



SOUTHWESTERN LORE

Official Publication, The Colorado Archaeological
Society, Vol. 42, No. 3 September 1976

5CR1—DRAPER CAVE EXCAVATION AND RESEARCH REPORT

by

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ABSTRACT

Draper Cave, Site 5CR1, is in the Rocky Mountain foothills of central Colorado in the northeast corner of Custer County. Both lithic artifacts and the radiocarbon (C^{14}) dates obtained on recovered charcoal samples place the occupation of this preceramic habitation site as far back in time as the Middle Archaic. The two radiocarbon dates, taken from levels of 71 cm. and 126 cm., were 3520 ± 70 and 3480 ± 65 B.P. (UGa 736, UGa 737).

The floor levels showed continuous deposits of artifacts to minus 147 cm. The cave bedrock was 214 cm. below the floor level at time excavation began. An interesting feature of this site was the recovery of McKean, Duncan, and Hanna types of projectile points. These types were scattered throughout the stratigraphic levels, tending to complicate analysis as a stratified site. Frequent rodent holes could have aided in this apparent mixing of cultural levels.

It is postulated that the site had been occupied for some years by the Archaic peoples then intermittently occupied by other cultural sequences to at least late preceramic time—no pottery sherds were found. (However, around A.D. 1840 white trappers began to settle in the area and found Ute, Arapahoe, and Cheyenne Indians living there.)

LOCATION

Draper Cave has an elevation of 6,580 feet. It lies at the east edge of the foothills of the Wet Mountain Range overlooking the broad plains to the east. The cave is at the south end of a long Dakota Sandstone outcropping and is approximately 80 feet from an intermittent stream, Tennant Gulch. The mouth of the cave is 13 feet above the bank of the stream. Directly below the cave in the bed of the stream is a clear water spring. Tennant Gulch empties into Hardscrabble Creek approximately two and a half miles east of the cave. Hardscrabble Creek then

flows NNE for 12 miles and empties into the Arkansas River east of Florence, Colorado.

The site is on the land of a 1,700+ acre ranch owned by the Episcopal Diocese of Colorado. The ranch is operated as a summer retreat and campsite for the members of the Episcopal Churches of Colorado and presently has a series of cabins, a dormitory, church, resident home and numerous picnic sites. Permission for excavation was obtained by the author from the Board of Directors, Episcopal Diocese of Colorado. Father William Pound was the resident Director on the property known today as the Trinity Ranch.

The cave lies within the Hardscrabble Mountain Quadrangle, 7.5 minute Topographic Series (USGS); 105° 7' 34'' longitude west, 38° 14' 27'' latitude north. It lies adjacent to the east line of the NW¼ NE¼ of Section 8, Township 21S, Range 69W, 6th Principle Meridian, and approximately 1,000 feet south of the north line of the section. Hardscrabble Mountain, one of the higher peaks of the Wet Mountains, crests at 10,402 feet and rises about five miles SW of Draper Cave.

GEOLOGY

The cave lies at the south end of a Dakota Sandstone outcrop, cut through by Tennant Gulch (Glen Scott 1972). The cave matrix was heavily deposited with a calcium carbonate filled clay. Such weathering is only possible in a temperate climate with considerable precipitation. A second cause of the formation of coarse limestone rubble is freezing and thawing. Thus in the entrance and front sections of the cave daily and seasonal variations influence sedimentation, which is also affected by rubble from the slopes above.

DESCRIPTION OF EXCAVATION

The cave and midden area were measured off in three-foot grid squares. (Fig. 1) except for grid rows WA and EC. These two grids were 4'6'' wide to work around existing boulders. Grid squares W3's, W4's, and the Test Trench Area (See Fig. 1) were excavated to bedrock at 84'' (216 cm.), and squares W2's were excavated to 64'' (162.3 cm.). Squares W1's were excavated to 38'' (96.6 cm.), squares W6's, W7's, W8's, and W9's—all in the midden area—were excavated to 34'' (86.4 cm.). Six three-inch bore holes were dropped into each square not completely excavated to bedrock with a gasoline powered auger in order to locate other possible burials. None were found. After excavations were completed the floor level was backfilled with shovels to the 38'' level.

