"HAT A" GIRL SCOUT ARCHEOLOGICAL FIELD TRAINING

41PC62

ABSTRACT

Early in the 1974 camping season of the Permian Girl Scout District, a burial was found at Mitre Peak Girl Scout Camp. I was notified of the find and made a trip to the camp (reported in SWFAS #11). This incident made the initial contact with the Scout Director, Jody Morrison and Camp Director, Pat Thompson.

I was invited to view some of the sites on the "HAT A" Girl Scout Camp. We visited the Arthur Harrell Ranch, where we met Mr. and Mrs. Arthur Harrell and also viewed some of the sites on their ranch. We discussed the possibility of an archeological field training session for scouts. We received permission from Mr. Harrell to excavate a small shelter, "Apache Cave", named by the scouts in a previous survey session, and one of the three middens below the shelter on the first terrace above the draw.

The camp was set up to be held at the same time of a regular session, July 29 thru August 9, 1975, a ten day session. Six girl scouts and two adult scout leaders participated.

ACKNOWLEDGEMENTS

I wish to express appreciation to Mr. and Mrs. Arthur G. (Bill) Harrell, Jr., for their permission to hold this project on their ranch, also for their hospitality and enthusiasm for this project. Jody Morrison, Director and Pat Thompson, Camp Director, for their help in getting the session arranged and their cooperation. The camp session personnel at the camp, Mr. and Mrs. Orville Reese, camp caretakers; Margaret Persons, cook; and Chris Holt, Austin, Texas, "HAT A" Camp Director, and the rest of the camp councilors. Special thanks go to Julia Dorris and Ann Carroll, the adult scout leaders who were such wonderful help with the camp routine and took up the slack when things got slowed down. Also, Margaret Persons, cook, who made such a special effort for our breakfasts so early in the morning.

I also wish to say that the participants Jerri Gililand, Muffy Hodges, Kristian Kiser, Ruth Lawson, Sherry Roberts and Katie Sloan were great girl scouts to work with.

THE AREA

The Arthur Harrell Ranch and "HAT A" Girl Scout Camp are located on the eastern edge of the Stockton Plateau, an extension of the Edwards Plateau which is a subprovince of the Great Plain Physiographic Province (Fig. 1). Ridges separated by broad alluvial valleys typify the topography of the draws and small tributaries. The elevation ranges from 2900 feet above mean sea level on the mesa top to 2700 feet in the draws and flood plains. The main drainage in the area is Lower Four Mile Draw which flows in an eastwardly direction to the Pecos River. Lower Four Mile Draw has intermittent springs along it that collect in several ponds along the draw. The small tributaries to Lower Four Mile Draw enter the draw from the northwesterly and southwesterly direction. Most of the small tributaries are short in length and have broad alluvial valleys.

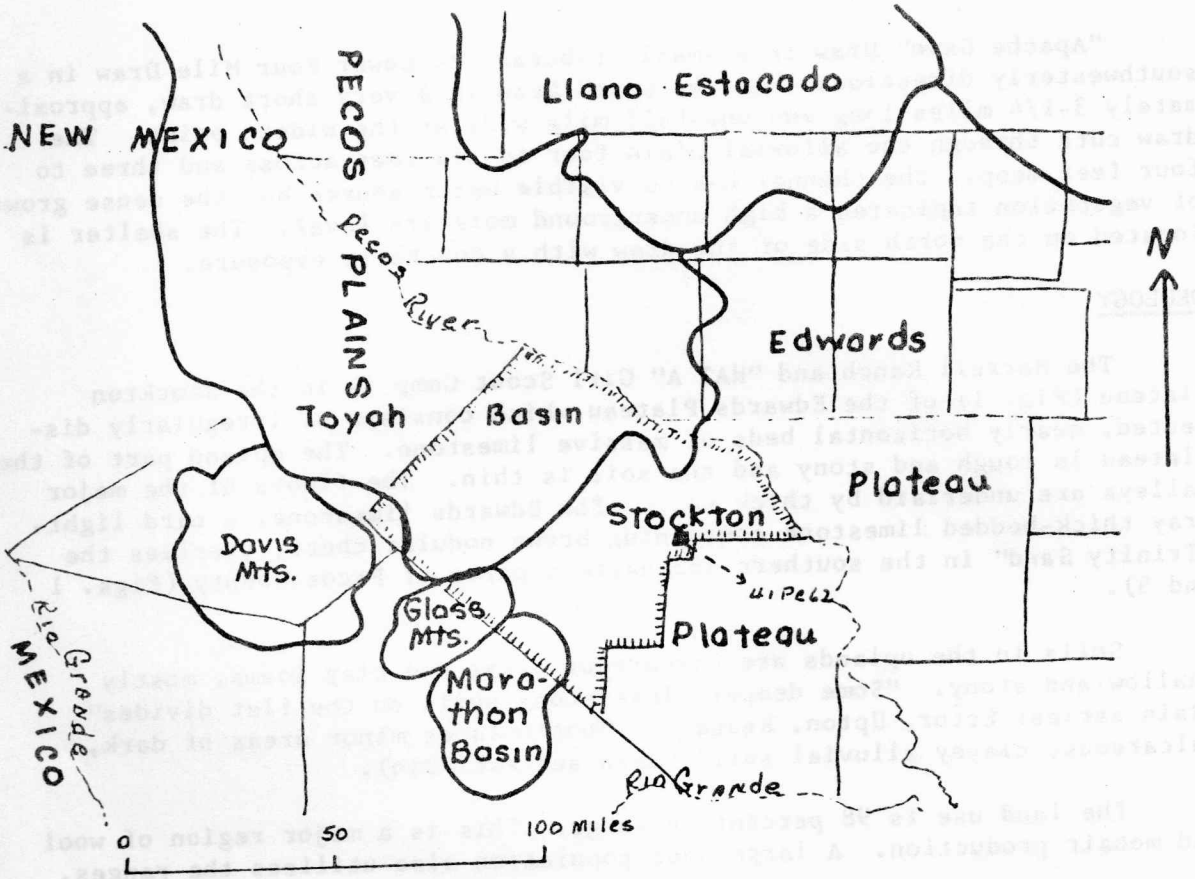
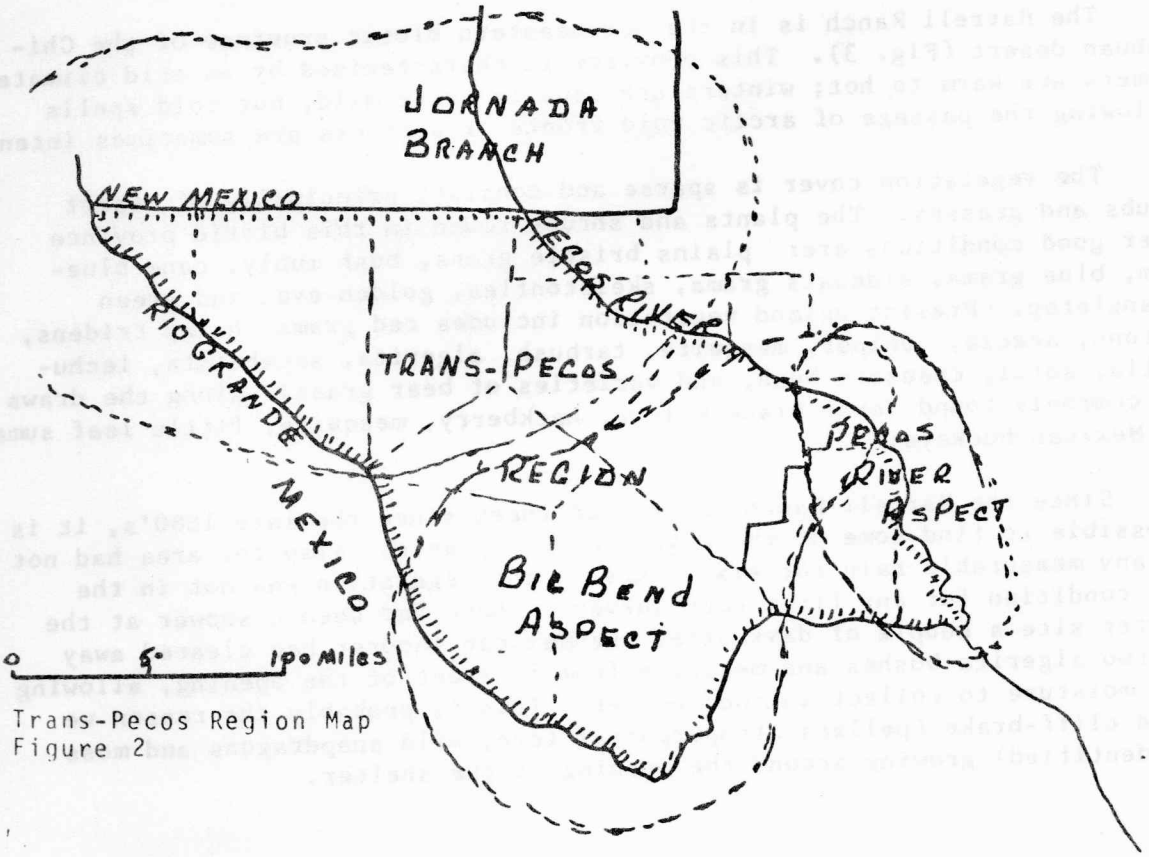


