposit, but no evidence of campfires or hearths, such as ash lenses, was revealed. The charcoal that did occur in the cave can readily be attributed to the residue of torches thrown in from above by early gold seekers, curious passersby or by the aborigines themselves. No traces of campfire soot were revealed on the cave walls or ceiling.

The natural deposit material consists of a dark black clay which is quite sticky due to the moisture present. Large numbers of rocks 6 to 12 inches in diameter were lying on the surface and scattered throughout the deposit. These were both angular and rounded fragments, many presumably thrown or fallen in from above. No visible stratigraphic change could be detected in the pit excavated. As would be expected, there were no evidences of a layering effect since the material which fell or was thrown into the cave naturally formed a conical heap below the opening. The excavated pit had not been disturbed to any great extent as was indicated by shell beads found in their original stringing position and by the occurrence of concentrations of human hand and foot bones.

There is some suspicion that the cave had been entered in the early historic period as indicated by the presence of a square nail and a fragment of green glass which may have been part of a lantern. These specimens occurred below the surface, the nail being at 0-6 inches and the

glass fragment at 23 inches. Despite the depth of the glass fragment, there was no evidence of previous excavation at this depth and its location may possibly be due to having fallen between the numerous rocks of the deposit. As this fragment was very close to the west end of the pit, it is possible that there is some disturbance of the site in the area adjacent to the pit dug. The only other known visitors actually to enter the cave are members of the Stanford University Cave-exploring group in 1949 and Dr. D.D. Deakins of Murphys in 1952. Neither of these parties excavated the deposit.

The nature of the deposit, with its absence of charcoal, seems to negate the use of the cavern by the aborigines for human residence. Further reasons for argument against early use of the cave for habitation are the uncomfortable conditions created by the constant dripping of water from the ceiling and the difficult accessibility of the vertical entrance shaft. There is no reason to believe that any living Indian ever even visited the interior of the cave.

Human skeletal remains

A heterogeneous mixture of dissociated and mineralized human bones was found on the surface and throughout the deposit. The greater part of the skeletal material was of a fragmentary nature, and complete skulls or skeletons were absent. The largest bone found was a human left femur with distal condyles missing. No skeletal material was found in direct articulation. Concentrations of finger and toe bones were noticed but the disorderly arrangement of these bones did not warrant the assignation of position to deliberate interment.

Limb, mandible and skull fragments and finger and toe bones were most numerous and noticeably scarce were vertebrae and pelvic bones. This discrimination is probably due to differential resistance to decay and is to be expected. The more porous bones, having larger cells and permitting freer access of oxygen would decay more rapidly.

In relation to the amount of excavation done, the human bone yield was very high. A bone count by levels dug is presented in Table 1.

The results of a left femur count conducted in the museum indicated that at least 16 individuals (12 adults, 3 children and one very small infant) were represented in the osseous material collected.[7] The exact number of individuals is probably greater as many additional femur fragments are too small to be classified. Also it must be borne in mind that these bones are from one small pit. If the same concentration of bones prevails throughout the deposit, one may estimate that at least 100 individuals were thrown into the cavern.

Actual interment of the skeletal materials found in the deposit is highly unlikely. The previously mentioned difficulty of entering the cave plus the absence of evidence of graves dug argue in favor of the belief that the corpses were thrown into the cave from the ground surface. This inference is further supported by the observed scattering of

the bones and the absence of any direct articulation of the skeletons.

Secondary disturbance of the bones is likely to have been effected by stones which appeared to have been thrown in from above and by numerous roots which extend throughout the deposit. Further possibility of disturbance may be attributed to rodent activity as a few rodent bones were also found in the pit excavated.

The possibility of bones having been interred elsewhere and later exhumed and cast into the cave seems unlikely. The presence of numerous small bones such as terminal phalanges make secondary deposition improbable. However, secondary burial cannot be considered entirely ruled out on the basis of the evidence at hand.

A summary of other mortuary caves in Calaveras County is given by Wallace[8] and Heizer[9] Winslow Cave conforms in many respects to other mortuary chambers found in the neighboring foothills. However, Winslow Cave appears to be unique in that the skeletal material found bears none of the calcareous deposit encrusted on the osseous material recovered from similar caverns in the area.