From the Datum point to the north-south grid line between the EC and ED squares there was a gradual drop in elevation of four feet, and it was level from there to the fence at the east end of the site. All "E" squares were excavated to a depth of 38'' (96.6 cm.) but were not as prolific in artifacts or cultural material as the "W" squares. A test trench of the "EE" grids was made to a depth of 38'' (96.6 cm.) down the slope of the bank of Tennant Gulch. The last square to be excavated was EE22. (Two more squares were mapped but left unexcavated so a solid wall could be formed after back-filling to stop washouts.) Before backfilling this extended test trench—which had an 11-foot drop from EE1—every six feet a stone wall was laid in place to stop erosion. The entire excavation was made in

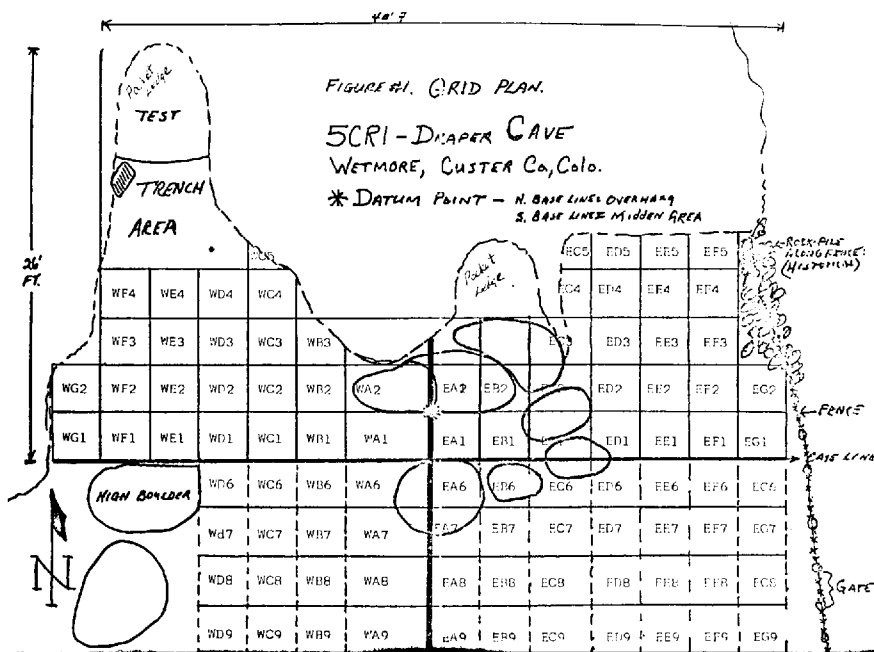


FIGURE 1. Grid plan, 5CR1, Draper Cave. All grids west of Datum point marked with "W" and grids east of Datum marked with "E."

arbitrary two-inch (5 cm.) levels to maintain more accurate recording of material recovered, although this may have hindered finding established occupation floors.

All the soil excavated was sifted through $\frac{1}{4}$ " mesh wire screens. The three fire pits and the matrix in the burial pit were sifted through $\frac{1}{8}$ " wire screen. All the lithic artifacts, bone tools, chips, and bone fragments were labeled and bagged as to squares and levels. Besides the artifacts and artifact fragments, a total (excluding the burial) of 4,968 long bone fragments and 1,970 small bone fragments were recovered. These were generally broken open and very fragmentary, making attempts at identification very difficult. Over 100 teeth were recovered, and the fauna utilized by the inhabitants of the site is being thereby reconstructed. (This report will be published at a later date.)