Figure 1



Trans-Pecos Region Map
Figure 2

"Apache Cave" Draw is a small tributary to Lower Four Mile Draw in a southwesterly direction. "Apache Cave" Draw is a very short draw, approximately 3-1/4 miles long and one-half mile wide at the widest point. The draw cuts through the alluvial plain four to six feet across and three to four feet deep. The channel has no visible water source but the dense growth of vegetation indicates a high underground moisture level. The shelter is located on the north side of the draw with a southerly exposure.

GEOLOGY

The Harrell Ranch and "HAT A" Girl Scout Camp is in the Stockton Plateau (Fig. 1) of the Edwards Plateau which consists of irregularly dissected, nearly horizontal beds of massive limestone. The upland part of the plateau is rough and stony and the soil is thin. The floors of the major valleys are underlaid by thick soil. The Edwards limestone, a hard light-gray thick-bedded limestone containing brown nodular chert, overlies the "Trinity Sand" in the southern and eastern parts of Pecos County (Figs. 1 and 5).

Soils in the uplands are calcareous clays and clay loams, mostly shallow and stony. "Some deeper, less stony soils on the flat divides" (Main series: Ector, Upton, Reagan); "bottomlands minor areas of dark, calcareous, clayey alluvial soil" (Main series: Frio).

The land use is 98 percent in range. This is a major region of wool and mohair production. A large deer population also utilizes the ranges.

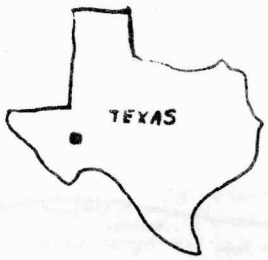
FLORA

The Harrell Ranch is in the northeastern biotic province of the Chihuahuan desert (Fig. 3). This province is characterized by an arid climate. Summers are warm to hot; winters are usually quite mild, but cold spells following the passage of arctic cold fronts or northers are sometimes intense.

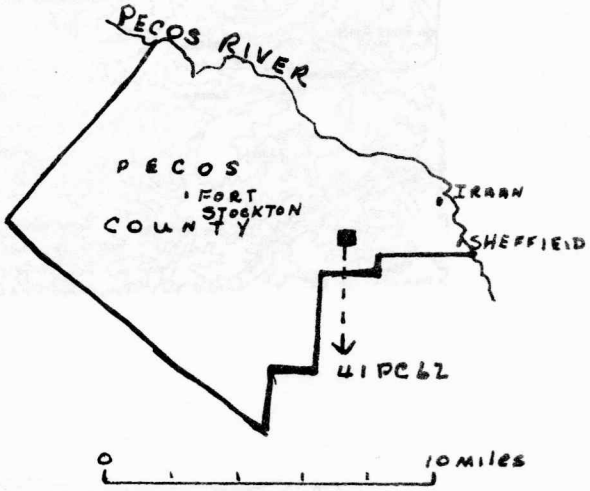
The vegetation cover is sparse and consists principally of desert shrubs and grasses. The plants and shrubs found in this biotic province under good conditions are: plains bristle grass, bush muhly, cane bluestem, blue grama, sideoats grama, skeletonflea, golden-eye, and green sprangletop. Present upland vegetation includes red grama, hairy tridens, cratons, acacia, juniper, mesquite, tarbush, algerita, sacahuista, lechuguilla, sotol, creosote bush, and varieties of bear grass. Along the draws are commonly found Texas black walnut, hackberry, mesquite, little leaf sumac, and Mexican buckeye.

Since the Harrell Ranch has raised sheep since the late 1880's, it is impossible to find some of those grasses and plants. Also the area had not had any measurable rain for six months so the vegetation was not in the best condition for any first hand survey. There had been a shower at the shelter site a couple of days after the Mexican laborer had cleared away the two algerita bushes and mesquite from in front of the opening, allowing some moisture to collect in the shelter. This is probably the reason we found cliff-brake (pellaea atropurpurea) fern, wild snapdragons and moss (unidentified) growing around the opening of the shelter.

Biotic Zone Map
Figure 3



Location Map
Figure 4



Pecos County Map
Figure 5

Road Map
Figure 6

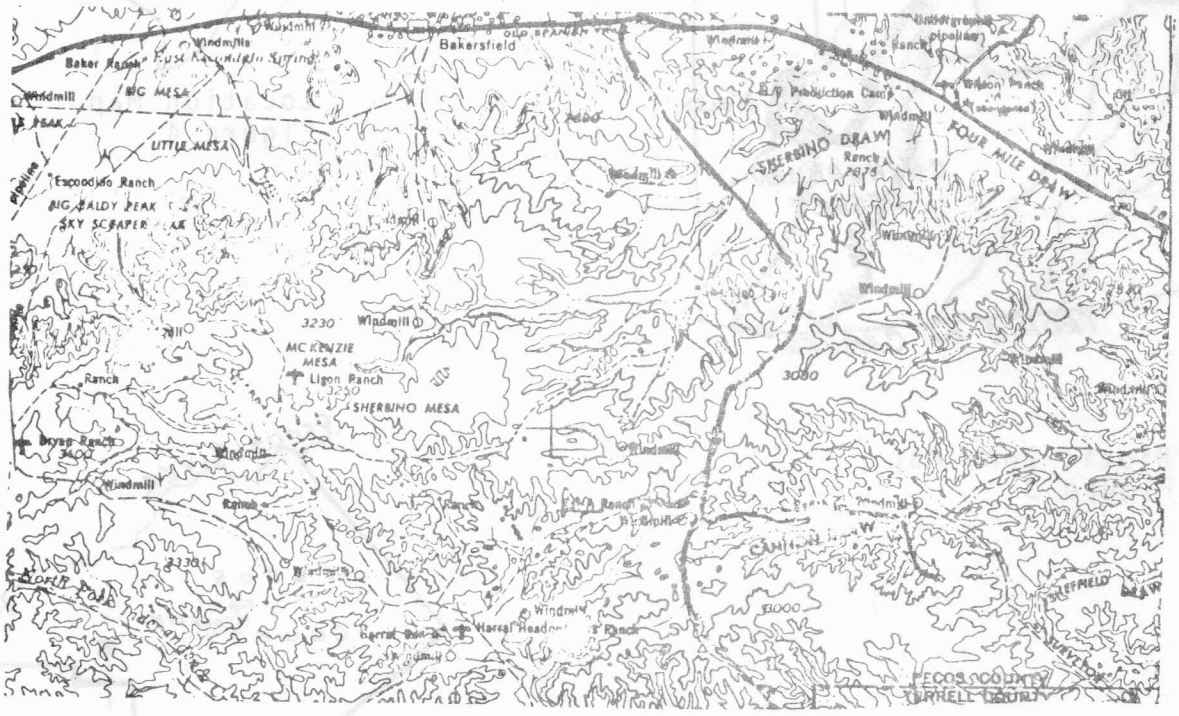


Figure 8

Figure 9

FAUNA

Fauna common to the area today include whitetail deer, javelina, cottontail rabbit, black-tailed jack-rabbit, ringtail, striped skunk, gray fox, kit fox, kangaroo rat, pocket mouse and cactus mouse. Also some of the other creatures, diamond-back rattler, copperhead at the ranch headquarters, scorpions, desert centipedes, tarantulas, collared lizards, horned toad, whip tail lizards, banded gecko, western box turtles and some small green frogs which were the shelter dwellers, and many birds.

