


FROM DOORN TO DUSK
vol 2



BLIT
571
HALK

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An open artefact scatter in close proximity to sites PL 43, 44 and 45 and occurring on a sandy saddle between two rock ridges/koppies. The sward slopes from south to north and soil erosion channels are present. The site may also have been disturbed by animals. The area covered by the scatter is approximately 15 x 6 metres with the densest concentration of material apparently occurring in the middle of the saddle closer to the sites. A 4 x 1 metre sample was made on this sward between PL 43 and 44 and the results are presented in TABLES 1: XIX, XX, XXI. Bone and OES were present and pottery also occurs. This includes several sherds and one solid lump of fired clay. The nature of breakage at the one end of this piece suggests that this may have served as a base nipple or as one of a number of supports to steady a conical base pot.

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	58		2	23	8	91
FLAKES	103	2	2	37	8	152
CORES				13		13
UTILIZED	4				2	6
PIECES ESQUILLEES	4			3		7
SCRAPER	2			2	3	7
ADZE	4	1			3	8
M.R.P.	2					2
TOTAL	177	3	4	78	24	286

TABLE 1:XIX ACTUAL ARTEFACT COUNTS PER RAW MATERIAL
FOR 4 x 1 metre SAMPLE - PL 46

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	63,7		2,2	25,3	8,8	100%
FLAKES	67,8	1,3	1,3	24,3	5,3	100%
CORES UTILIZED	66,7			100,0	33,3	100%
PIECES ESQUILLEES	57,1			42,9		100%
SCRAPER	28,6			28,6	42,9	100%
ADZE	50,0	12,5			37,5	100%
M.R.P.	100,0					100%
TOTAL	61,9	1,1	1,4	27,3	8,4	100%

TABLE 1:XX PERCENTAGE RAW MATERIAL PER ARTEFACT CLASS-PL 46

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	32,8		50,0	29,5	33,3	31,8
FLAKES	58,2	66,7	50,0	47,4	33,3	53,1
CORES UTILIZED	2,3			16,7	8,3	4,5
PIECES ESQUILLEES	2,3			3,9		2,1
SCRAPER	1,1			2,6	12,5	2,4
ADZE	2,3	33,3			12,5	2,8
M.R.P.	1,1					0,7
TOTAL	100%	100%	100%	100%	100%	100%

TABLE 1:XXI PERCENTAGE ARTEFACT CLASS PER RAW MATERIAL-PL 46

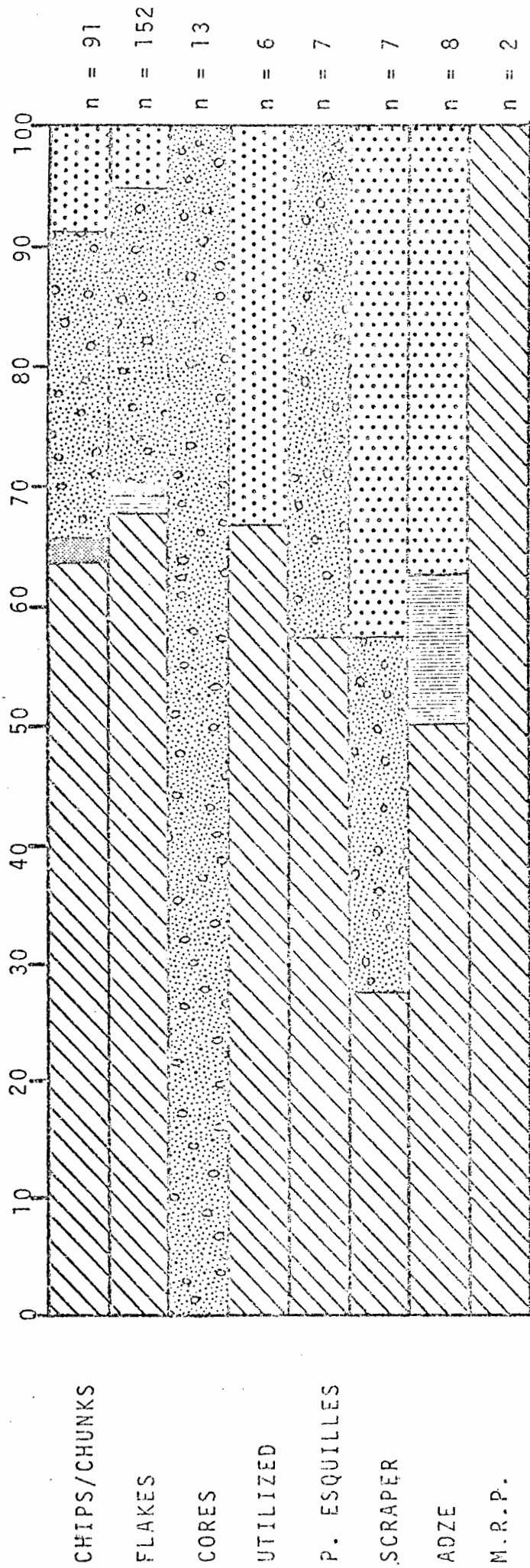


FIG I : XI PERCENTAGE RAW MATERIAL PER ARTEFACT CLASS SITE PL 46

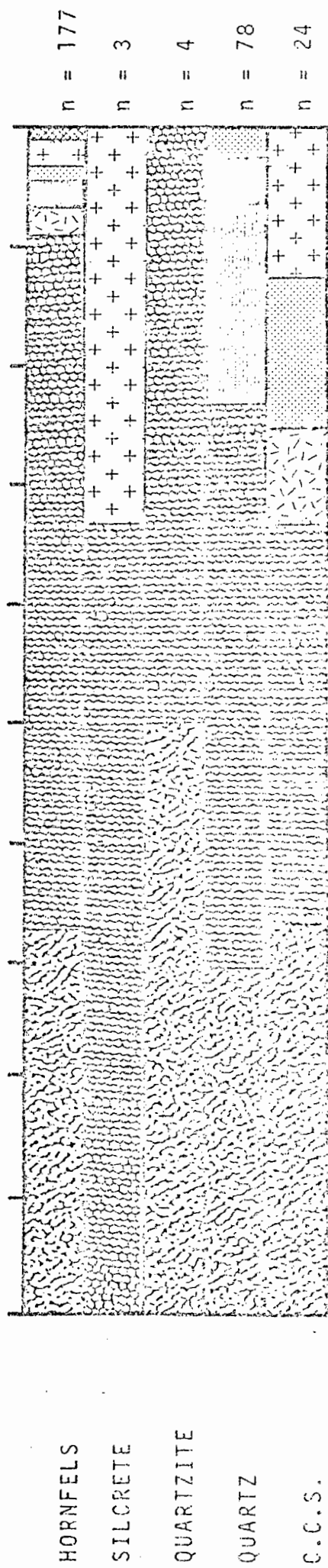


FIG I : XII PERCENTAGE ARTEFACT CLASS PER RAW MATERIAL SITE PL 46

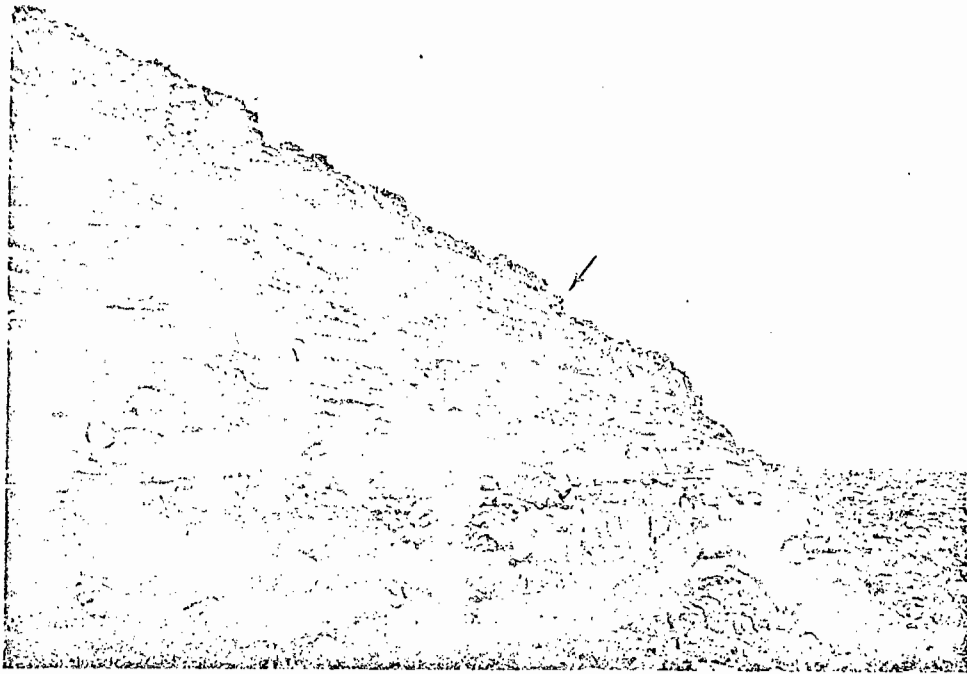


PLATE 57: PL 51 : View from gorge - looking approximately south.