FEATURES

The first feature discovered was on the west wall of the cave in the ungridded test trench area about 25 cm. below the surface of the floor. The feature was a series of 12 parallel grooves in the sandstone wall, approximately 30.5 cm. long, from 10 to 15 mm. deep, and approximately 2.5 cm. apart. They could have been formed by grinding antler tips into workable tools. A number of such tools were found in the excavation, apparently used for flakers and awls.

Three well-formed fire hearths were excavated, two cobble lined and one slab lined. One cobble-lined fire pit (61 cm. below surface, square WF2) was uncovered and had a slab stone reflector still upright on the cave mouth side. This was located 20.32 cm. above the top of the burial pit. The second well-formed

cobble-lined fire pit came from square WF3 at a level of 91.44 cm. Two manos and one projectile fragment came from this pit. The third fire hearth was found in square ED2. It was the only slab-lined hearth located and possibly was made and used by a different culture than the other two. It was lined by five upright sandstone slabs, three of which were protruding just above the unexcavated floor of the rock shelter. (The "E" grids were considered a rock shelter, as they were not afforded total protection from wind and weather, whereas the "W" squares north of the baseline were considered the cave area as they were in total protection from the weather.)

There were numerous concentrations of charcoal throughout the site which could not be identified as lined fire hearths. All charcoal concentrations were labeled and identified as to square and depth and wrapped in double layers of aluminum foil and placed inside an air tight plastic bag. These were kept for further analysis if desirable and fundable.

A "Soil Profile Column" was carved out of the partial grid square WC5. This 15.24 cm. by 20.32 cm. soil column was carefully troweled from grid WC5 which had been left standing for level sequences during the excavation. This soil column was exposed intact, standing free from the cave wall. It was painted with a solution of one part Elmers Glue and four parts water to lend stability. It was then further stabilized with a 2" by 8" plank and completely wrapped with strips of white sheeting, then covered with 1/4-inch layer of plaster of paris. After drying for over 24 hours it was then transported to the lab in Boulder for further analysis. (I extend grateful thanks to Dr. Jim Hester for recruiting graduate student Allen Kane to do a soil analysis on this feature [published in this issue].)

The last and most important feature uncovered at 5CR1 was the semi-flexed Archaic burial. The skeletal remains of a single component burial were found in an unlined burial pit with 38 stone (chert) knives as burial offerings. This skeleton was recovered from below the dripline in the mouth of the cave. The cause of death could not be determined at time of excavation. The skeleton was interred on its left side with both legs flexed and oriented toward SSW from NNE. The right leg was over the left leg, the right arm flexed with hand up to the neck, left arm extended along side and on front of torso. The skull was turned up facing out of the mouth of the cave to the south.

Except for the skull, which was in good condition, the skeleton was in a very deteriorated condition. The maxilla and mandible were also intact and in good preservation. All the teeth were present with normal attrition wear patterns and no visible evidence of decay or deformity. The right ulna or radius was partially intact but both joints were reduced to "chalk"—making it difficult to determine which bone it was. The right tibia was also in one piece except for severe deterioration of both joints. All other bone was essentially reduced by severe decomposition to "chalk," perhaps due to the proximity of the dripline. The composition of the burial pit walls was a solidified calcium carbonate mixture with sand and clay, which must have been extremely difficult to dig in with primitive tools. The burial subject was probably wrapped in skins as the matrix was very dark in color, whereas the surrounding walls were much lighter in color.

The only burial offerings discovered were the 38 knives; white to pink in color—local area chert. Nine were around the skull, eight along the chest area, and

the remainder over and behind the flexed knees. (Much appreciation and gratitude is extended to Dr. Mike Finnegan for his analysis of the skeletal remains of this feature [published in this issue].)