ETHNOHISTORY

The Harrell Ranch and "HAT A" Girl Scout Camp is located in the extreme eastern part of the area of Trans-Pecos Region, which is described as west of the Pecos River, east of the Rio Grande River and south of the New Mexico border (Fig. 2). In this area, we have Big Bend Focus, Pecos River Focus and Jornada Branch of the Mogollon. This area will show influence from the three foci.

Open campsites are found throughout much of the highland area of the Trans-Pecos and in sheltered canyons and draws. These campsites have a thin layer of occupational debris sometimes scattered over a considerable area. Most of the debris consists of hearthstones, small fragments of rock whose color and structure indicate repeated burning. At some campsites, the hearthstone would be in a small circle with ash and charcoal mixed with the rock fragments. In other campsites there were large doughnut-shaped circles or horseshoe-shaped circles, so-called sotol pits, which represents a different Indian group at a different time period than rock shelters.

By historic times, the Spanish reported Jumanos living in this Trans-Pecos region who did some agriculture along the Rio Grande and hunting and gathering in the uplands at seasonal times of the year. This group disappeared from the recorded reports and by the middle of the 18th century the Apache occupied this area, having been pushed southward from the High Plains. The early 19th century had the Comanche raiding parties following the war trails through the Trans-Pecos region into northern Mexico.

After the settling of the southwest by the Spanish, the stage and freight road from San Antonio to El Paso del Norte passed north of this area. On this route was established the Escondido Spring Stage stop, which is located 17 miles north of the ranch. The mid 1800's saw ranchers start moving into the area with sheep and goats. Mr. McKenzie has the surface leases for grazing sheep on "HAT A" and the Arthur Harrell, Jr. ranches.

SITE

The "Apache Cave" rockshelter is located (Figs. 8 and 9) in the Edwards limestone ledge, on the north side of the draw facing south at 2752 feet elevation, with the middens located below on the first terrace of the draw in the alluvial flood plain, 2722 feet elevation (Fig. 7). The rockshelter was designated 41PC62 with four features:

The middens 41PC62-A (food preparation area)
"Apache Cave" draw 41PC62-B (food and water source)
Mesa Top 41PC62-C (work shop)
Talus Slope 41PC62-D (garbage disposal area)

The utilized area of the shelter was small with blackened ceiling. The roof fall in front of the opening and down the talus slope indicated at one time the shelter had a larger area for usage. The utilization of the shelter over a long period of time was indicated by the amount of material in front of the shelter and the talus slope debris. The occupation of the shelter was probably during periods spent in gathering the resources of the area and migration of family units through the area.

The rockshelter had previously been shoveled out to the front of the opening, creating a sizeable mound. Some of the roof fall had occurred before this event with the shelter matrix covering the roof fall and some sizeable roof fall on the mound falling afterwards. The shelter still provided a good project for the scouts' field school.

The three middens on the first terrace of the draw were not very large and the burnt rock was scattered over a fairly large area, instead of in a compacted area compared with middens in the surrounding area. The three middens were crescent-shaped with the opening or depression oriented to the east and southeast side. These middens had small amounts of firecracked limestone accumulated around them. The middens probably were not used very many times and it could have been that the three hearths were prepared at three separate times, making the accumulation of the burnt rock small.

The talus slope covered sixty feet of the slope with a 45° of incline. The deposit of debris in the top 15 feet was concentrated and of ashy, blackened soil, and discarded burnt rock and tools.

The mesa top surface was irregular and had sparse vegetation. There was a bench (3' to 1') below the top surface around the mesa top. On the north was a wide area which possibly could be a good area for mortar holes and bedrock metates. On the southernmost side were the remains of flint nodules in the limestone.

The draw showed a good growth of trees, shrubs and grasses in and along the channel cut. There seems to be no visible source of water.

PROPOSAL TO PERMIAN SCOUT COUNCIL

ARCHAEOLOGICAL FIELD SCHOOL TRAINING SESSION

Place: Girl Scout "HAT A" Ranch - Arthur Harrell Ranch
A small shelter to be tested.
Three burnt rock middens to be tested below the shelter.
Survey the draw that the shelter and middens are in.

Time: July 30 thru August 8, 1975, a 10 day session

Participants: Senior or Cadettes (20 maximum - 10 minimum).

Purpose:
1. To carry out a project of testing a small shelter and to test a burnt rock midden that is below the shelter on the first terrace of the draw; survey the entire draw.

2. To instruct the Scouts in the techniques of field archeology, surveying, mapping, care of artifacts recovered, and the writing of the report on a daily basis.

Excavation: All the proposed excavation is based on 20 participants, if fewer the excavation will be cut down.

1. All measurements will be metric.
2. Test trench the shelter from the outer edge in front to the back of shelter. The huge roof fall in front of the shelter may present a chance to place the trench one side or other of the roof fall.
3. Test trench one of the burnt rock middens from the outer rim to the center, or until the hearth or depression of a hearth is bisected.
4. The two burnt rock middens will be placed in a grid system that will allow for some checkerboard testing for living areas around the midden areas.

Artifacts: All artifacts recovered will be placed on display at the "HAT A" Ranch. Hopefully several girls will take the challenge to prepare a display that will show the artifacts in a teaching project for further use at the summer sessions of the scouting program.

Writing of the Report:

Each girl will serve as crew chief of a square or of a test trench. She will write up the daily log from her field notes and artifacts catalogued that day. This would leave only the abstract to be written at the conclusion of the field school.

Tools and Equipment:

Each girl should have:

1. Small triangle shaped trowel (masonry).
2. Metric tape (3 meters).
3. Line level.
4. Clip Board.
5. Two pencils and pencil sharpener.
6. Whisk broom.
7. 6-inch ruler (15 CM).

To be furnished:

1. Screens (1/4 mesh)
2. Shovels.
3. Two extra leaders (20 maximum)
4. Leaders for afternoon program sessions.
5. Forms needed to keep records.
6. Sacks for artifacts.

Permian Basin Scout Council:

1. Stakes (1" x 2" x 12") and twine.
2. Wheel Barrow (3)
3. Transportation to the sites and back to camp.
4. Four adult leaders (20 maximum)
5. Food and sleeping facilities.
6. Facilities for washing and drying artifacts at "HAT A" Ranch House.

SCHEDULE OF THE TRAINING PROGRAM

5:00 A. M.	Awake - Breakfast
6:30 A. M.	At site ready to work
11:30 A. M.	Break - to allow girls to review work done. Prepare to leave site.
12:30 P. M.	Lunch and rest period.
2:00 P. M.	Wash artifacts and cataloguing.
3:00 P. M.	Program by resource person, or swimming.
6:30 P. M.	Dinner
7:00 P. M.	Classroom

FIELD SCHOOL SCHEDULE

The camp session started Tuesday, July 29, at the "HAT A" Ranch House Scout Camp with evening meal served at 5:30 P. M. With the six girls, Julia Dorris, Chris Holt, and I visited the site that evening. We discussed the techniques to be used on both sites, midden and rock shelter; returned to camp and revised the schedule for the next morning. Waking at 5:30 A. M., waking the girls at 6:00 A. M.; breakfast at 6:30 A. M.; leave camp at 6:45 A. M.; arrive site 7:00 A. M. (sunrise). Leave site 12:00 noon, to be back in camp for lunch 12:30 P. M. Rest period after lunch until 2:00 P. M., lab session; free time; 6:30 P. M. dinner; 7:30 P. M. classroom and lab activities; 9:00 P. M. lights out.