PLATE 58: PL 51 : View of inside of the shelter. Painting at left of figure with camera.

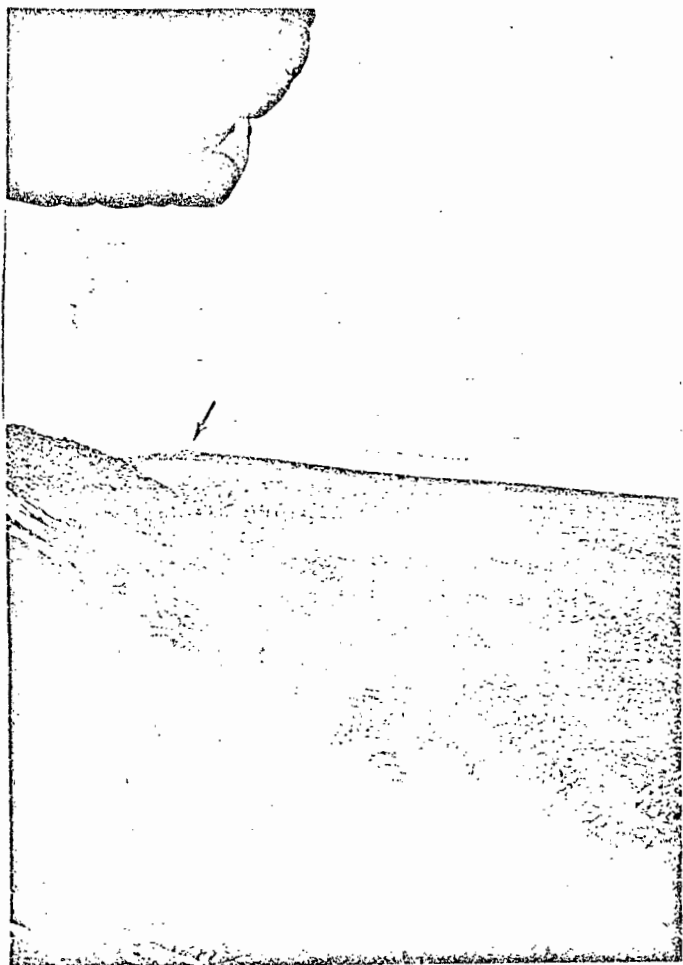


PLATE 59: View from outside PL 51, karoo koppies in background, Aserskop, PL 33 and the floor of the Putslaagte Kloof.

DESCRIPTION - SITE PL 51

A large, long shelter approximately one kilometre south-east from sites PL 43-46. The shelter occurs in a steep, rocky face and is about 50 metres above a runoff channel which forms an access route to the main kloof about 100 metres below. The orientation is south-west and an excellent view is gained to the south although the view in front is limited by the opposite kloof wall. To the north one can see up the runoff gully to the koppie which contains site 43 - 46. Sun would reach the shelter itself during the late afternoon but sun is available all day in the vicinity, i.e. the saddle at PL 46. The shelter lacks any natural screening and while wind could be a problem, rain is not likely to affect the shelter since it is reasonably deep (8 metres). The floor is even although cluttered with large boulders leaving an open area along the back wall. This area is sandy but does not appear deposit-like. The access to the cave is steep and fairly difficult due to large boulders and bushes on the talus. A small recess at the back of the cave appears to have rocks piled into it. Artefactual material is present in low frequencies. Some hornfels chips, chunks and flakes were noted as well as several long quartzite Levallois blades, one of which had a prepared platform. One silcrete Levallois blade was also observed. Three large lower grindstones were found at various places on the floor. No pottery was observed. The shelter has very little painting present and the images are presented in TABLE 1:33 (a)(b).

	♂	♀	?	TOTAL
HUMANS	3		1	4
ZEPPELLINS				9
FINGER SMEAR				2
LINE				1

1:33(a)

	TOTAL
HUMAN	4
INANIMATE	12
	16

1:33(b)

TABLES 1:33 (a) (b) - ROCK ART IMAGES AT PL 51

DESCRIPTION - SITE PL 54

A small shelter with unusual formation properties. The opening to the shelter is about 1,5 metres above the ground and is approximately one metre high. On entering the shelter one finds that the roof is domed and at its highest is about 1,5 metres so that when one's head and shoulders are in the dome it is not possible to see out of the shelter. (figure B shows location) The site is located at the south-west side of the koppie which contains PL 43 - 46 and is about 150 metres from these sites. The orientation of the shelter is south-west and sun would only reach here during late afternoon. This site is not viewed as an important occupation site but rather as a unit of the "koppie cluster" described. The site is about 100 metres above the main kloof floor and lies on an access route from all the sites (PL 38 - 46) down to the main kloof via a gently sloping main runoff gully described earlier. An excellent view of the upper area of this route is available. Rock art is present in the dome and the images are presented in TABLE 1:34 (a)(b). No pottery or artefactual material was observed at the site or in the immediate area.

		TOTAL
ZEPPELINS		3
PATCH		1
		4

TABLE 1:34 - ROCK ART IMAGES AT PL 54

DESCRIPTION - SITE PL 55

A small shelter with an artefact scatter in front. The site occurs at the bottom of the access kloof described in the description of PL 54, and almost in the main kloof about 300 metres north of PL 52. (see figure B) The actual height above the kloof floor is about 4 metres and the shelter faces south-west. Its position limits its view to the immediate kloof and up the access kloof. This position also ensures that sun reaches it during mid-afternoon. The very size of the site and the material suggests a use other than extended occupation. No rock art is present. The artefactual material includes hornfels chips, chunks, hornfels and ccs flakes and two hornfels adzes. One undecorated rim sherd was observed.



PLATE 60: PL 52: View from koppie opposite. (Site arrowed)
Floor of Putslaagte in foreground.



PLATE 61: PL 52: View inside shelter - paintings at left of
figure and left of bush.



PLATE 62: Group scene - note faded hookheaded figures below bags.



PLATE 63: Detail of bag with peg to facilitate hanging.



PLATE 64: Detail - male figure with equipment.
Extension of genitals may be a later
addition.

DESCRIPTION - SITE PL 52

An exposed rock wall with a flat, rocky/sandy area in front. No shelter occurs as such. The site occurs about 20 metres above the kloof floor and on the south-west wall of the kloof, at the junction point of the drainage kloof/access route described earlier, and the main kloof. The site faces south-west and its position limits the view to the immediate area. Its position enables the site to receive sun from mid-morning to mid-afternoon even though it is low down in the kloof. The shelter lacks any natural screening from the elements and wind and rain are a problem. Some large boulders do occur at the edge of the flat area on the south side of the site. Shade could be found in the vicinity. The access is steep but not difficult. Bushes occur at the site and a large tree grows on the extreme right. Painting occurs and the images are presented in TABLE 1:35 (a)(b). Artefactual material is present on the talus and in the site. This includes hornfels chips, chunks and flakes. One chunk of silcrete and one of ccs. One quartzite lower grindstone and one hornfels pieces esquillees were noticed. Six potsherds were found of which one showed red burnish. This site is not viewed as being used for extended or frequent visits.