GROUND STONE IMPLEMENTS

There were 16 whole or nearly complete metates, called block metates—after the Magic Mountain Site Report—because they were very thick and made from the native sandstone. Also there were 78 metate fragments recovered throughout the site. Only two slab metates were found and no fragments. These were well pecked on the edges and ground on both sides, almost wearing through at the center. Most of the metates and fragments were reburied under the back-fill after measurements and recording of their provenience. A floral study by Ray Lyons (this issue) supports an assumption that ample local floral resources existed to support a hunter-gatherer population.

There were 17 whole manos and 31 fragments, plus many smaller pieces of fragments. These were also buried under the back-fill. Generally, the manos were ground on two sides, although a few were multisided. Several were ground into a rocker shape and some were ground flat on both sides.

OTHER LITHIC MATERIAL

Projectile points were divided into classifications aided by the "Tate-Hagar" classification chart (Fig. 2) which was appropriate to the groups of finds at this site.

WITHOUT STEMS						WITH STEMS											
		POINTED BASE	CONVEX BASE	STRAIGHT BASE	CONCAVE BASE	BARB OR TANG	WIDER THAN BLADE			NARROWER THAN BLADE							
							CONVEX BASE	STRAIGHT BASE	CONCAVE BASE	Tapering		Parallel-sided			Expanding		
										POINTED	CONVEX	CONVEX	STRAIGHT	CONCAVE	CONVEX	STRAIGHT	CONCAVE
A	LEAF					ROUND											
B	TRIANGULAR					SHARP LATERAL	EXPANDING										
C	DIAMOND					SHARP OBLIQUE											
		1	2	3	4		5	6	7	8	9	10	11	12	13	14	15

FIGURE 2. Classification chart used for projectile point classes at 5CR1-Draper Cave. Modified by Tate-Hagar. This chart met all the types needed in this research report.

TABLE 1. Percent of type classifications according to depth of 119 classifiable projectile points. (S) = Serration, total of 16; (G) = Basal grinding, total of 11. Depth levels in inches. Compiled by W. Tate.

LVL	A2	A3	A4	A5	A9	A10	A12	A13	A14	A15	B5	B6	B7	B10	B11	B12	B13	B14	B15	C3	C9	C10	C13	C14	C15	LVL	#	(S)	(G)
+6																										+6	1		
+4																										+4	2		
+2																										+2	1		
0																										0	1		
-2																										-2	1		
-4																										-4	6		
-6																										-6	11		
-8																										-8	7		
-10																										-10	6		
-12																										-12	8		
-14																										-14	7		
-16																										-16	14		
-18																										-18	4		
-20																										-20	8		
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-60																										-60			
#	4	4	2	4	1	3	10	6	5	1	5	1	1	1	6	10	14	7	8	1	1	1	17	5	2	#	119	16	11
%	3.4	3.4	1.7	3.4	0.8	2.5	8.4	5.0	4.2	0.8	4.2	0.8	0.8	0.8	5.0	8.4	11.8	5.9	6.7	0.8	0.8	0.8	14.3	4.2	1.7				

From the "Soil Column Analysis" by Allen Kane (this issue) there were five major soil levels that I attribute to the major occupation levels in general of the Draper Cave. However, the projectile point types were profusely scattered throughout the matrix, perhaps due to rodent activity and/or historical disturbance.

The following chart (Table 1) will show the tentative classifications of 119 identifiable projectile points, with classification "B-12" falling into the McKean-Duncan variables according to Mulloy (1953) (Fig. 3).

The stones and flakes recovered from 5CR1 reflect nine kinds of material used in the lithic artifact manufacture. The comparisons are listed in Table 2 in order of the numbers found.

For a graphic representation of artifact distribution, see Figure 4. Photographs of selected artifacts are in Figures 5-7.