This proved to be a very workable schedule. The girls were required to take part in some of the camp duties; clean tents; clean latrines; set up tables for dinner; and take part in the evening flag ceremony.

SURVEY PROCEDURES

Midden

The east midden was selected to survey and test, because of the area having sparse vegetation and not another midden being involved. The crew surveyed the area, flagging the lithic material. A base line was staked north-south through the midden. A grid was laid out east from the base line in one meter squares (3 meters wide and 5 meters long) making a 15 meter square grid to be mapped and collected (Fig. 10).

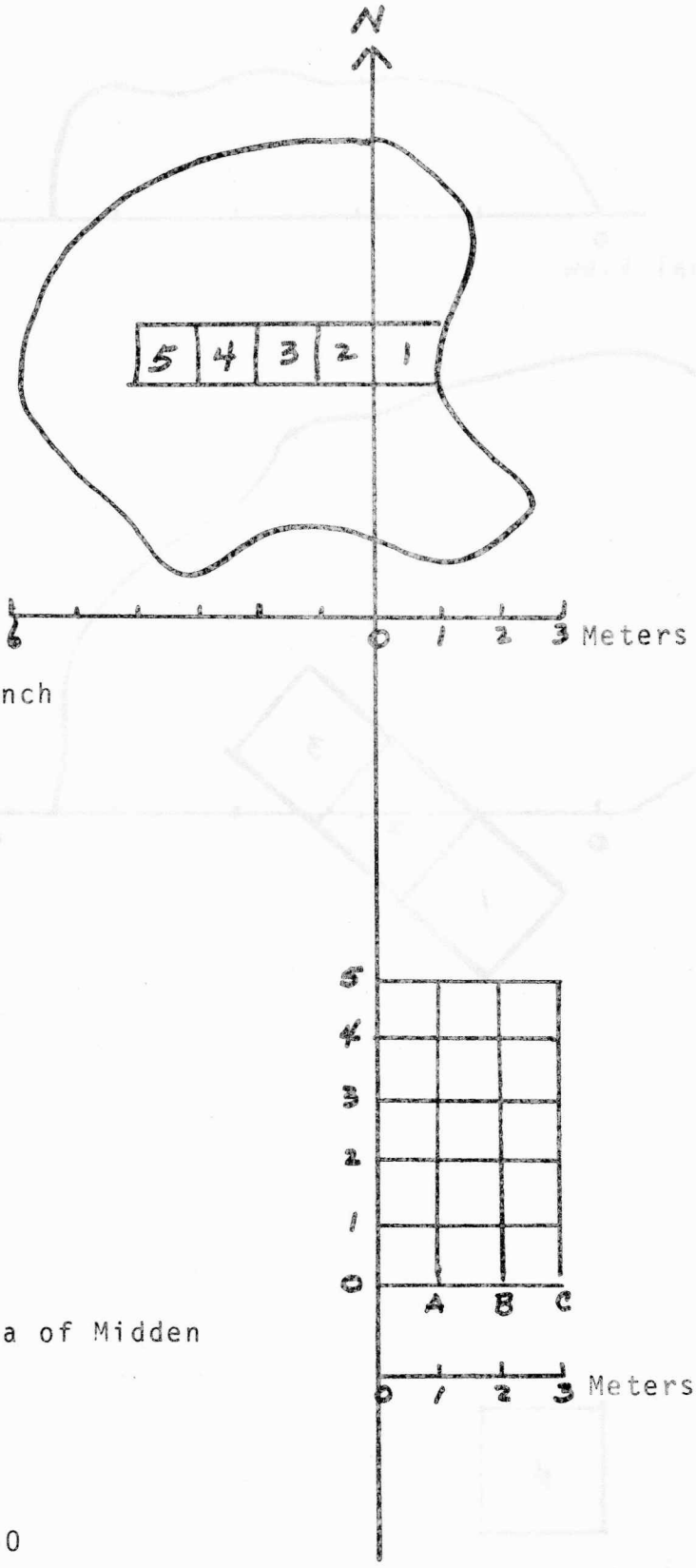
Before mapping, the crew resurveyed, finding more lithic debris. They were beginning to become more familiar with what flint looked like. Each crew member was given a piece of graph paper and the flagged material was identified as each flagged object was mapped. A chart of symbols was compiled to indicate the different types of tools being mapped. After completing the map, the map was used to make an evaluation of the area on the east side of the midden.

The material was collected from each square in a sack marked with the designated number on the southeast corner of each square.

"Apache Cave" Draw

The Draw was surveyed with all the plants, trees, and food sources being identified by sight. Those not identified in the field, specimens were gathered and brought in for identifying by using several sources of publications.