Artifacts

The excavated pit contained a considerable number of artifacts in association with the human remains, a total of 75 specimens being recovered. In addition to these, 4329 shell beads were found; a few of these were lying in their original stringing position. Some of the artifact types are virtually identical to those found in nearby Moaning Cave.[10] Since Wallace has already given a detailed description of these, it is sufficient here to present only an enumeration of the same types from Winslow Cave, plus a description of the new kinds of artifacts found.

A total of 32 more or less complete abalone ornaments and 27 fragmentary ones were collected from the excavated pit. The following types from Winslow Cave are also reported for Moaning Cave:

1. Shell pendant, circular; 4.0-5.0 cm. diameter; one central and one peripheral perforation; serrated edge; ground on both sides; 2 certain specimens and one dubious fragmentary specimen (Wallace, 1951b, Fig. 4a).

2. Shell pendant, circular; 3.0-5.3 cm. diameter; single central perforation; serrated edge; 3 specimens are ground on both sides; 3 specimens have rough outer layer of shell on the back (Wallace,1951b, Fig.4b).There are 9 fragmentary specimens which probably belong in this type but as they lack the entire rim, it is not possible to ascertain that they did not have one or more peripheral perforations also.

3. Shell pendant, rectangular; 1.1 x 2.0 cm.; single perforation in one end; unmodified edge; ground on both sides; 1 specimen (Wallace, 1951b, Fig. 4d).

4. Shell pendant, subtriangular elongate; 1.2-1.6 x 4.0-5.1 cm.; perforation in one end; unmodified edge; ground on both sides; 3 specimens (Wallace, 1951b, Fig. 4h; here Plate 1C).

5. Crude "half" shell beads manufactured from the body whorl of olive shell (O. biplicata); 0.6-0.9 cm.; 5 specimens retain a trace of the inner whorl, 2 specimens have no vestige of the whorl; all specimens have a single central, punched perforation (Wallace, 1951b, Fig. 4j).

6. Elongate-saucer ("saddle") beads manufactured from olive shell with no vestige of the whorl; 1.0 cm. diameter; small central drilled perforation, 1.0 mm. diameter; 1644 specimens (Wallace, 1951b, Fig. 4k; here Plate 1J).

7. Small, round, slightly cupped disk beads manufactured from olive shell; 0.6-0.9 cm. diameter; one central drilled perforation, 0.1-0.3 cm. diameter; 2515 specimens (Wallace, 1951b, Fig. 4 l; here Plate 1K).

The following are the new artifact types found at Winslow Cave:

Shell artifacts

1. Shell pendant, circular; 3.3 cm. diameter; 2 central perforations; unmodified edge; ground on both sides; 1 specimen (here Plate 1G).

2. Shell pendant, circular; 3.2 cm. diameter; 2 central perforations; serrated edge; ground on both sides; one specimen (here Plate 2A, 6).

3. Shell pendant, circular; 2.6 cm. diameter; 2 central and one peripheral perforations; unmodified edge; ground on both sides; 1 specimen (here Plate 2A, 3).

4. Shell pendant, circular; 1.4 cm. diameter; one large central perforation; unmodified edge; ground on both sides; 5 specimens (here Plate 1H).

5. Shell pendant, rectangular; 1.3 x 1.9 cm.; one central perforation; unmodified edge; ground on both sides; 2 specimens (here Plate 1Q).

6. Shell pendant, subrectangular elongate; 0.9-1.5 x 2.4-3.9 cm.; perforation in one end; unmodified edge; ground on both sides; 10 specimens (here Plate 1E).

7. Shell pendant, elongate; 1.3 x 4.4 cm.; 2 perforations near one end; unmodified edge; ground on both sides; 1 specimen (here Plate 2A, 14).

8. Shell pendant, asymmetrical elongate; 0.8-1.5 x 1.8-2.7 cm.; perforation in one end; unmodified edge; ground on both sides; 20 specimens (here Plate 1A).

9. Shell pendant, triangular; 1.2-3.1 cm.; perforation in one end; unmodified edge; ground on both sides; 3 specimens (here Plate 1B).