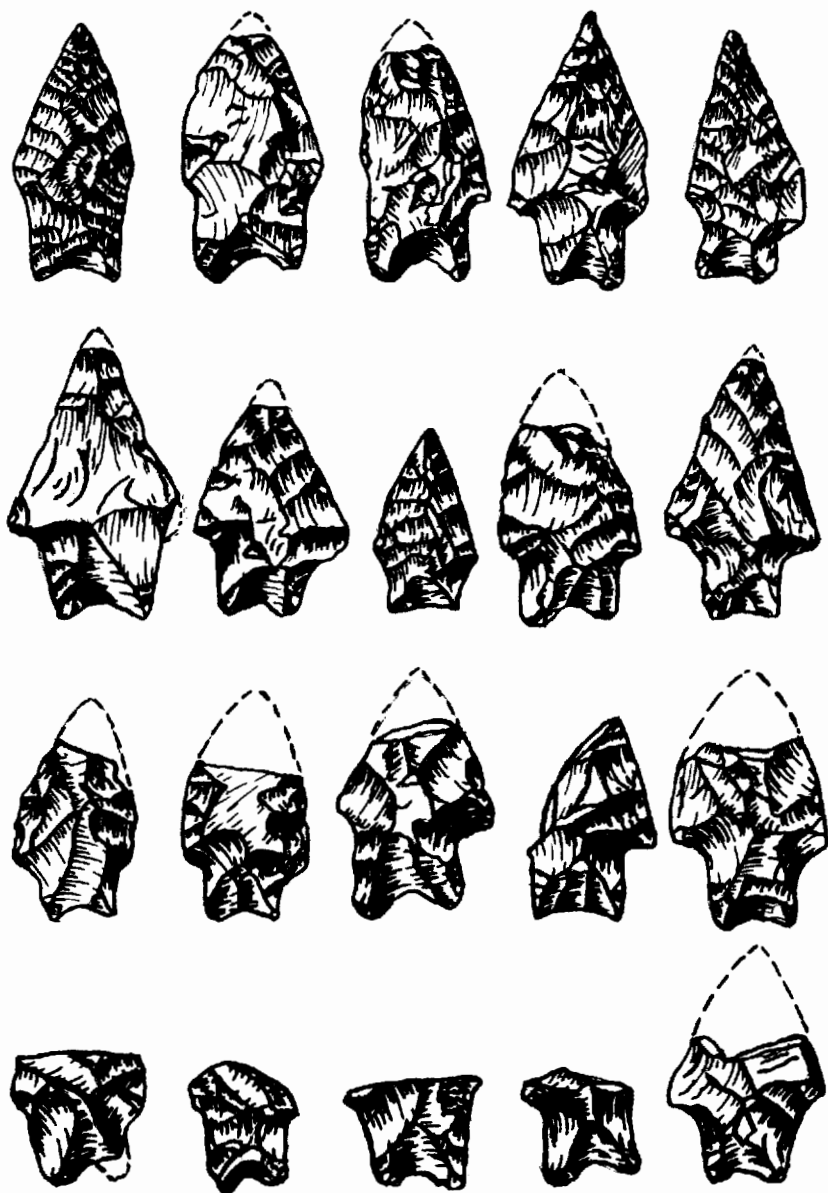
CONCLUSIONS AND ACKNOWLEDGEMENTS

It is hoped that a better understanding of Rocky Mountain foothills archaeology can be supplied from this field research. Many mistakes made at this site have been analyzed and proper corrections made. I cannot complete my remarks without stating that I have been very gratified with my association with the members of the Denver Chapter, CAS, and their dedication to gain personal knowledge and extend research methods in a field dominated by scientists and scholars.

This project was undertaken by the author as Dig Foreman and principal coordinator of research projects connected with it. The extensive report by Dr. Mike Finnegan of the skeletal material is most appreciated. The soil analysis report by Allen Kane is a vital part of this entire report. Thanks to Mr. Glen Scott, Geologist, U.S.G.S., Denver Federal Center, for his timely visit to the site. Appreciation to the anthropology students from four colleges and universities who donated their time to join the dig crews. And to all those who assisted in the analysis and lab work for much needed help, for Ray Lyons' report, for the study and drawings by Bill Tate, and the 38 faithful members of the Denver Chapter CAS who gave up the summer of 1972 to make this whole thing possible.