	♂	♀	?	TOTAL	
HUMAN	3		30	33	*
INDETERMINATE BUCK			2	2	
BAG				11	*
MARK				9	
SHAPE				3	
PALETTE				1	
FINGER SMEAR				1	
AREA OF PAINT				4	
AREA OF DAUBS				5	
AREA OF SHAPES				1	

* 11 bags and 7 humans comprise a "cave scene" or "group scene" (see photograph)

1:35 (a)

	TOTAL
HUMAN	33
ANIMAL	2
INANIMATE	35
	70

1:35 (b)

TABLES 1:35 (a) (b) - ROCK ART IMAGES AT PL 52



PLATE 65: View of kloof showing position of PL 56 and 58 (arrowed)

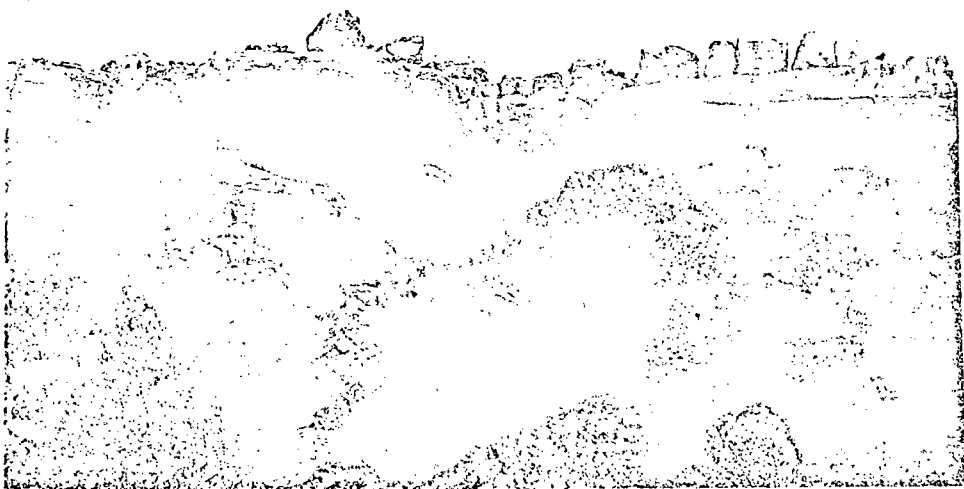


PLATE 66: PL 56 and 58. View from kloof floor.

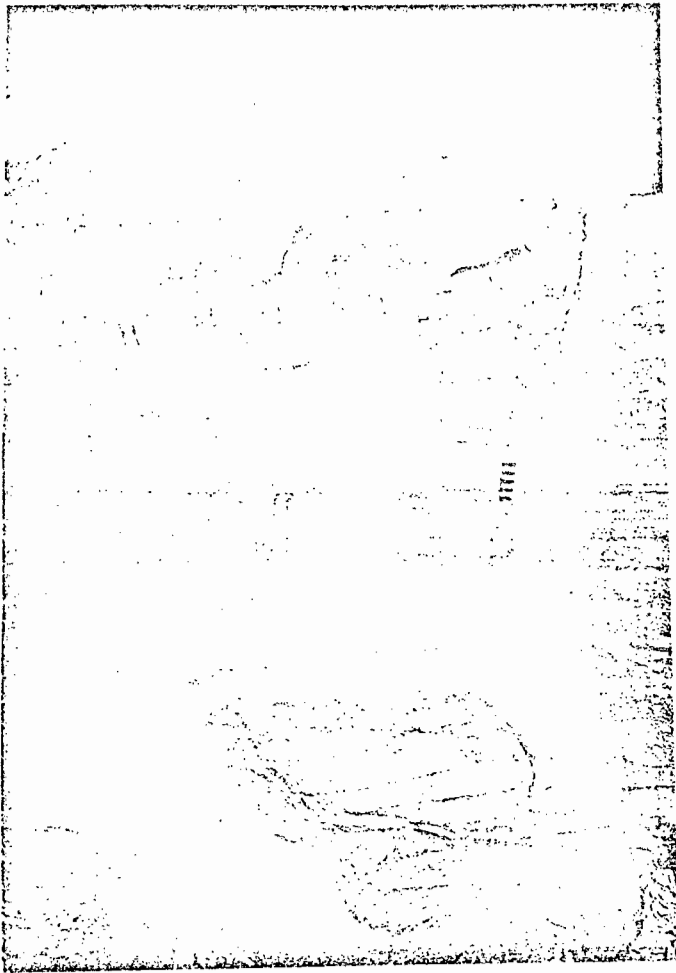


PLATE 67: Superpositioned Eland torsos and crayonned Eland. Some handprints to lower left of torsos.



PLATE 68: Detail of crayonned Eland showing long, straight horns.

DESCRIPTION - SITE PL 56

A medium size overhang about 20 metres above the kloof floor and on the northerly side of the kloof. The overhang is deeper on the left and shallower on the right. Boulders occur on front and on either side. The floor is fairly level overall with the section on the left, in the deeper section, being rather rocky and uneven. The level section of the floor elsewhere may harbour a shallow deposit. The site faces south and sun availability is limited to the morning. Sun or shade can be obtained in the kloof for most of the day. The site would provide some protection from wind and rain. The view is limited by its position and confined to the kloof to left and right for some distance and the area above the opposite kloof wall. Painting is present at the site, i.e. the eland on a good surface, the handprints and other images on a rather scrappy surface. The images are presented in TABLE 1:36 (a)(b). Artefactual material is sparse and occurs in the shelter itself. It includes some hornfels chips, chunks and flakes. No pottery was observed at the site. The site is one kilometer up the kloof from PL 52.

	♂	♀	?	TOTAL
HUMANS			3	3
ELAND			16	16
			<u>Left</u> <u>Right</u> <u>?</u>	
HANDPRINTS			14 11 25	25
FINGER SMEAR				1
AREA OF DAUBS				2

1:36 (a)

	TOTAL
HUMAN	3
ANIMAL	16
HANDPRINT	50
INANIMATE	3
	72

1:36 (b)

TABLES 1 : 36 (a) (b) - ROCK ART IMAGES AT PL 56

DESCRIPTION - SITE PL 58

A small overhang about 10 metres north-east of PL 56 and at the same level. This overhang, would probably be used at the same time as PL 56. The shelter faces south and the conditions are the same as for PL 56. This site is easiest reached via PL 56. Some rock art is present and the images are presented in TABLE 1:37 (a). No artefactual material is directly associated.

DESCRIPTION - SITE PL 58

A small overhang about 10 metres north-east of PL 56 and at the same level. This overhang, would probably be used at the same time as PL 56. The shelter faces south and the conditions are the same as for PL 56. This site is easiest reached via PL 56. Some rock art is present and the images are presented in TABLE 1:37 (a). No artefactual material is directly associated.

	♂	♀	?	TOTAL
HUMANS	4		3	7

TABLE 1 : 37 - ROCK ART IMAGES AT PL 58

DESCRIPTION - SITE PL 57

This site occurs as a ledge at the front of a rock wall which has a very small overhang. The ledge itself is quite wide although one is hampered by bushes growing along the rock wall. The edge of the ledge looks out over the kloof and some distance on either side and across to the plain above the opposite kloof wall. The ledge is divided into two areas by a projecting boulder along the rock wall. The floor is rather overgrown but fairly level. The shelf is about 40 metres above the kloof floor and faces south-east. It is about 0,75 kilometers up the kloof and on the same side as PL 56 and 58. This site would receive some morning sun and wind and rain are likely to be a problem. The very front of the terrace will receive sun most of the day until mid-afternoon. Painting is present and the images are presented in TABLE 1:38 (a)(b). The presence or absence of artefacts was unfortunately not noted for this site.

	♂	♀	?	TOTAL
HUMANS	5	2	10	17
MARK				3
DOTS				5
FINGER SMEAR				6
AREA OF FINGER SMEARS				3
AREA OF PAINT				3
AREA OF LINES				2
SHAPE				1
LINE				1

1 : 38 (a)

	TOTAL
HUMAN	17
INANIMATE	24
	41

1 : 38 (b)

TABLES 1:38 (a) (b) - ROCK ART IMAGES AT PL 57

DESCRIPTION - SITE PL 48

A small shelter about 80 metres up a small drainage gully which leads into the main kloof from the south-east. The site has a rock floor with a rocky and overgrown talus in front. The site faces north-west and as such is likely to receive sun for the afternoon only. The site would be in direct receiving position for rain accompanied by a north-west wind. There is no natural screening. The surface is rough but the roof provides a good painting surface. "Painting" is present on the roof and the images are presented in TABLE 1:39 (a)(b). No artefactual material occurs at this site. The site is about 6½ kilometers from sites PL 52 and 55, and about 0,5 km from site PL 57, and is probably associated to the occupation of that area. It is about 0,75 kilometers from the site cluster near the farm De Puts.