10. Shell pendant, subtriangular; 0.9 x 3.5 cm.; perforation in one end; unmodified edge; ground on both sides; 2 specimens, both made from shell rim (here Plate 1F).

In addition to the above shell pendants, there are two unclassifiable fragments, catalogue numbers 9 and 47. Number 9 is a fragment of a circular pendant with no perforation showing and number 47 is roughly one half of a circular pendant with one edge perforation. Both pieces have unmodified edges.

Although two of the pendants are made from red-backed abalone, the remainder are manufactured from green-backed abalone (Haliotis cracherodii). The surfaces of some of the ornaments are badly eroded, but where identification is possible, green-backed abalone seems to have been preferred.

Beads

1. Small, round, flat disk beads manufactured from olive shell; 0.3-0.5 cm. diameter; single central perforation, .05-.15 cm. diameter; 144 specimens (here Plate 2A, 21).

2. Rectangular beads, slightly curved on longer sides; manufactured from olive shell; 0.6-1.0 cm.; single central perforation; 9 specimens (here Plate 2A, 22).

3. Spire-lopped beads, manufactured from olive (Olivella biplicata) shells; entire spire is ground off; 0.8-1.2 cm.; 0.2 cm. diameter of perforation; 10 specimens (here Plate 2A, 23).

4. Bone beads manufactured from vertebrae of an unidentified fish; edges ground; one central perforation; diameter 0.5-0.3 cm.; diameter of perforation ranges from 0.2-0.3 cm.; 5 specimens (here Plate 2A, 24).

5. Stone bead, cup-shaped; polished white stone, possibly stalagmite; 1.1 x 1.5 cm.; single drilled perforation; 1 specimen (here Plate 1P). Except for being a smaller size, this specimen is very similar to Wallace's Fig. 3n which he describes as a pipe bowl or pipe inset.

The small disk Olivellas occurred in association with the larger beads and as at Moaning Cave, the beads seemed to have been strung in groups of five or more between clusters of larger ones. A few "saddle"

beads were also found in their original stringing position.

Stone artifacts

1. Projectile point, stemmed, square base; 4.9 cm. long; 2.6 cm. wide; pink chert; 1 specimen (here Plate 1R).

2. Projectile point, triangular; obsidian; corner notched, stemmed; 1 specimen 3.6 cm. long, 2.5 cm. wide; 1 specimen 4.1 cm. long, 2.2 cm. wide. Similar to Wallace's Fig. 3p but edges are not serrated (here Plates 1S and 1T respectively). One additional specimen, catalogue number 51, probably belongs in this type, but due to the fragmentary nature of this specimen, a definite type could not be assigned.

3. Projectile point, triangular; obsidian; square base; 4.4 cm. long, 2.5 cm. wide; 1 specimen (here Plate 2B,3). In addition there is an unclassifiable medial fragment of an obsidian projectile point.

4. Large blade, square base; obsidian; 16.3 cm. long, 4.1 cm. wide; 1 specimen (here Plate 1X).

Among the stone artifacts recovered, there are 5 obsidian flake scrapers, amorphous in shape. These show slight retouching along the edges only (here Plate 1U-W).

5. Quartz crystals; 3.0-5.0 x 1.6-3.2 cm.; 4 specimens intentionally modified by battering, 1 specimen unmodified (here Plate 1N).

6. Chips of quartz crystal; 2 specimens, possibly broken off the quartz crystals when the latter were thrown in from the ground surface.

Bone artifacts

1. Canine teeth (probably bear); 7.9 cm. long, 2.4 cm. wide; perforation extending through the side wall into the pulp cavity of the root end; 1 specimen (here Plate 1L).

2. Bone "atlatl hook;" 3.6 cm. long, 1.4 cm. wide; one side beveled; 1 specimen (here Plate 1M).

3. Human bone implement ("atlatl"?); 38.5 cm. long, 3.5 cm. wide; manufactured from a human right femur; one fragment was found in the surface collection donated by Dr. Deakins and the two remaining fragments were found in situ; 1 specimen (here Plate 1Y).