Midden

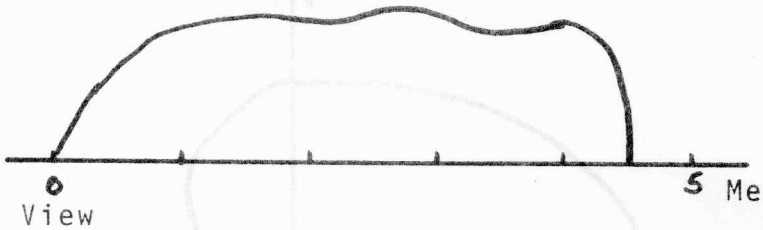


Test Trench

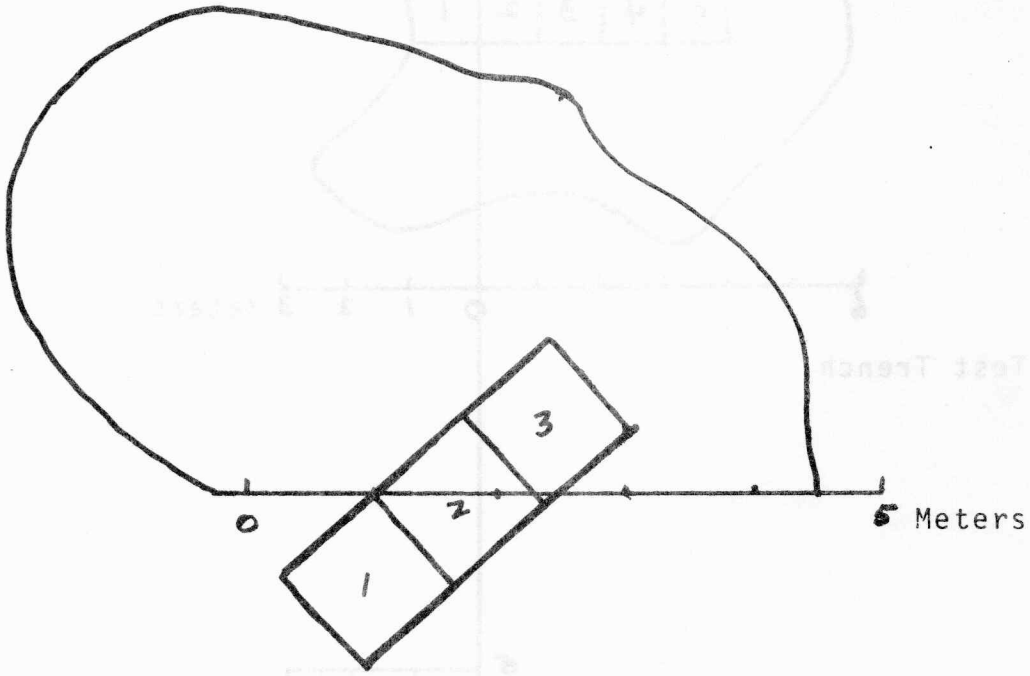
Grid Area of Midden

Figure 10

Rockshelter



Horizonal View



Vertical View

Figure 11

SHELTER TEST TRENCH

Figure 12

SQUARE 1		SQUARE 2		SQUARE 3	
Level 1 0-10cm	9 Flakes 10 chips 49 bone fragments				
Level 2 10-20cm	1 broken awl 1 awl fragment 31 flakes 49 chips 1 snail shell 78 Bone framents				
Level 3 20-30cm	1 biface (mid-sec.) 6 scrapers 35 flakes 49 chips 9 snail shell 1 core	Level 1 0-10cm	1 flake 1 chip		
Level 4 30-40cm	4 scrapers 1 core 53 flakes 74 chips 41 bone fragments 5 snail shell	Level 2 10-20cm	4 bone fragments 4 chips 7 flakes		
Level 5 40-50cm	1 Paisano 6 scrapers 2 biface 31 bone fragments 73 flakes 160 chips 9 snail shell	Level 3 20-30cm	6 scrapers 23 flakes 23 chips 30 bone fragments 1 snail shell 1 walnut shell 1 mussel (sma.) 2 metate broken	Level 1 0-10cm	1 Abasola (?) 5 uniface 84 bone fragment 48 flakes 113 chips 3 snail shell 6 walnut shell 1 22 shell
Level 6 50-56cm	9 scrapers 3 biface 148 bone fragments 3 cores 41 flakes 57 chips 2 snail shells	Level 4 30-36cm	1 biface 5 scrapers frag. 2 uniface 15 bone fragments 7 snail shell 99 flakes 106 chips 4 metates broken	Level 2 10-17cm	1 Ensor 7 scrapers frag. 69 flakes 103 chips 86 bones 3 cores 1 snail shell 1 mussel frag.

Mesa Top

The Mesa Top was surveyed by the crew being assigned areas to search. The crews were instructed how to look for evidences that might indicate a mortar hole or bedrock metate.

Talus Slope

Each crew member was given a collecting sack marked with site number and assigned an area for survey on the talus slope.

Rock Shelter

The area in front of the rock shelter opening and to each side of the ledge was surveyed with this being included with the talus slope material that had been cleared or discarded from the shelter.

EXCAVATION PROCEDURES

The two sites chosen to be tested, midden and shelter, were to be trenched. Test trenches were to be troweled, with material removed with small scoops to buckets which were dumped in 1/4-inch screens with the material picked from the screen and collected in a paper sack marked with the site number, square number, level, date, and crew members names.

Each day, the two crew members were changed and during the morning's work, the crew members exchanged duties, screening, troweling, keeping records, and photographing. This worked well as the crew members were very mature girls.

SURVEY

Mesa Top

The survey on the mesa top found 27 scrapers (broken and fragments), 7 cores, 3 projectile bases; one Paisano, 1 Val Verde and side notched; one mid-section and 3 biface fragments (Figs. 15 and 17).

The mesa top survey found no evidences of a hearth or midden, mortar hole or bedrock metate. There was a small area on the southwest side where flint nodules that had eroded out of the limestone ledge had been quarried. The nodules were of Edward Flints, and evidence from the remaining nodules in the limestone showed they were small, with fractures and crystal deposits.

Talus Slope

The talus slope covered a large surface of the slope from the edge of the ledge in front of the shelter to the bottom of the slope. The largest amount of debris covered the first third of the upper slope. Several animal trails bisected the talus and had disturbed the surface. The soil deposit was ashy black with the densest amount at the top edge.

The lithic material collected from the slope consisted of 52 scrapers (whole and broken); 30 cores; 1 mid-section of a projectile and the base, possibly a Paisano (Figs. 15 and 18).

EXCAVATION

Midden

The test trench was staked out in the midden to bisect it from the east to the west in the depression or open end of the crescent-shaped midden. The trench was 5 meters long and one meter wide with one meter square east of the base line and four meters square west of the base line (Fig. 10).

The trench was divided in 5 one meter squares and numbered one through five from east to west. The two squares chosen to be excavated were one and two (Fig. 6), which were located in the hearth or open end area of the midden. The squares were excavated to a depth of 20 centimeters in two 10 centimeter levels.

Square 1 from the amount of firecracked rock was on the outer edge of the midden with no indication of a depression for a hearth. In the second level (10 - 20 cm) on the southwest quadrate, was an area of fewer burnt rock and more burnt soil. Square 2 in level one had firecracked rock but fewer in number and less dense than square one. In the second level (10 - 20 cm), the firecracked rock decreased, and large rocks began to take the shape of an arc from the southeast corner to the northwest corner of the square. The southwest quadrate of the square contained a small number of rocks and the matrix was ashy and burnt. This quadrate was removed to 52 cm to sterile soil, which indicated a very hot fire had burned or several fires to burn the soil to this depth.

Rock Shelter

The shelter was to be tested by a test trench 3 meters long and one meter wide, with a north-south orientation. The trench was marked off into 3 one meter squares. With the previously removed matrix of the shelter, square 1 was staked to bisect the north half of the mound; square 2 was on the slope; and square 3 was (inside) on the fill of the shelter's living floor area. This provided a good test of the shelter and gave the girls a good working knowledge of level control with difficult elevations.

The shelter size (Fig 11) did not allow much room for excavation activity. The two crews of 3 girls were assigned squares 1 and 3, leaving square 2 to allow for working area. A 10 cm balk was left between the squares. Square 1 had several pieces of roof fall which left very small matrix to be removed and made excavating slow. Square 3 was completed to bedrock (17 cm) below surface and this crew started square 2. With the space limited for excavation we made three crews with two girls each. We opened a fourth square (4.86 meters from test trench and 45° west of north) on the edge of the ledge to test the depth of fill.

Square 4 - first three levels were troweled and artifacts mapped in place. On finding no evidence of hearths or living floor area, the next four levels were removed by loosening the burnt rock and ashy soil deposit with a small hand pick and scooping out the fill. Even this was a slow process. Square 2 was completed at 36 cm from the surface of the southeast corner. Square 1 was completed with a 54 cm fill total depth of the northwest quadrate of the square, and the southeast quadrate had a total depth of 16 cm being roof fall. The matrix fill of the test trench was ashy burnt soil. Square 1 contained 209 burnt rocks, and square 2 - 31. Square 3 had no burnt rock in its fill.

TEST SQUARE 4

Level 1	0-10 cm	4	biface 3 fragments
		14	scrapers fragments
		119	flakes
		203	chips
		1	bone fragment
		1	mussel fragment
Level 2	10-20 cm	1	Perdiz (broken tip)
		2	Scrapers broken
		35	flakes
		49	chips
Level 3	20-30cm	2	bifaces broken
		5	scrapers
		29	flakes
		46	chips
		3	bone fragments
		1	snail shell
Level 4	30-65cm	15	flakes
		17	chips
		5	bone fragments
		2	snail shells

SHELTER TEST TRENCH

BALK Between Square 1 and 2
1 Paisano Base broken tip
6 scrapers
31 bone fragment
43 flakes
95 chips
3 cores

BALK Between Square 2 and 3
1 Abasolo
1 Perdiz
1 biface
1 uniface
14 flakes
24 chips
67 bone fragments
1 walnut shell
1 mussel shell (small)
2 snail shell

Figure 13

LAB ACTIVITIES

The lab activities were scheduled for two hours in the afternoon at the "HAT A" Ranch House yard and screened front porch. Toward the end of the 10 day school, we got behind with the cataloguing so some evenings were spent cataloguing, marking artifacts and sacking. The material collected from the midden grid (Figs. 10 and 20) was the first material used in the lab work. They were washed, dried and arranged in the same grid pattern to see if there were any activity patterns for the midden. Two areas were possibilities, the southeast and northwest areas.

This material was used as classification exercise of lithic analysis. Each piece of lithic was typed to tools (projectiles, darts or arrowheads; biface or scraper) or lithic debris (cores, flakes or chips).

Lithic debris was analyzed as primary (+ 75% cortex); secondary (- 75% cortex); and interior (no cortex); also to the source of flint. Then the artifacts and lithic debris were catalogued and marked with catalogue numbers.

The material from the rest of the site was catalogued, marked and sacked.

DISCUSSION OF FIELD SCHOOL

The maximum participants of 20 as the proposed field work had been based on was altered after arrival at "HAT A" Ranch to the 6 participants. The work schedule was reduced to surface survey of the eastern side of the east midden; a test trench of one midden; and a test trench of the shelter. As the field school progressed, we did survey the talus slope, the top of the mesa and the draw.