	LEFT	RIGHT	?	TOTAL
HANDPRINTS		13		13

TABLE 1 : 39 - ROCK ART IMAGES AT PL 48

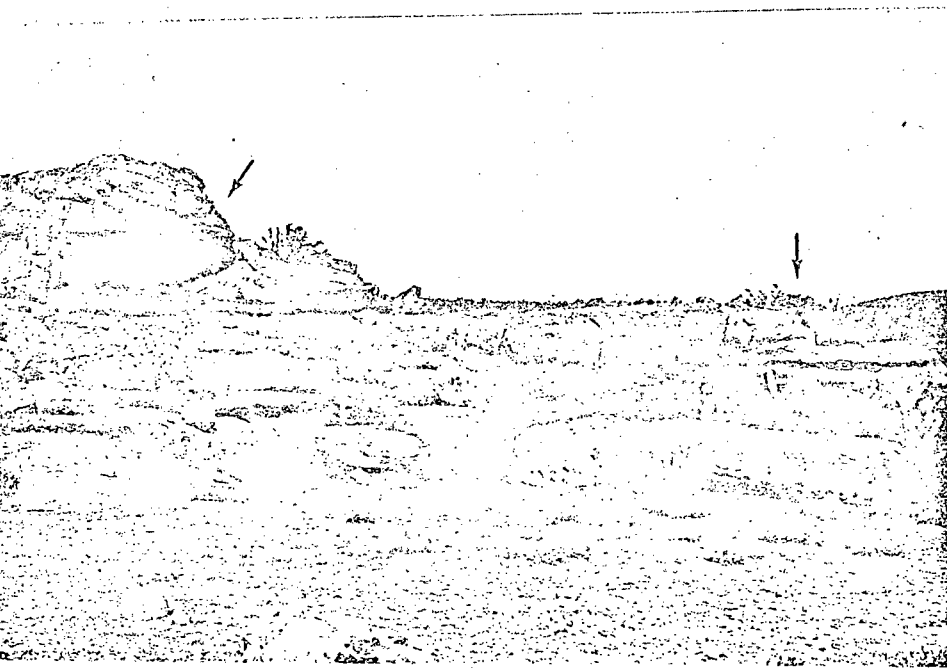


PLATE 69: View of PL 19 and 20 (arrowed)

DESCRIPTION - SITE PL 19

A small rock shelter on the south side of the kloof in the last rocky area of the kloof some 100 metres north-east of the farmhouse at De Puts. The floor of the kloof is only a few metres below over most of the area at the head of the kloof. As one moves west towards the Brandewijn Rivier, the kloof changes in nature from rocky kloof walls to a rolling sandy hill situation. The watershed of the Brandewijn and Putslaagte would also lie to the west. The next true rock outcropping occurs in proximity to "Kooitjies se Kop" some distance to the west and has been exposed due to erosion by the Brandewijn Rivier. PL 19 faces north and is about 10 metres above the floor of the kloof. The site itself would receive afternoon sun, but sun and shade can be found in the immediate vicinity at any time of the day. There is no natural screening and wind and rain would be a problem. This, and some other sites occur in proximity to two farms and as such this area is used to some extent by sheep and the people in the area. Dung and sheep remains are present in many of the sites and tin cans etc. occur as well. Graffiti is present at one site. The presence of a green patch and some reeds in a small depression in the kloof floor in this area, as well as two windmills nearby suggests that spring activity may occur here after periods of rain and at other times in the past.

The site PL 19 itself has been used as a kraal and much dung is present. A disturbed shallow deposit is present. The site also has some rock art although the painting surface is rather scrappy. The images are presented in TABLE 1:40 (a)(b). Artefactual material is found in the shelter and on a talus which extends down to PL 20. (PL 20 may well be an extension of PL 19.) The material includes hornfels, quartz and ccs chips, chunks and flakes, one hornfels core, one quartzite upper grindstone cum hammerstone, one large silcrete end scraper, six hornfels adzes and two ccs adzes. Fine and coarse tempred wares are present in the ceramic sample. Of two sherds, one showed red burnish and the other showed ordinary burnish.

	LEFT	RIGHT	?	TOTAL
HANDPRINTS	1	1	6	8

TABLE 1:40 - ROCK ART IMAGES AT PL 19

DESCRIPTION - SITE PL 20

A small rock wall with a small flat sward at the front with a seemingly denser concentration of artefacts than on the talus between PL 19 and 20. The wall faces north-east and is about 7 metres above the kloof. The site has no natural screening but this is not seen as an important site in terms of occupation but probably forms a unit of the site cluster in this area. Animal disturbance is marked. There is no rock art but artefactual material includes hornfels, silcrete, quartz and ccs chips and chunks and the same raw materials are represented in flakes with the addition of quartzite. One quartzite upper grindstone and one hornfels adze were also observed. No pottery was observed at the site itself but it is represented at PL 19 and on the talus and as such pottery is probably associated.

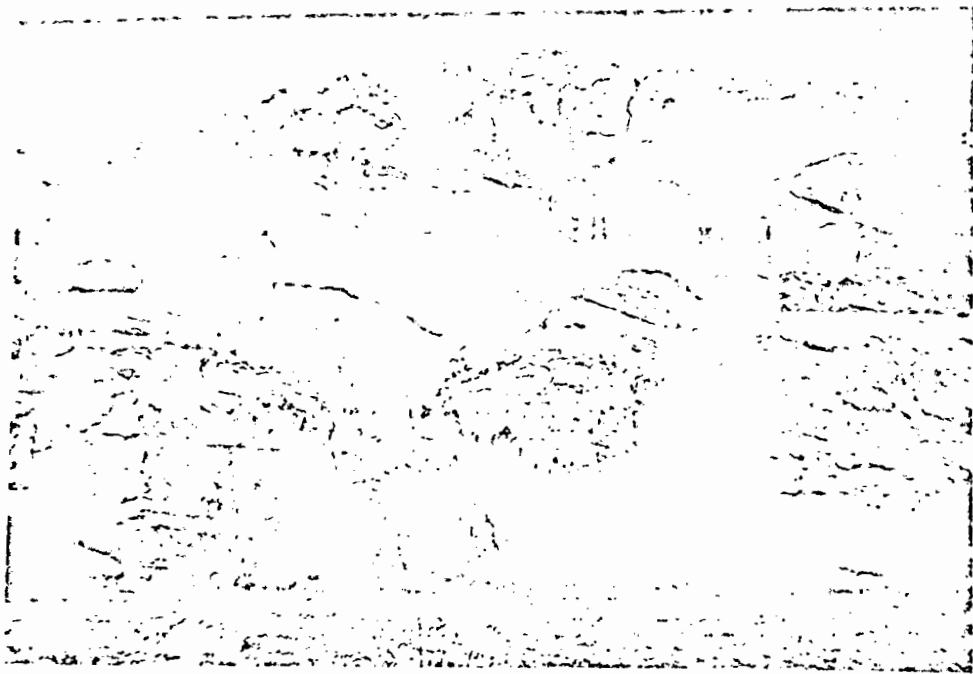


PLATE 70: PL 21: Shelter behind rocks. Part of painting surface can be seen in V-shaped opening.