Conclusions

The excavations at Winslow Cave were not extensive enough to reconstruct the entire history of human utilization. An attempt to fit the material from Winslow Cave into a local culture sequence is difficult and unreliable because knowledge of the archaeological situation of the Sierra foothills is extremely limited at the moment. However, of the cultural pattern that is known for this area, nearby Moaning Cave can be said to be most similar to Winslow Cave on the basis of artifact types recovered and similar use of a limestone cavern as a mortuary chamber. The small number of similarities of Winslow Cave's artifact types with these of Moaning Cave is probably due to the small number of artifacts recovered from the latter. Aside from these conclusions, it can be said that Winslow Cave is a Middle Central California Horizon site with several Early Horizon hold-overs. A trait list comparison with adjacent areas is given in Table 3.

Although the dating is uncertain, there is no reason to postulate any great antiquity for Winslow Cave, but the site is prehistoric and not one of the Late Horizon. The assigning of a more or less precise age to a prehistoric culture deposit, such as that found in this site, is difficult, but presumably the site is at least several hundred years old.

Since this is the first mortuary cave to be investigated by archaeologists before any vandal action had occurred, Winslow Cave holds great promise for further clarifying this distinctive mortuary complex and it is to be hoped that additional excavation of the cavern can be carried out.

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NOTES

1. This site is recorded in the files of the University of California Archaeological Survey as Cal-99. The cavern received the name of Winslow in acknowledgment for the generous support and cooperation given to the U.C.A.S. by Mr. and Mrs. Burt Winslow of Murphys, on whose property the cavern is located. The site was previously discovered and visited by members of the Stanford Grotto, National Speleological Society in 1949. We are indebted to Mr. Edward Danehy of the Stanford Grotto for information pertaining to the site. We also wish to express our appreciation to Dr. and Mrs. Duane D. Deakins of Murphys, who called attention to the site and graciously supplied ladders and other special equipment to the field party.

2. Information regarding the exact location of Winslow Cave is obtainable at the office of the University of California Archaeological Survey, Department of Anthropology, University of California, Berkeley 4, California.

3. A photograph of the cave opening has been printed in Wallace, 1951a, p. 202, top, captioned as "Indian burial pit." The depth as given in the caption is erroneous.

4. The field party was under the direction of C.W. Meighan, archaeologist for the U.C.A.S. and included M.A. Baumhoff, assistant archaeologist, D.M. Pendergast, and the writer. The writer wishes to express his gratitude to Mr. C.W. Meighan, who aided greatly in the preparation of this report.

5. Several dozens of skeletal fragments had been previously collected from the surface by Dr. D. Deakins, who kindly contributed the specimens to the University of California's Museum of Anthropology.

6. Wallace, 1951b, p. 35.

7. Thanks are here expressed to Leroy G. Fischer who made the bone identifications and count of individuals.

8. Wallace, 1951b, p. 35.

9. Heizer, 1952, pp. 3-4, 6-7.

10. Wallace, 1951b.

11. Moaning Cave list from Wallace, 1951a, 1951b. List for lower Sacramento Valley horizon cultures from Lillard, Heizer and Fenenga, 1939 and Heizer, 1949.

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Table 1

Occurrence of Human Bone by Level

Level in inches	Number of bone fragments recovered**
Surface	418
0-6	302
6-12	197
12-18	245
18-24	167
24-30	312
30-36	94
TOTAL	1735

** Figures for bone fragments do not include pieces smaller than approximately 3 cm. square. The deposit also included a great number of smaller pieces.

Table 2

Trait List Comparison of Winslow Cave's Artifact Types with Moaning Cave and the Culture Sequence of the Lower Sacramento Valley

(See Note 11, supra)

Winslow Cave		Moaning Cave	Late Central California	Middle Central California	Early Central California
A7.*	Circular shell pendant, serrated edge, 1 central, 1 peripheral perforation	+	-	+	-
A5.	Circular shell pendant, serrated edge, 1 central perforation.	+	-	+	-
A8.	Rectangular shell pendant, single perforation in one end, unmodified edge.	+	+	+	-
A2.	Circular shell pendant, 2 central perforations, unmodified edge.	-	-	+	+
A6.	Circular shell pendant, 2 central perforations, serrated edge.	-	-	+	-
A4.	Circular shell pendant, 1 large central perforation, unmodified edge.	-	-	-	+
A3.	Circular shell pendant, 2 central and 1 peripheral perforations, unmodified edge.	-	-	-	+
A12.	Rectangular shell pendant, one central perforation, unmodified edge.	-	-	+	+
A13.	Rectangular elongate shell pendant, perforation in one end, unmodified edge.	-	+	+	+

* Letter-number entries in this column refer to types illustrated in Plate 2.