This type of intense field school with this small number of participants worked fine and was easy to conduct. The purpose set forth was to teach the participants how to survey, map, and record a site. If necessary, to excavate a site and keep good field records. The girls did every task set forth and accomplished it well. These scouts had an interest in archeology but no knowledge of field archeology. At the end of the school, I had doubts the girls would retain all they had learned in such a short period of time. So in October four of the scouts were invited to participate in a week end field project. The four girls were assisting a project as a crew and they functioned very well, in fact better than some of the adult crews.

The first day of surveying the gridded area of the midden, they did not recognize the flint too well when mapping. The girls resurveyed and they did find more material. The mapping of the grids started slowly, but they accomplished the task well. The excavating skills were developed slowly. The main function that troubled them the most was keeping walls of the squares straight and troweling the square surface down evenly without digging a hole in one area. The keeping of a field journal was not a task done with enthusiasm, but several of the girls were very observant and did keep a good record.

The use of a line level did not trouble them in any way and they understood the elevation of the various squares. They all participated in drawing in the maps of the surfaces of each square.

The lab work seemed to be fun time for them. The washing and drying of the artifacts was conducted in "HAT A" Ranch House yard under the big shade trees and the cataloguing on the screened porch for protection from the wind. The catalogue number writing on the artifacts proved to be a challenge. They made many errors but finally learned to write the numbers small and with some clarity.

The artifact classification was a slow process but they learned how to use the Texas Handbook for the projectile description and distribution for the classification. As for the other lithic tools, they understood the usage of the tools better than the flint knapping procedures of making tools.

The bone classification was one of the activities that we did not get to do in any detail. One evening, for identification, we looked at some resource material on small rodents, which was 90% of the bone recovered.

The field school was a success and I recommend that more amateurs do this for their scout councils so these young people who are interested might be able to learn.

DISCUSSION OF THE ARCHEOLOGY

The site 41PC62 and features A, B, D, and D, provided a very good site for a teaching field school. The shelter having been shoveled out made analysis of the distribution of tools hard to verify (Figs. 12, 15, and 19). This made dating a little hard, but we can give the site a time span of 3000 B.C. to 1500 A.D. This time span is very broad basing it on just six projectiles. If we could have found the site undisturbed, we could have had a better sequence of the time periods (Fig. 16). This could have given us a general overview of the periods of the shelter occupation and certain time periods being represented. The lithic debris, cores, flakes and chips, showed that flintknapping was an activity whether they found the flint locally or brought it in. This site situated in the Edwards Plateau, provides resources of flints so probably several quarries are close by, like the flint nodules found in surveying the mesa top.

The scrapers suggested the preparation of food, animal skins or tanning processes. The great number found broken and fragmented indicated the scrapers were being used extensively. Some of the scrapers showed wear patterns and others usage scars.

The bones recovered belong to rodents and rabbits. Bone awls indicated the only utilization of bone in the area. The fragments of awls were too small to identify the bones of what animal, possibly of deer. The prevalence of rodent bones could be the result of activities of predators in the area. During our 10 days we had a ringtail cat visit us at the shelter early every morning and also found coyote tracks in our screening dirt. So predators did frequent the area around the shelter.

The six small pieces of a metate did not fit together, although they seemed to be of the same source of material. They were pieces of the flat slab type metates used to crush and grind seeds.

The Texas black walnut shells found in the fill of the shelter cannot be shown as an indication that man utilized them. They were there for his usage but also they were available to the rodents to carry in. The mussel shell pieces indicate a source of food that had to come from fresh water. The Lower Four Mile Draw having seep springs along its channel very possibly could have had fresh water flow. Also the shelter is not that far from the Pecos River and they could have been carried in from the river. It seems more reasonable that if Lower Four Mile Draw had had fresh water mussel, there would have been more mussel shell recovered.

The test square 4 on the edge of the ledge showed in the first three levels (0 - 30 cm) (Figs. 15 and 19) the densest occupation debris. But in the next levels (30 - 65 cm) the occupational debris decreased very rapidly.

The two balks between the squares (Figs. 13 and 19) yielded more material than the squares did. These balks represented 20 cm of the test trench and if the percentage of this could have been repeated in the three squares, we would have had a good lithic recovery.

Midden

The two squares of the test trench of the midden did not give a very complete sample of the midden. The time ran out and we did not have enough time to do more excavation. If square 3 in the test trench could have been excavated showing more of the hearth area, this may have given us an indication of the type of hearth used. The broken Frio projectile found in square 2 has a broad time period (Figs. 15 and 20). The Frio is a minor type in the Edward Plateau Aspect and Pecos River Focus. It is considered an Archaic Stage (spear thrower projectile).

The shelter site yielded the largest variety of lithic artifacts and reflects the longest time span of utilization of the area. The middens did not yield the artifacts for any comparison to other crescent-shape middens in the Edwards Plateau or Pecos River Focus.

For the site 41PC62, giving it a time span of 3000 B.C. to 1500 A.D. is tentative and is based solely on the lithic artifacts recovered from the two test trenches and surface survey of the talus slope and mesa top.

CONCLUSION

This site complex 41PC62 is an indication of a type of economic pattern attributed to the prehistoric population of the Trans-Pecos Region. It was a small shelter site being utilized from the middle of the Archaic Period (spear thrower) to the Neo American (arrow and bow) 3000 B.C. to 1500 A.D. (Fig. 16). This pattern is one of gathering and hunting in a specific area by a family unit until the food resources became hard to find and the group migrated on to another area. This site also shows there was a shift at some time in the type of technology of food preparation. The three crescent middens indicate an attempt to prepare food a different way, or a new source of food in a specialized manner.

In terms of general activity this site follows the basic Trans-Pecos Region pattern of hunting and gathering economy which was unchanged throughout the known span of occupancy.

MIDDEN GIRD SURVEY

	0	1	2	3	4	5
A	1 scraper 3 flakes 7 chips	1 biface 10 flakes 3 chips	2 end/side scraper 3 flakes 6 chips	1 Biface (mid-sec.) 1 end scraper frag. 7 end/side scrapers 5 side scrapers 21 flakes 15 chips 3 cores	3 flakes 1 chip	
B	1 side notched projectile 1 broken scraper 4 flakes 2 chips 3 cores	1 side scraper 1 scraper 7 flakes 1 chip 1 core	6 flakes 5 chips	5 flakes 4 chips	6 flakes 1 chip 1 core	
C	2 side scrapers 1 biface 4 flakes 3 chips 1 core	13 flakes 1 chip	5 flakes 9 chips	5 flakes 7 chips 1 core	5 flakes 3 chips 3 cores	

Figure 14

MIDDEN TEST TRENCH

Square 1			Square 2		
Level 1	0-10cm	20 flakes 32 chips	Level 1	0-10cm	1 Frio broken 14 flakes 27 chips
Level 2	10-20cm	1 scrapers 1 biface 2 uniface 9 flakes 2 chips	Level 2	10-20cm	1 side craper fragment 1 end scraper fragment 14 flakes 5 chips

TALUS SLOPE SURVEY

1 Paisano base
1 Biface (mid-section)
30 Cores
11 End Scrapers
24 Side Scrapers
16 End-Side Scrapers
1 Concave Side Scraper
126 flakes
170 chips