TABLE 2. Lithic Materials

Material:	Number-Chips:		Percent:
Quartzite	7,081	99%	71.85%
Chalcedony (Chert)	1,895		19.23
Jasper	657		6.66
Basalt	116		1.17
Quartz (white)	82		.83
Petrified wood	9	1%	.09
Obsidian	8		.08
Clear Quartz	3		.03
Agate	2		.02
TOTALS	9,853		100 %



(Drawings by Bill Tate)

FIGURE 3. Projectile points and fragments that fall into the Mulloy variants of McKean Duncan. Catalog No. Row one: 43, 276, 145, 185, 44. Row two: 277, 130, 107, 77, 12. Row three: 278, 21, 43, 404, 324. Row four: 328, 486, 34, 443, 299. (Actual size)

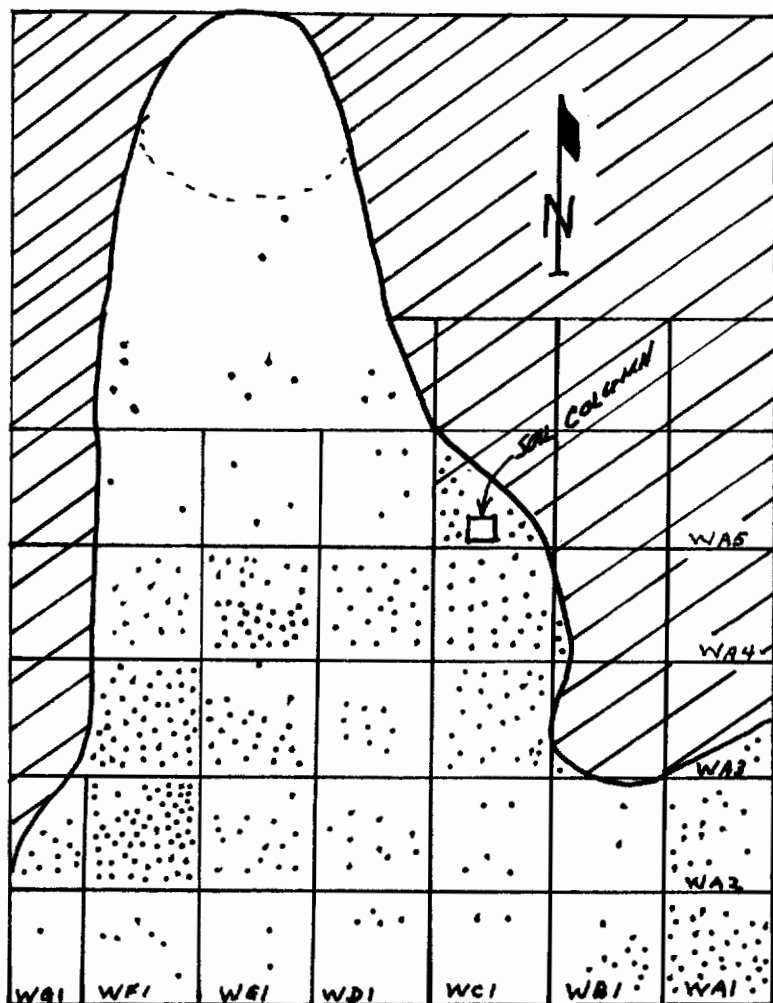
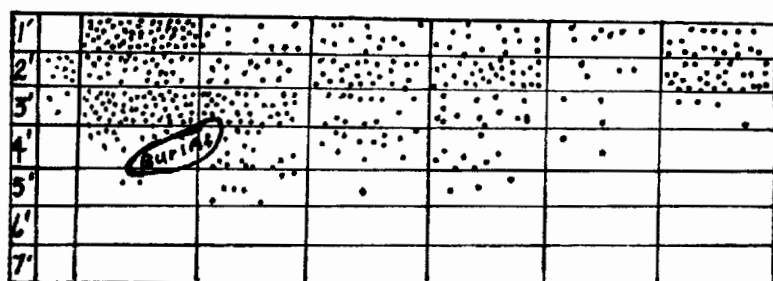


FIGURE 4. (Above) Artifact concentration per grids. (Below) Profile of artifacts as to depth, measured in feet. 5CR1—Draper Cave.