Table 2 (Continued)

Winslow Cave		Moaning Cave	Late Central California	Middle Central California	Early Central California
A14.	Elongate shell pendant, 2 perforations near one end, unmodified edge.	-	+	?	+
A15.	Asymmetrical elongate shell pendant, single perforation in one end, unmodified edge.	-	+	+	-
A16.	Triangular shell pendant, perforation in one end, unmodified edge.	-	+	+	-
A17.	Shell pendant, claw shaped, manufactured from shell rim.	-	+	+	+
A19.	Elongate saucer, "saddle," Olivella beads.	+	-	+	-
A18.	Crude "half" shell olive beads with trace of inner whorl.	+	+	-	-
A20.	Small, round, slightly cupped Olivella beads.	+	+	-	-
A21.	Small, round, flat disk Olivella beads.	-	-	+	-
A22.	Rectangular olive beads, slightly curved on longer sides.	-	-	+	-
A23.	Spire-lopped, whole Olivella beads.	-	+	+	+
A24.	Small, fish vertebrae beads.	-	-	+?	-
B1.	Large, square based, stemmed chert point.	-	-	-	-

Table 2 (Continued)

Winslow Cave		Moaning Cave	Late Central California	Middle Central California	Early Central California
B2.	Large, corner notched, stemmed, triangular obsidian point. Non-serrated.	+	-	+	+
B3.	Square based, triangular obsidian point.	-	-	+	+
B4.	Large, square based obsidian blade.	-	-	-	+
B5.	Obsidian flake scrapers.	-	+	+	+
B6.	Quartz crystals.	-	+	+	+
A25.	Stone bead, cup-shaped.	+*	-	-	-
C1.	Perforated bear canine tooth.	-	?	+**	+**
C2.	Bone "atlatl hook."	-	-	+	-
C3.	Bone implement with a carved handle.	-	-	+?	-
	Use of human bone in the manufacture of artifacts.	-	-	-	+
	Preference for green-backed abalone in manufacturing shell ornaments.	+	-	+	-

*Larger specimen interpreted as a pipe bowl.