MESA TOP SURVEY

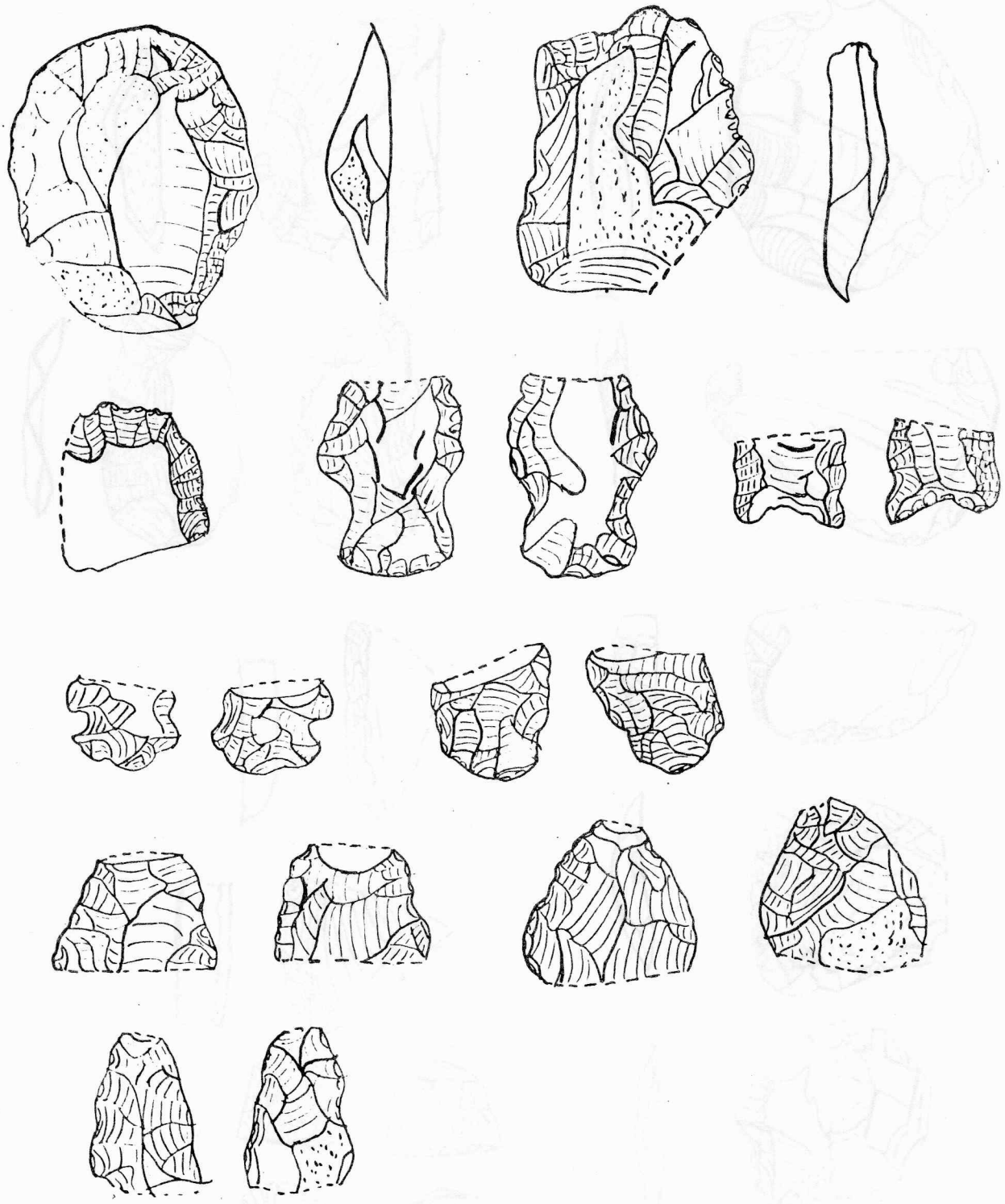
1 Val Verde
1 Paisano base
1 side notched base
1 Abasolo (?)
1 Biface (mid-section)
2 biface
7 cores
4 end scrapers
10 end-side scrapers
13 side scrapers

Figure 15

DIAGNOSTIC CHART
41PC62

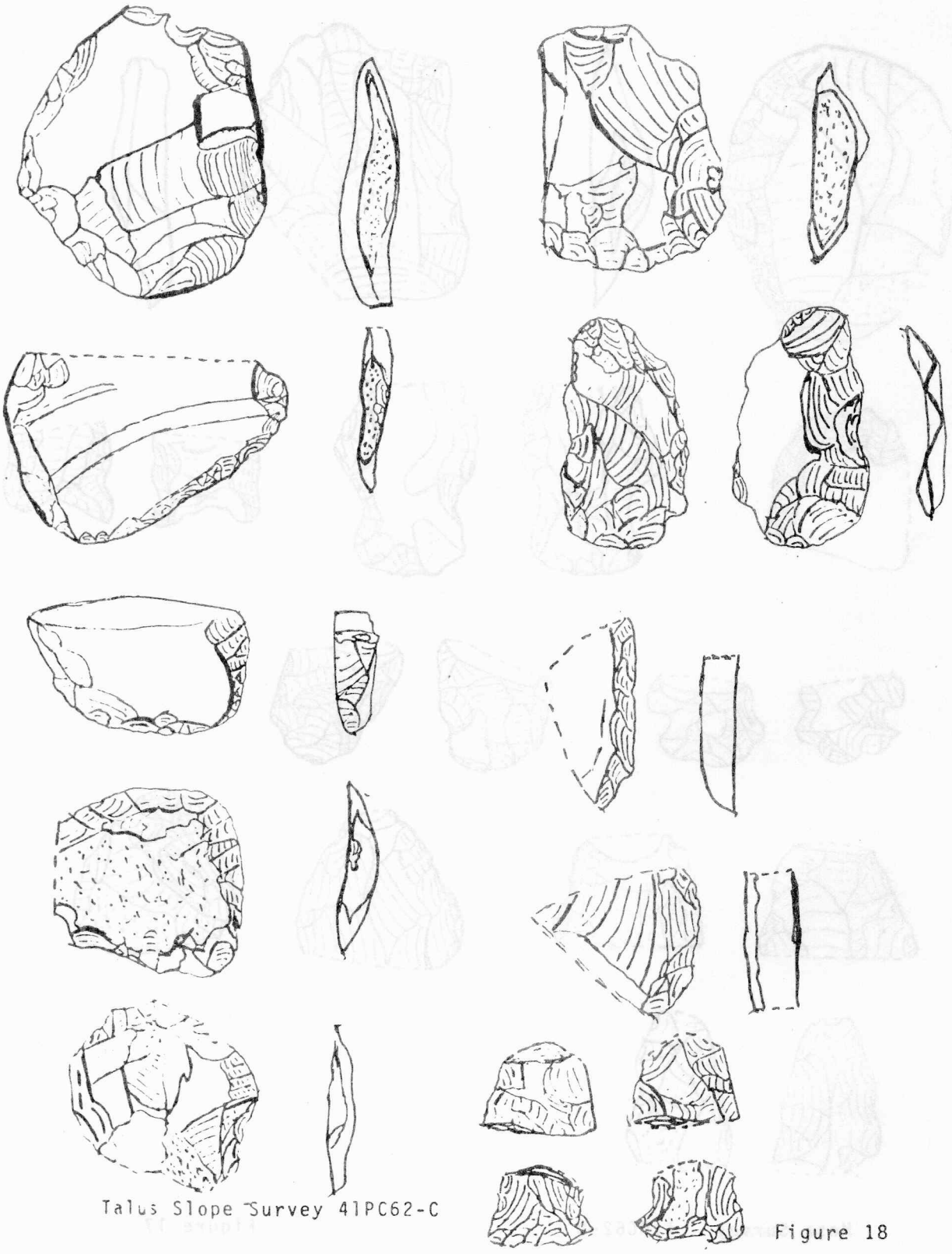
Period	Date	Diagnostic Types or Classes	Shelter Evidence	Midden Evidence	Mesa Top Evidence	Talus Evidence
VI	1500-1795AD	Arrowhead-metal	none	none	none	none
V	50-1795AD	Scallorn, Peraiz Livermore	2 Perdiz			
IV	350-1245AD	Ensor, Frio Paisano	1 Ensor 2 Paisano	1 Frio	1 Paisano	1 Paisano
III	4580BA-110AD	Shumla, Langtry Pedernales Montell Val Verde			1 Val Verde	
II	6810-1315BC	Pandale-Abasolo Bulverde Early Barbed	2 Abasolo			
I	8350-4800BA	Lerma-Plainview Angosture Golondina				