PLATE 73: Sitting and lying human figures.
Possible trance connotations. Note
bands around knees (refer also plates
74 and 75)

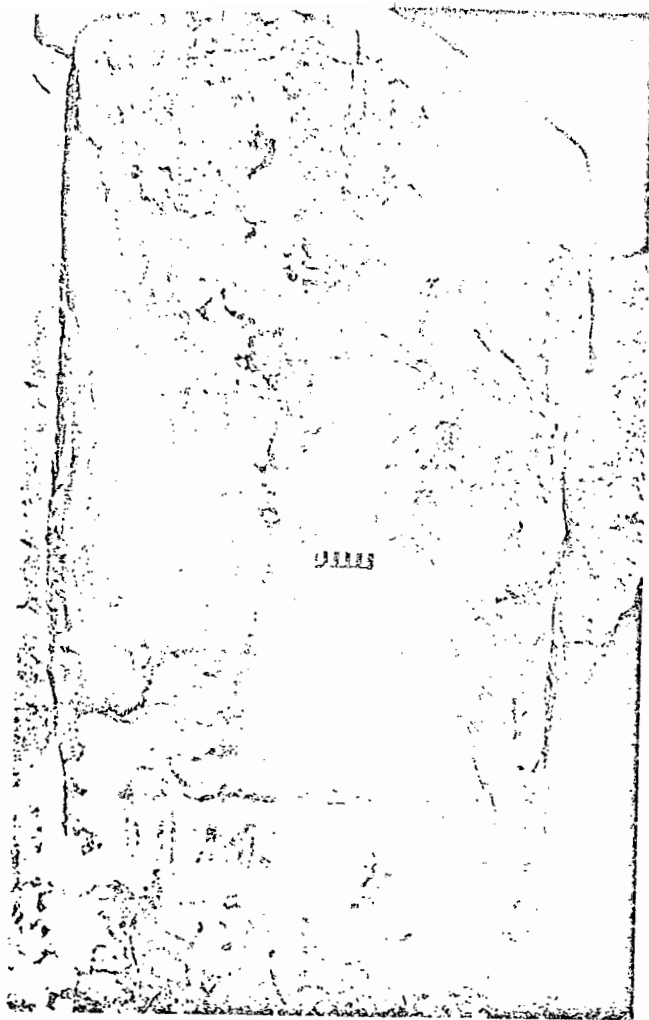


PLATE 71: Detail of large panel showing good preservation of pigment. Fight scene further to right.

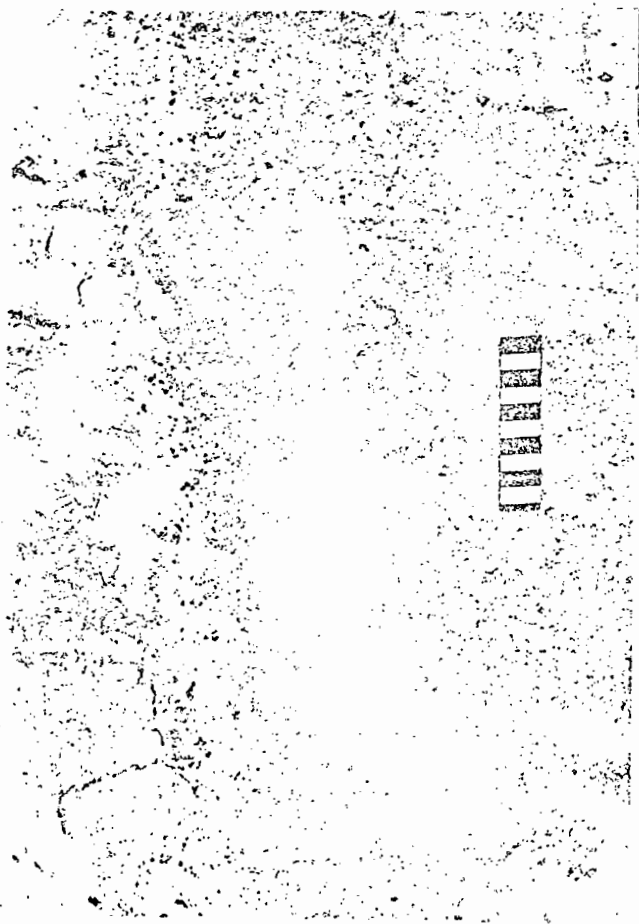


PLATE 72: Group of bending humans - possibly involved in a dance.

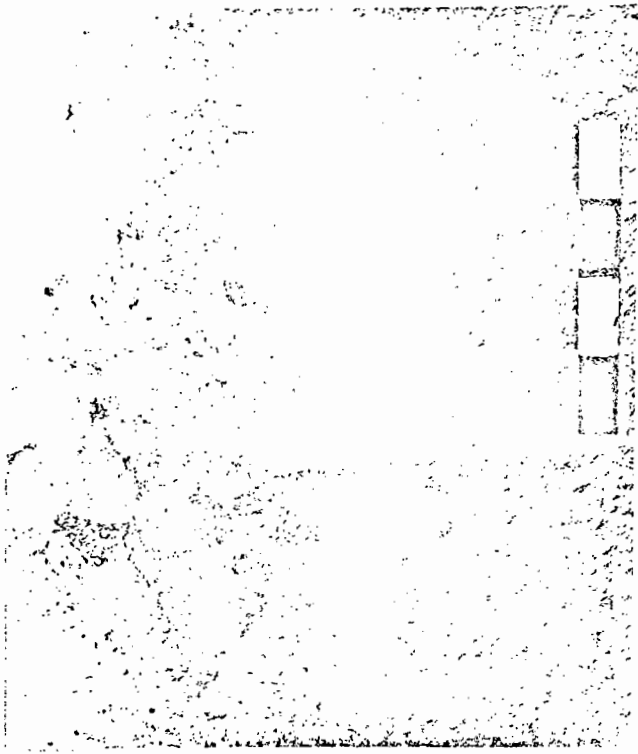


PLATE 74: Detail of figure with bands around knees.

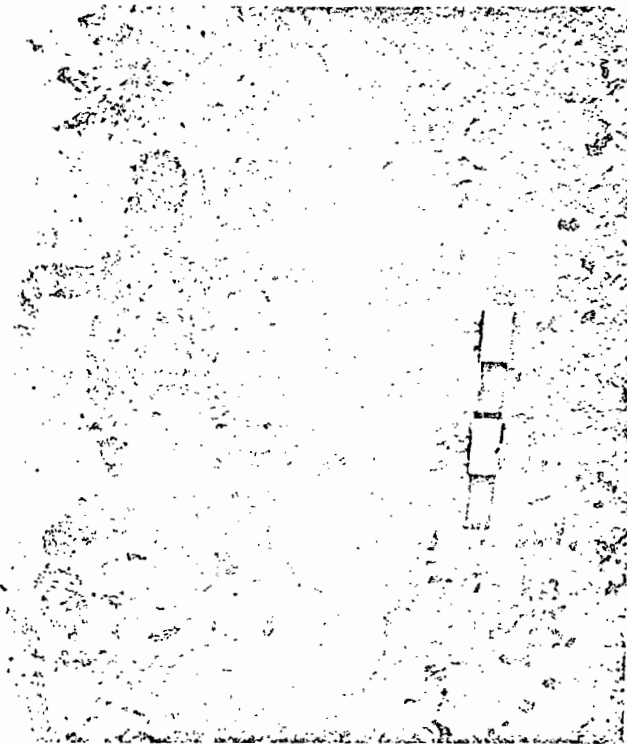


PLATE 75: Detail of figure with bands around knees.

01

DESCRIPTION - SITE PL 21

This site is formed by a large block of the main surface of the koppie, fracturing into two huge boulders which resulted in a rock wall with a small passage-way leading to it. While the fracture continues to floor level at the rock wall (painting surface) one has to balance on small terraces of rock to get at the paintable surface. There is no overhang. This site's only conceivable purpose would be as a painting site. While the surface is on the whole not of the best quality, it is the best surface in any of the sites of the small cluster which occurs on the "koppie". The wall and passage way face north. Part of the wall receives sun during the afternoon and during later afternoon through the passage entrance. The site gets extremely hot when direct sun is shining into it. No artefactual material was observed in the site itself. On a flat sward in front of the cave beginning a few metres away is a large open scatter of artefacts. This scatter is probably associated to the few small shelters which occur in this vicinity. It is only about 15 metres east of PL 19 and at about the same level. The material includes chips, chunks and flakes of hornfels, silcrete, quartz, quartzite and ccs, one hornfels adze, one quartzite upper grindstone and three bored stones (broken) were found in the area. These are made of a shale-like material, fairly hard but softer than quartzite. There is painting in PL 21 and the images are presented in TABLE 1:41 (a)(b).