**Coyote tooth; not strictly comparable.

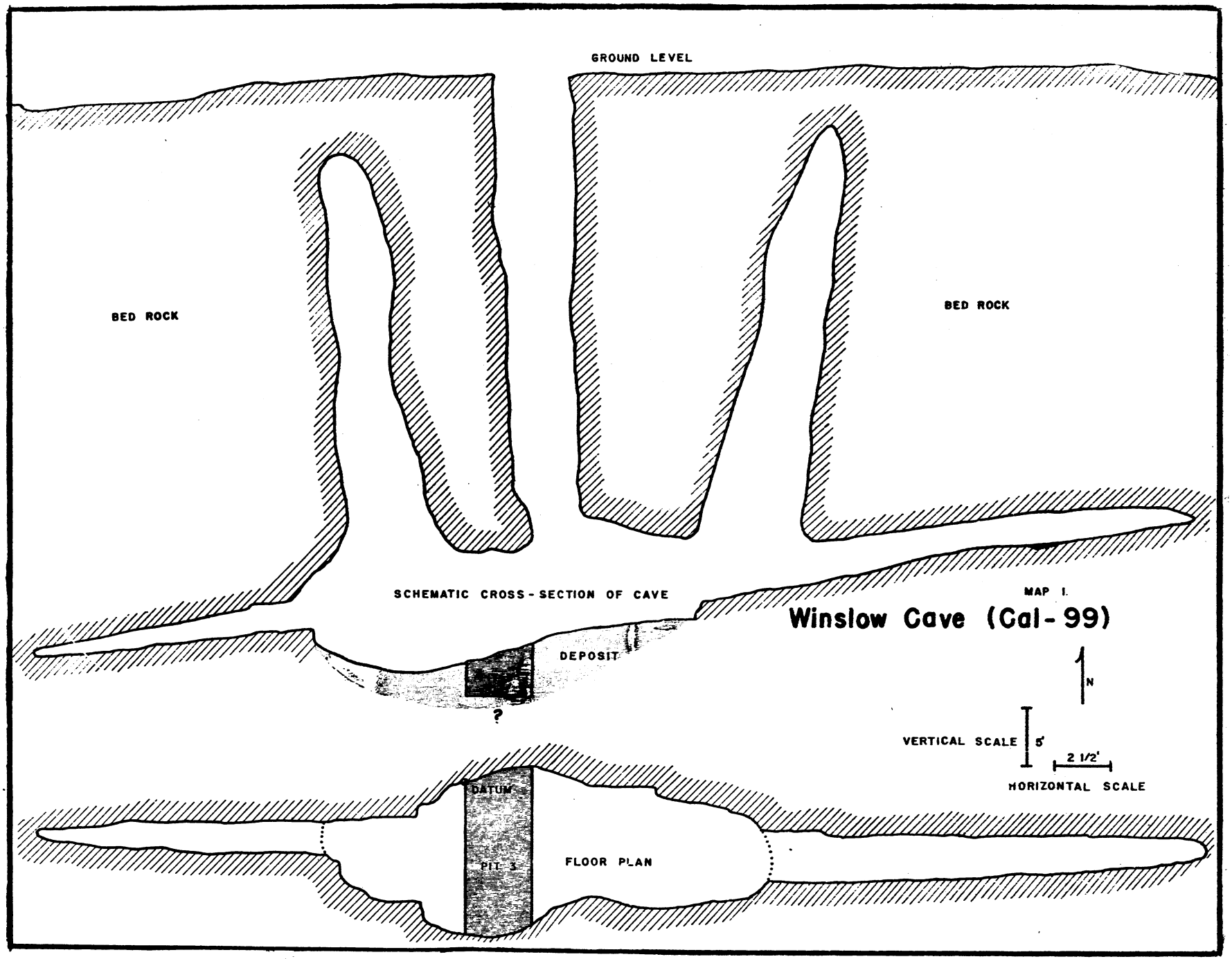
EXPLANATION OF ILLUSTRATIONS

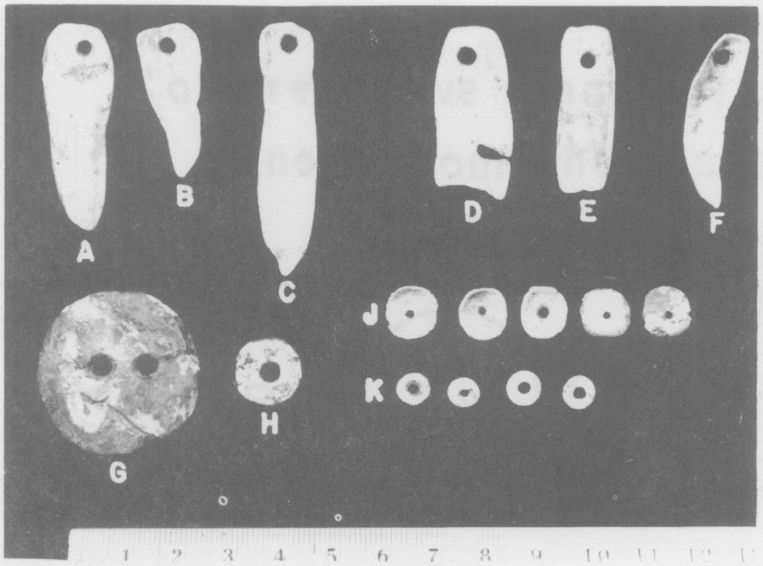
Note: Specimens are in the University of California Museum of Anthropology. Catalogue numbers used are field numbers.

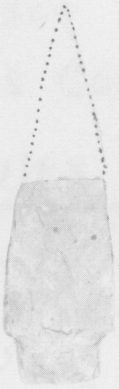
Map 1. Schematic cross-section and floor plan of Winslow Cave.