Figure 16



Mesa Survey 41PC62-D

Figure 17

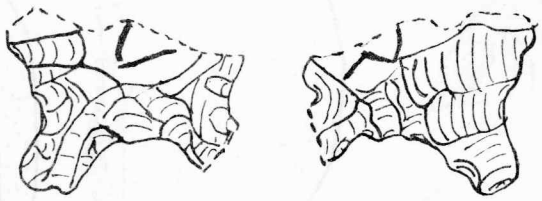


Talus Slope Survey 41PC62-C

Figure 18

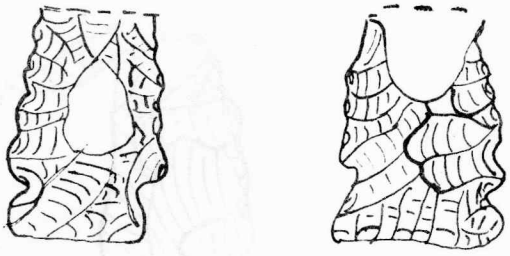
Square 1

Level 3

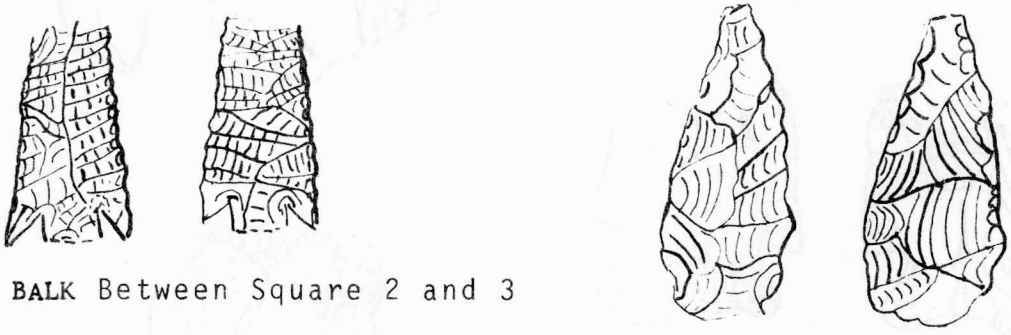


BALK Between Square 1 and 2

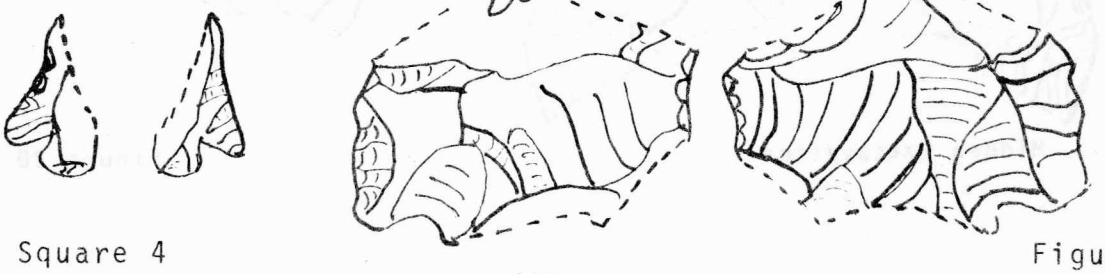
Square 3



Level 2

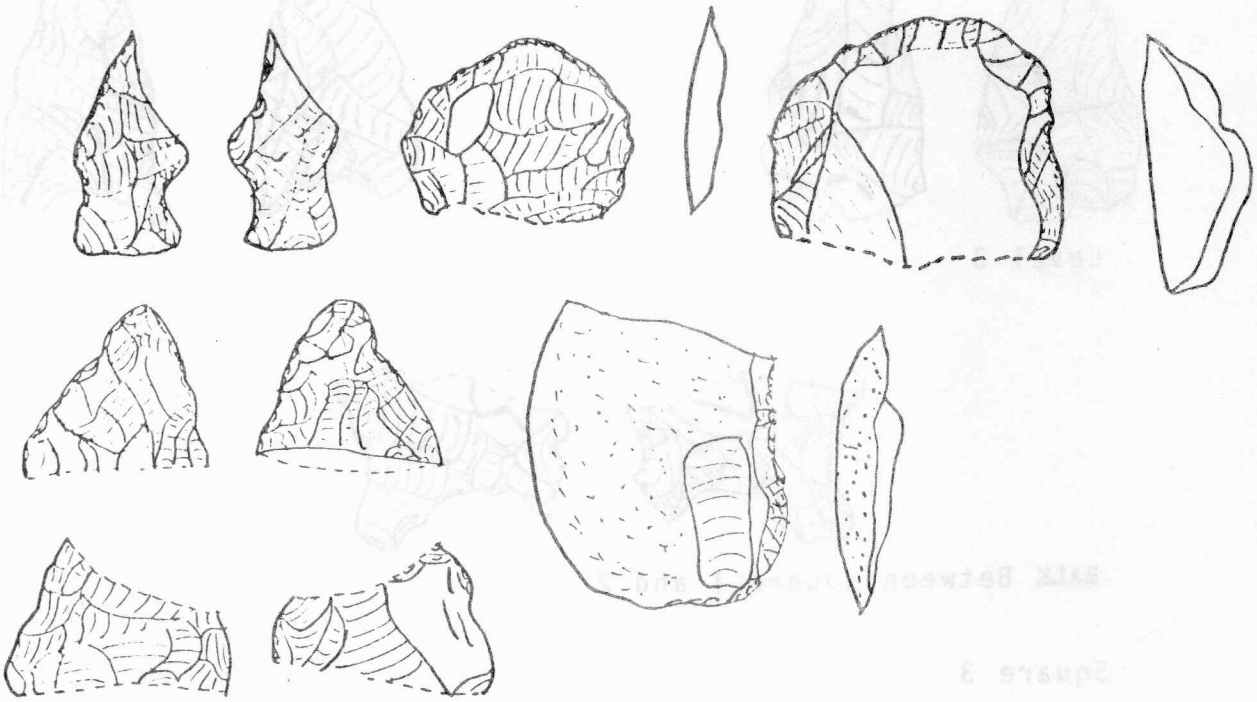


BALK Between Square 2 and 3

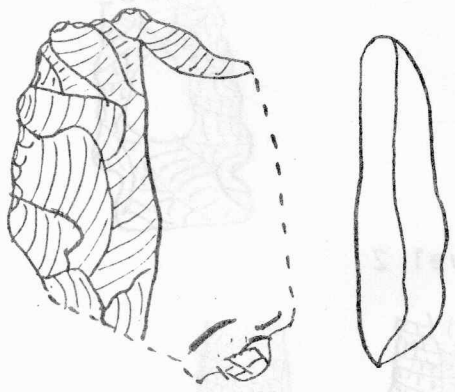


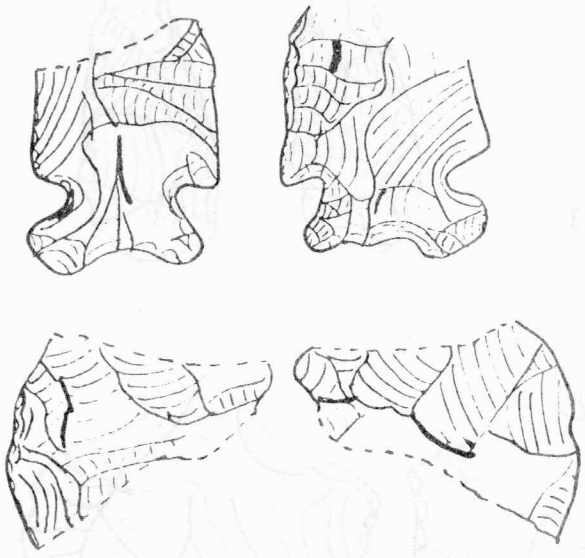
Square 4

Figure 19



Midden Grid Survey





Midden Execavation

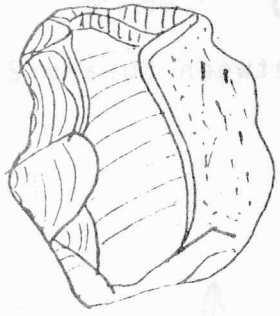


Figure 20

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