	♂	♀	?	TOTAL
HUMANS	27	11	77	115
ELAND			1	1
INDETERMINATE ANIMAL			3	3
INDETERMINATE BUCK			3	3
SHAPE				3
LINE				2
PALETTE				1
FINGER SMEAR				2
AREA OF MARKS				3
AREA OF PAINT				2

1 : 41 (a)

	TOTAL
HUMAN	115
ANIMAL	7
INANIMATE	13
	135

1 : 41 (b)

TABLE 1 : 41 (a) (b) - ROCK ART IMAGES AT PL 21



PLATE 76: PL 26: Looking up the talus. Sample taken left of sitting figure. Small overhang can be seen in the background.

DESCRIPTION - SITE PL 26

A dense artefact scatter further around the koppie and to the east of PL 21. This open scatter occurs about 10 metres away from the scatter described in front of PL 21 although the two are not separate units since artefacts occur over most of the area between PL 19 and 26 but vary in density. The densest manifestations occur at PL 19, 21 and 26, (densest of the three). The scatter is about 15 metres x 10 metres in area and is on a sward in front of two small overhangs. The sward does slope to some extent but the concentration seems to be fairly even. Deflation may have caused a degree of concentration but one would presume the same situation to have pertained at PL 19 and 24. The "site" is about 6 metres above the kloof and faces north east. The talus would receive sun all or most of the day and the small shelter would provide little shade. Good shade is not abundant in this area. The nearest good shade spots would be found approximately 400 metres away on the koppie to the north-east, i.e. where sites PL 53, 59 and 60 occur. The talus may in fact prove worth excavating since it looks as if some depth might occur. A sample of 6 x 1 metres was made approximately two metres in front of the shelter. The results of the sample are presented in TABLE 1:XXII, XXIII and XIV. The surfaces inside the shelter are very friable and may have been painted at one time. Bone, OES and pottery occur. Some of the pottery shows red burnish. While no good shelters are available here, the material suggests frequent or extended use of the area.

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	71	5	3	124	21	224
FLAKES	132	9	9	72	26	248
CORES	3	2	1	12	1	19
UTILIZED	2				1	3
PIECES ESQUILLEES	1	1		3		5
SCRAPER				3		3
ADZE	10				1	11
M.R.P.	2	2		1		5
TOTAL	221	19	13	215	50	518

TABLE 1:XXII

ACTUAL ARTEFACT COUNTS PER RAW MATERIAL
FOR 6 x 1 metre SAMPLE - PL 26

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	31,7	2,2	1,3	55,4	9,4	100%
FLAKES	53,2	3,6	3,6	29,0	10,5	100%
CORES	15,8	10,5	5,3	63,2	5,3	100%
UTILIZED	75,0				25,0	100%
PIECES ESQUILLEES	20,0	20,0		60,0		100%
SCRAPER				100,0		100%
ADZE	90,0				10,0	100%
M.R.P.	40,0	40,0		20,0		100%
TOTAL	42,7	3,7	2,5	41,5	9,7	100%

TABLE 1:XXIII PERCENTAGE RAW MATERIAL PER ARTEFACT CLASS-PL 26

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	32,1	26,3	23,1	57,7	42,0	43,2
FLAKES	59,7	47,4	69,2	33,5	52,0	47,9
CORES	1,4	10,5	7,7	5,6	2,0	3,7
UTILIZED	0,9				2,0	0,6
PIECES ESQUILLEES	0,5	5,3		1,4		1,0
SCRAPER				1,4		0,6
ADZE	4,5				2,0	2,1
M.R.P.	0,9	10,5		0,5		1,0
TOTAL	100%	100%	100%	100%	100%	100%

TABLE: XXIV PERCENTAGE ARTEFACT CLASS PER RAW MATERIAL - PL 26

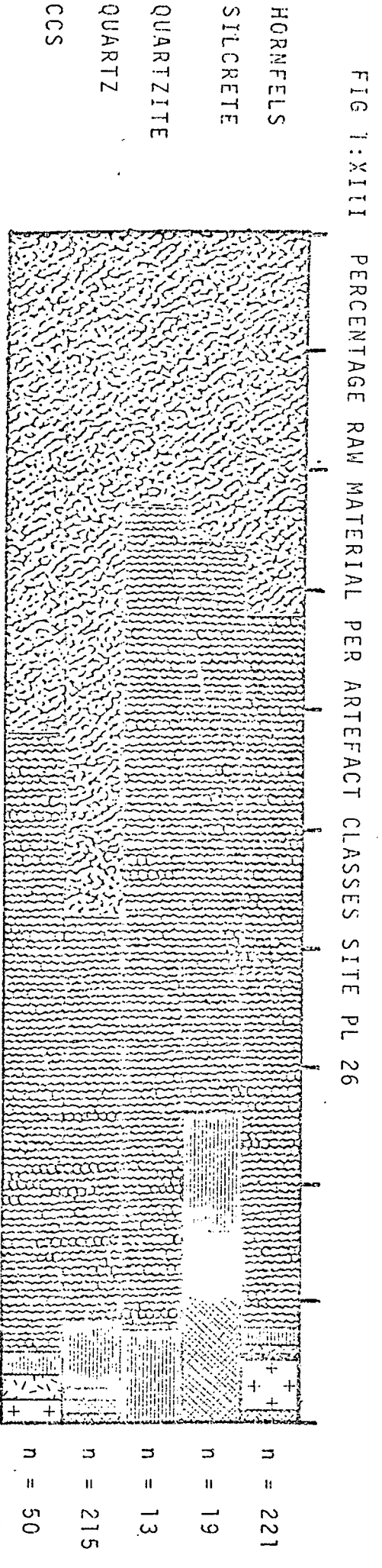
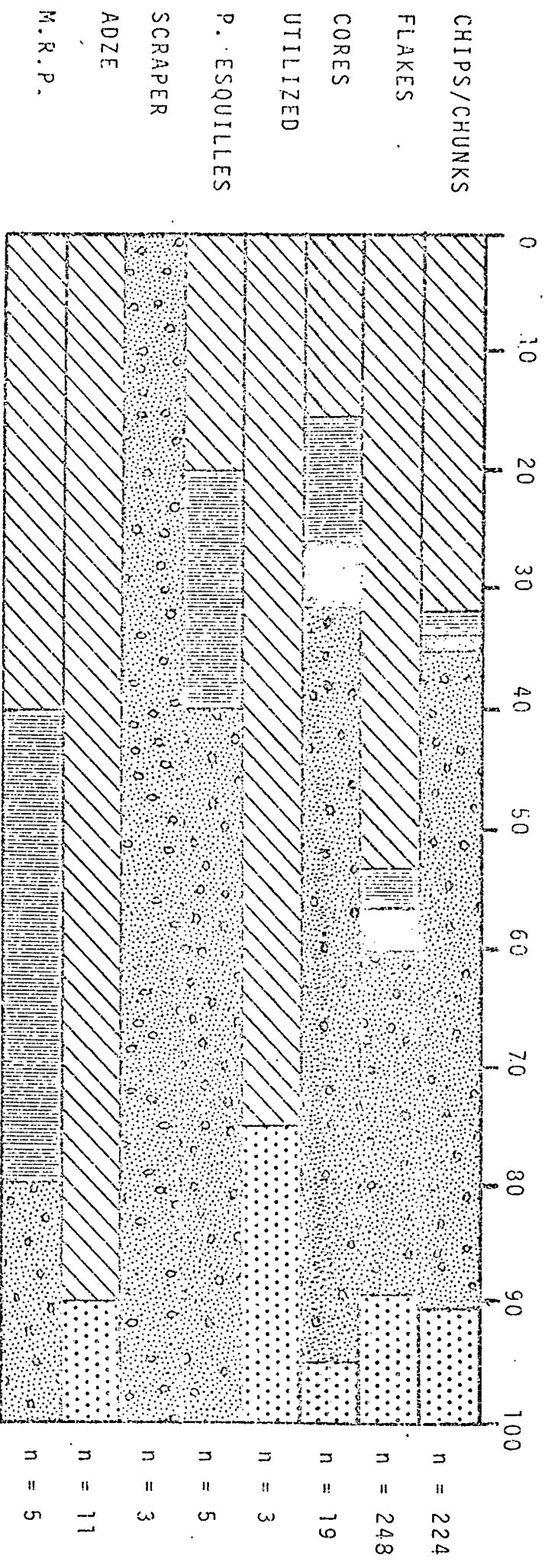