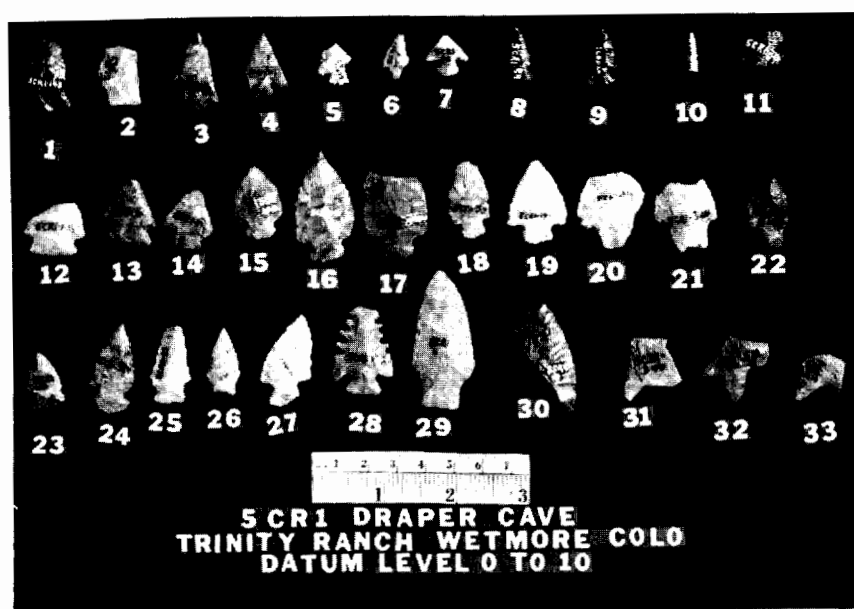


FIGURE 5. 5CR1—Samples of artifacts by levels. Photographs by Homer McGeorge.