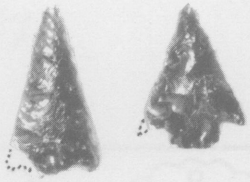
Plate 1. (Artifacts A-Q have a centimeter scale to indicate size. The sizes of the remaining artifacts are given below or in the text of this report.) A-F, shell pendants, #15; G, shell pendant, #36; H, shell pendant, #52; J-K, Olivella beads, #17; L, perforated canine tooth (bear?), #13; M, "atlatl hook," #3; N, quartz crystal, #12; P, stone bead, #40; Q, rectangular shell pendant, #13; R, chert point, l., 5.0 cm., w., 2.6 cm., #2; S, obsidian point, l., 4.1 cm., w., 2.3 cm., #20; T, obsidian point, l., 3.6 cm., w., 2.5 cm., #53; U, obsidian scraper, l., 4.1 cm., w., 2.4 cm., #18; V, obsidian scraper, l., 4.5 cm., w., 2.4 cm., #49; W, obsidian scraper, l., 4.3 cm., w., 2.8 cm., #29; X, obsidian blade, l., 16.3 cm., w., 4.1 cm., #16; Y, bone implement manufactured from human femur, l., 38.5 cm., w., 3.5 cm., #37.

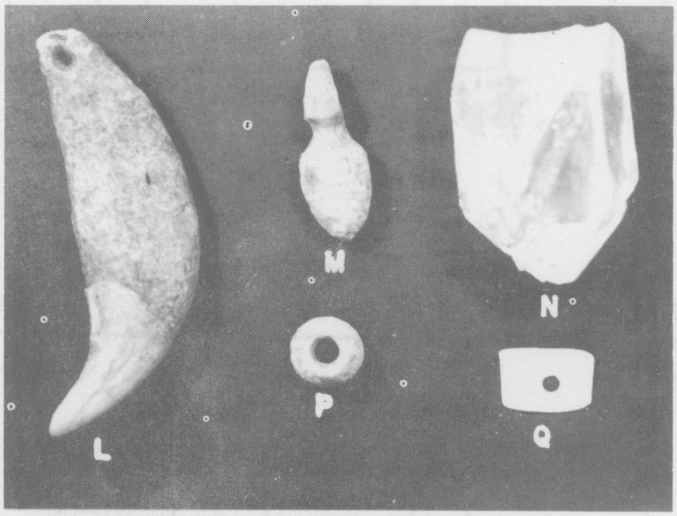
Plate 2. Comprehensive chart of artifact types known from the Calaveras County mortuary cave complex. (All artifact types from Winslow and Moaning Caves).
A, 1-17, shell pendants; 18-23, shell beads; 24, fish vertebrae beads; 25, stone bead.
B, 1-3, projectile points; 4, obsidian blade; 5, obsidian scraper; 6, quartz crystal.
C, 1, canine tooth (bear?); 2, bone "atlatl hook?"; 3, bone implement manufactured from human femur..


GROUND LEVEL
BED ROCK
BED ROCK
SCHEMATIC CROSS-SECTION OF CAVE
DEPOSIT
?
MAP I.
Winslow Cave (Cal-99)
N
VERTICAL SCALE 5'
2 1/2'
HORIZONTAL SCALE
DATUM
PIT 3
FLOOR PLAN