FIG 1: XIV

PERCENTAGE ARTEFACT CLASSES PER RAW MATERIAL SITE PL 26

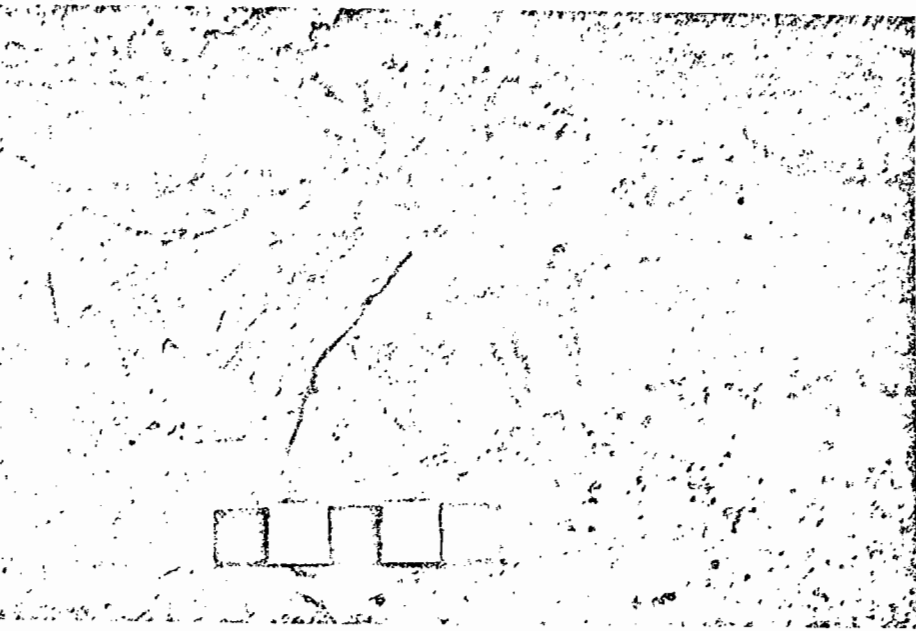


PLATE 77: Aardvark - (Orycteropus afer)

DESCRIPTION - SITE PL 53

A rock shelf approximately 5 metres long with a shelter on the west side. The rock shelf runs west/east and is approximately 3 metres at its widest. This terrace is level base rock and has a light sand covering. The overhang at the west is small and the floor also consists of base rock though it is very uneven. The shelter and terrace face south-west, i.e. towards PL 26 etc. Bushes grow at the edge of the terrace. Another small depression/overhang occurs in the middle of the rock wall at the back of the terrace. The shelter and shelf receive sun from late morning to noon. The position would provide some shelter from rain and wind. There is a good view of the immediate kloof. Both the overhangs have rather scrappy surfaces but some painting is present. The images are presented in TABLE 1: 42 (a)(b). The site is about 10 metres above the kloof and access is easy. A few hornfels chips, chunks and flakes occur. No pottery was observed. The material suggests minor use and this use is probably related to an open artefact scatter which occurs above this site on top of the koppie.

	♂	♀	?	TOTAL
HUMANS			19	19
ELAND			1	1
AARDVARK			4	4
INDETERMINATE ANIMAL			2	2
PALETTE				1
PATCH				1
FINGER SMEAR				1
AREA OF DAUBS				1

1 : 42 (a)

	TOTAL
HUMAN	19
ANIMAL	7
INANIMATE	4

30

1 : 42 (b)

TABLE 1 : 42 (a) (b) - ROCK ART IMAGES AT PL 53

DESCRIPTION - SITE PL 59

A small south-westerly facing overhang, occurring at the same level as PL 53 and approximately 10 metres from it. The site occurs on the easiest access route to the open area on top of the koppie, i.e. the open area which contains PL 60. The site is insignificant and should be seen as a unit of the site cluster on the koppie. The site contains some rock art and the images are presented in TABLE 1:43 (a) (b). No artefactual material is directly associated with the site.

	♂	♀	?	TOTAL
HUMANS			1	1
FINGER SMEAR				2

1 : 43 (a)

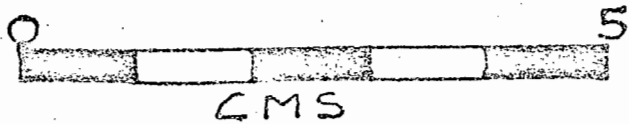
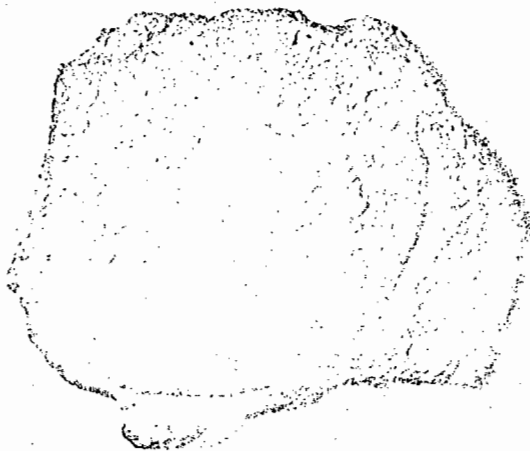
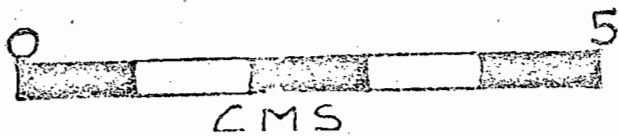
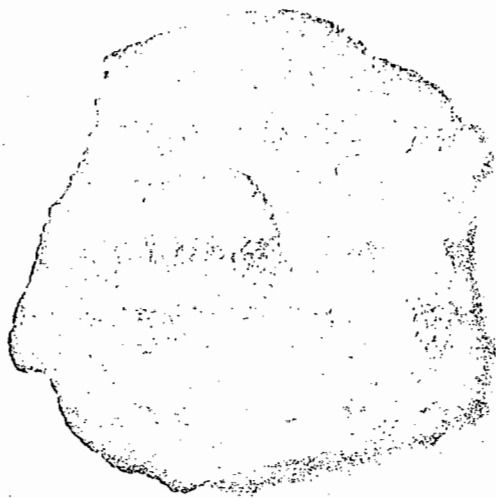
	TOTAL
HUMANS	1
INANIMATE	2
	3

1 : 43 (b)

TABLES 1 : 43 (a) (b) - ROCK ART IMAGES AT PL 59



PLATE 78: PL 60: View of shelter and open sward in front. Sample taken left of figures.



PL 60 - Detail of pot lug found on surface of sward at PL 60

DESCRIPTION - SITE PL 60

A small shelter with a large flat sward in front. The shelter faces south-east and one can see across to PL 26 and the kloof in between. The shelter would receive early morning sun but the open area would receive sun most of the day. Shade is available on the koppie at any time. The shelter is small and has no natural screening but some relief from rain would be provided. There are traces of a rock wall at the west side of the shelter but this is probably a recent structure. The site is about 20 metres above the kloof and the access is easy. Some painting is present on the scrappy surface of the shelter and the images are presented in TABLE 1:44 (a)(b). The floor of the shelter is sandy but may conceal a deposit estimated at 10 centimeters or more in depth. The area in front is flat, and bordered by rocks. Its size must be in the vicinity of 20 metres x 30 metres and has a light sand and grass covering. An artefact scatter covers a good deal of this area (15 x 8 metres) and varies in its surface density. A sample of 4 x 1 metres was made of the scatter and the results are presented in TABLE 1:XXV, XXVI and XXVII. This surface provides an excellent situation for doing a spatial plot of artefacts on the surface. Since the area is level and on base rock, deflation and runoff are not likely to have caused too much disturbance or distortion. Animals may have disturbed the site to some extent but not seriously. Since the site was visited after rain, it was noticed that there were many pools of standing water on the koppie around the site and running water (a spring?) was noticed about 150 metres away on the western side of the koppie. Much pottery is present and includes one decorated neck sherd with horizontal incised lines right up to the base of the round everted rim. One internally reinforced and pierced lug was collected. Bone is also present. The material suggests frequent or extended use of the location.

See photo of lug.