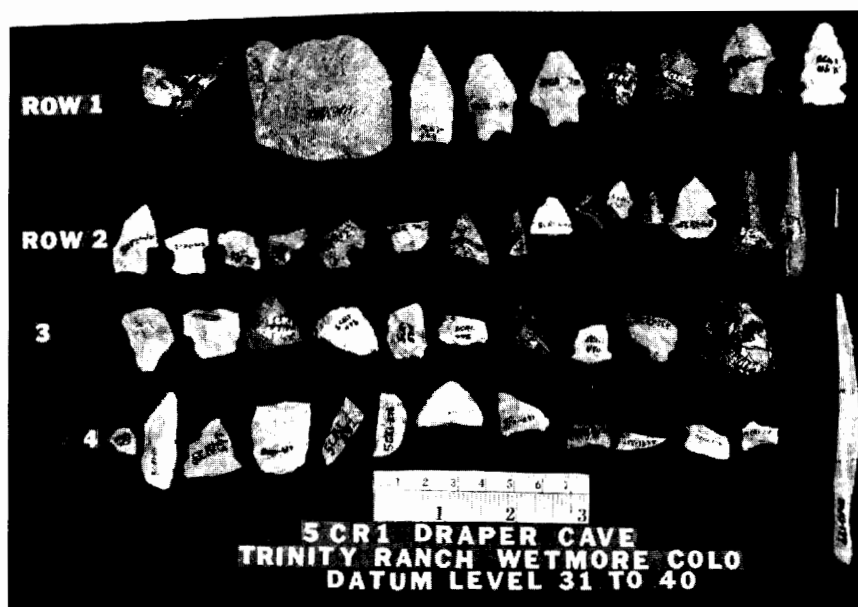
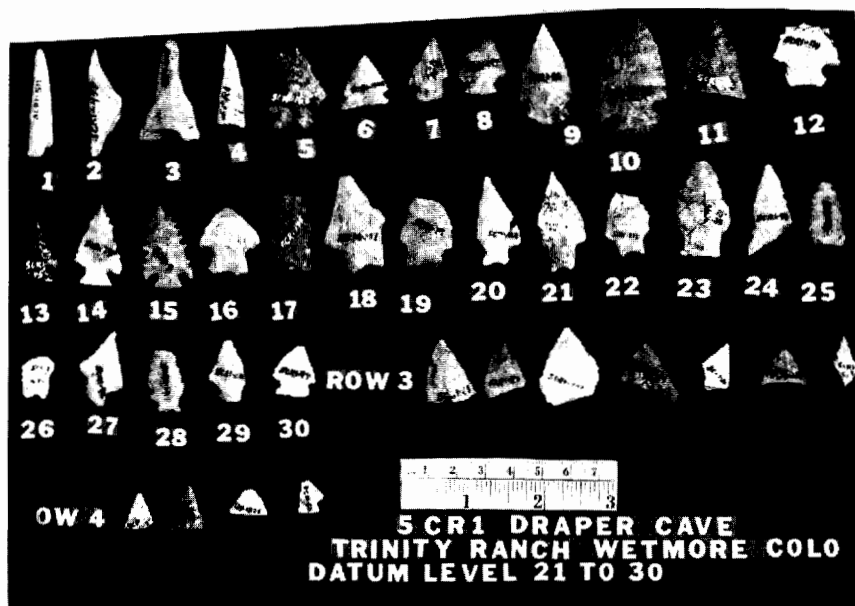


FIGURE 6. 5CR1—Samples of artifacts by levels. Photographs by Homer McGeorge.

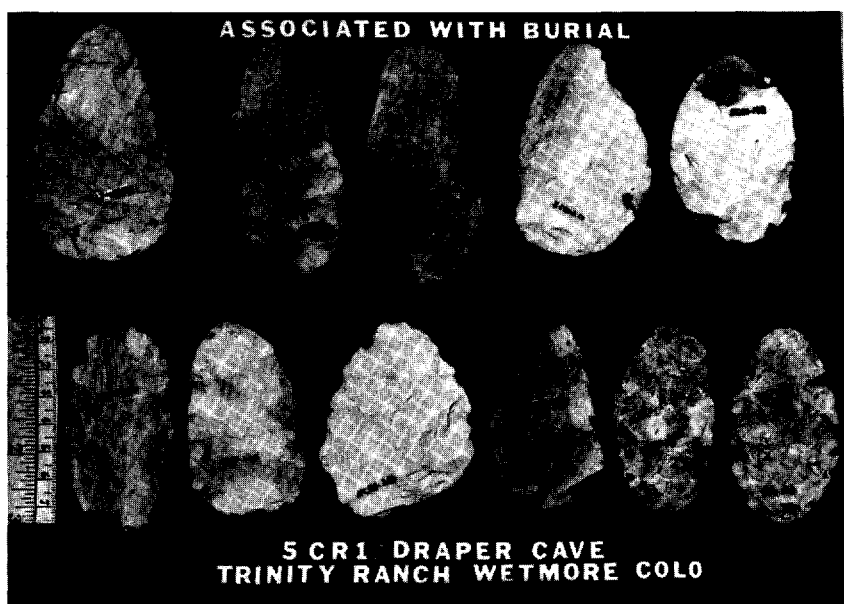


FIGURE 7. 5CR1—(Above) Samples of 38 stone knives from the burial pit. (Below, Samples of artifacts by levels. Photographs by Homer McGeorge.

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