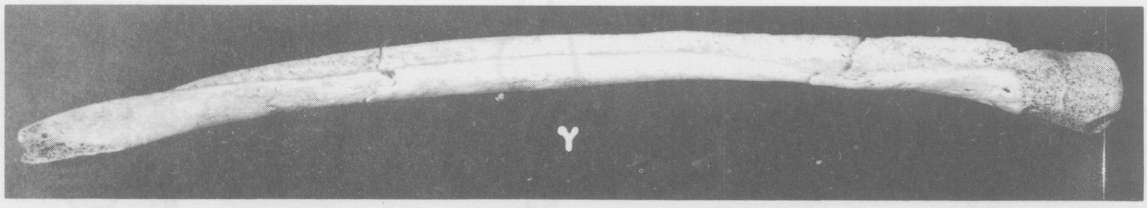
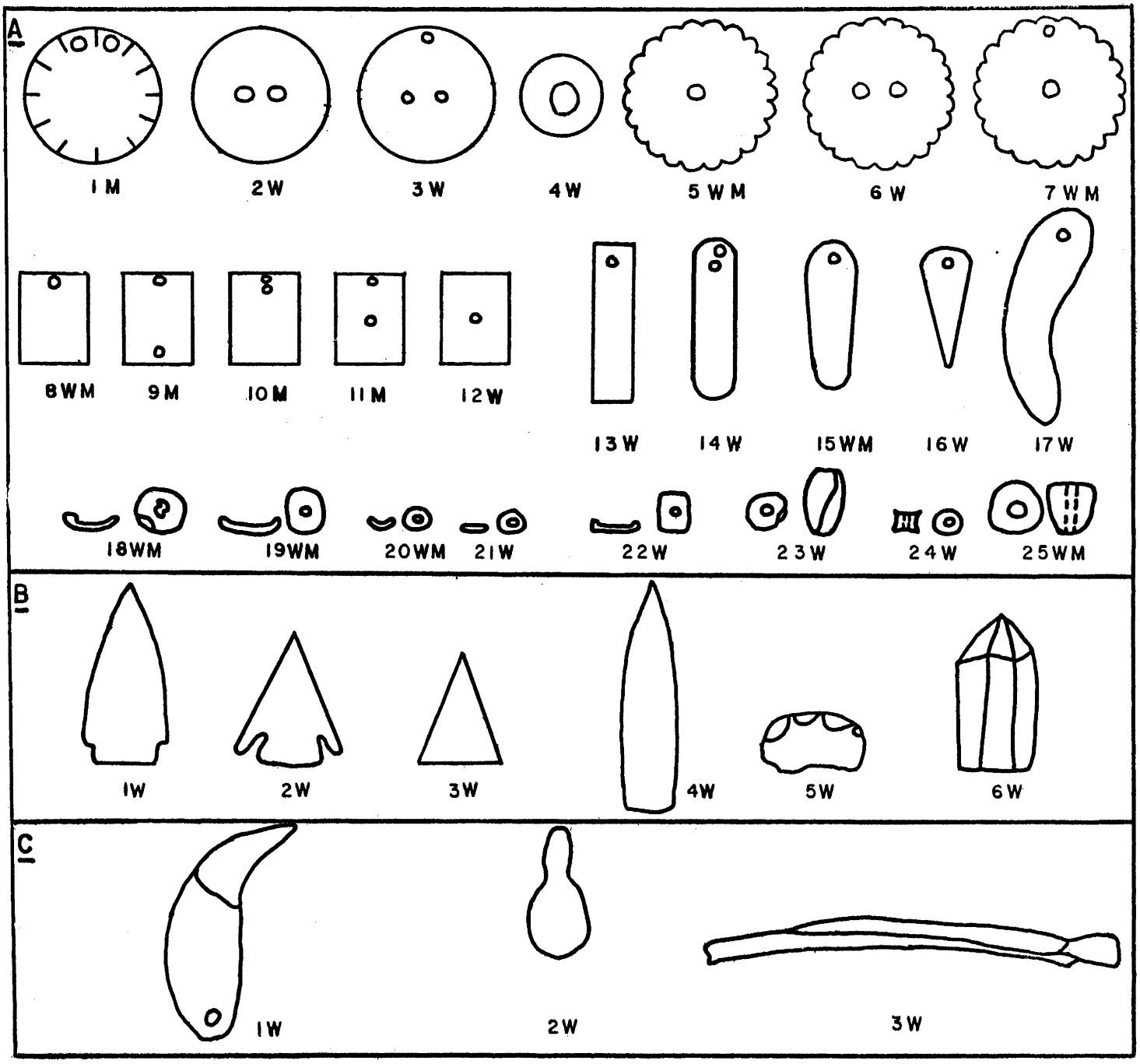


PLATE I.

Comprehensive Chart of Artifact Types Known from the Calaveras County Mortuary Cave Complex



W= Winslow Cave
M= Moaning Cave
WM= Both Winslow and Moaning Caves

PLATE 2.