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	88	1	10	86	16	201
FLAKES	139	6	7	49	29	230
CORES	1			3		4
UTILIZED	2				2	4
PIECES ESQUILLEES	1					1
SCRAPER					4	4
ADZE	12				6	18
TOTAL	243	7	17	138	57	462

TABLE 1:XXV ACTUAL ARTEFACT COUNTS PER RAW MATERIAL
FOR 4 x 1 metre SAMPLE - PL 60

	H	S	Q2	Q	CCS	TOTAL
CHIPS/CHUNKS	43,8	0,5	5,0	42,8	8,0	100%
FLAKES	60,4	2,6	3,0	21,3	12,6	100%
CORES	25,0			75,0		100%
UTILIZED	50,0				50,0	100%
PIECES ESQUILLEES	100,0					100%
SCRAPER					100,0	100%
ADZE	66,7				33,3	100%
TOTAL	52,6	1,5	3,7	29,9	12,3	100%

TABLE 1:XXVI PERCENTAGE RAW MATERIAL PER ARTEFACT CLASS-PL60

	H	S	QZ	Q	CCS	TOTAL
CHIPS/CHUNKS	36,2	14,3	58,8	62,3	28,1	43,5
FLAKES	57,2	85,7	41,2	35,5	50,9	49,8
CORES	0,4			2,1		0,9
UTILIZED	0,8				3,5	0,9
PIECES ESQUILLEES	0,4					0,2
SCRAPER					7,0	0,9
ADZE	4,9				10,5	3,9
TOTAL	100%	100%	100%	100%	100%	100%

TABLE 1:XXVII PERCENTAGE ARTEFACT CLASS PER RAW MATERIAL-PL 60

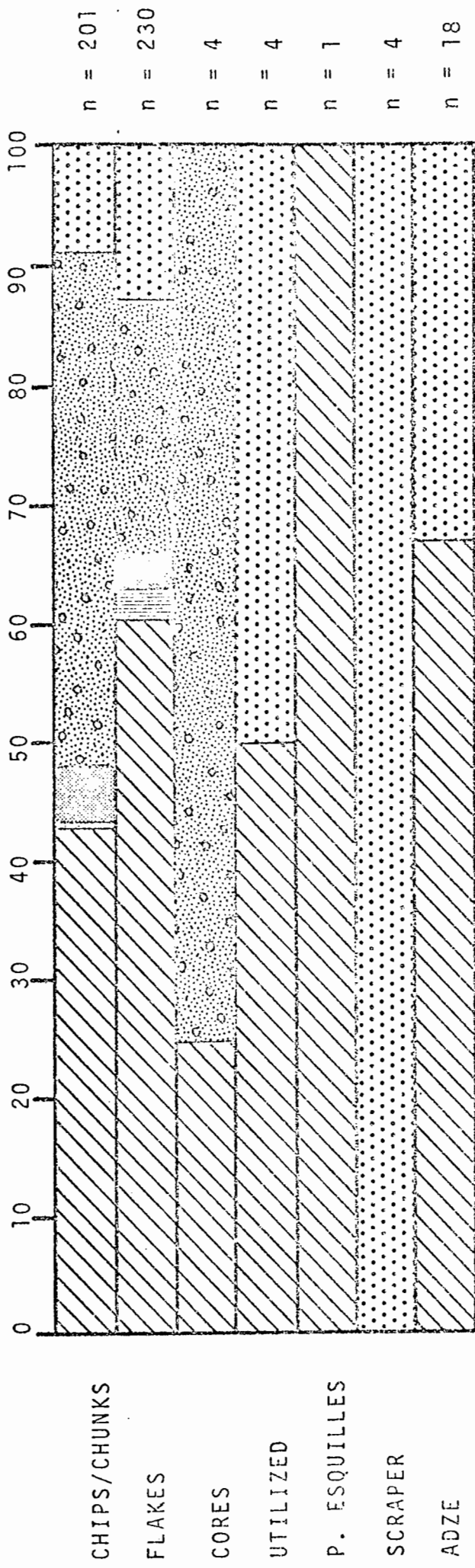


FIG 1 : XV PERCENTAGE RAW MATERIAL PER ARTEFACT CLASS SITE PL 60

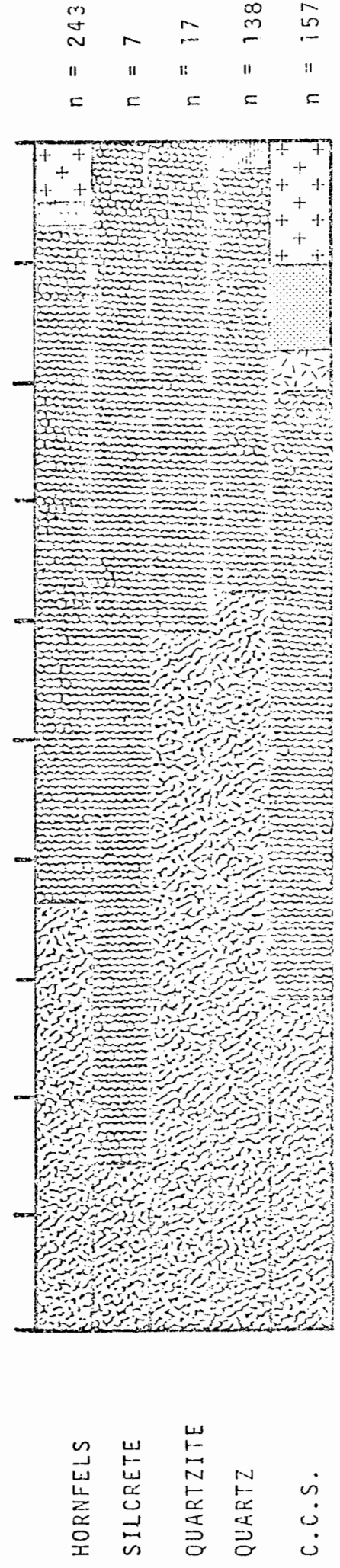


FIG 1 : XVI PERCENTAGE ARTEFACT CLASSES PER RAW MATERIAL SITE PL 60

	♂	♀	?	TOTAL
HUMANS			3	3
MARK				1
FINGER DOT				10

1 : 44 (a)

		TOTAL
HUMANS		3
INANIMATE		11
		14

1 : 44 (b)

TABLES 1:44 (a) (b) - ROCK ART IMAGES AT PL 60

ADDENDUM TO PART I

The existence of a further eight rock art sites in the vicinity of PL 19, 21 etc. with minor occurrences of artefactual material is known but unfortunately could not be recorded in detail in the time that was available. Only one of the sites shows much material and that is present in the form of painting. A handprint site is known about not far from PL 26. On the whole one or two images are present at these remaining sites and usually are of a very scrappy nature. The presence of these sites, some of which were given numbers during preliminary reconnaissance of the area accounts for the jump from PL 21 - PL 26 and from PL 26 - PL 28 in the presented recorded sites. (These will be recorded at some future date.)

PART II

The variable nature of both raw materials and artefact types at sites in the kloof requires some explanation at this point.

HORNFELS (H)

A black to bluish-black flinty material. It is fine grained though rather brittle. It is a fairly hard material and is sometimes referred to as indurated shale. The fracture can be controlled and its nature makes it suitable for the manufacture of microlithic tools.

SILCRETE (S)

"Consists of scattered quartz grains in a colloidal silica matrix" (Deacon, J. 1969:50) The frequency of the quartz inclusion varies and may lead in some cases to the material appearing very smooth. Its conchoidal type fracture renders it ideal for stone tool manufacture. (Mazel, A. 1978:29) The colour varies from light brown to grey.

QUARTZITE (QZ)

This material has developed from sandstone by the introduction of silica into all spaces between the original grains of quartz. (Mazel, ibid) It is therefore highly crystalline and this makes it rather brittle. This makes it a difficult material to use both during the flaking procedure and during the production of microlithic tools.

QUARTZ (Q)

A basically high silica content material frequently having inclusions and infortities present. While it is extremely fine grained, it is also very brittle and this is a difficult raw material to use for production of flakes or bladelets. The size of the occurrence is usually small and this further limits its use in specialised tool manufacture. It is frequently

milky or opaque in appearance but may also appear very pure in quartz crystals.

CRYPTO CRYSTALLINE SILICATES (ccs)

This includes a range of extremely fine grained materials such as chert, jasper, agate. Chert and jasper often have quartz inclusions although not to the same extent as noticed in silcrete. The size of their occurrence varies from small to medium size pieces and also tends to limit the nature of the effective pieces produced during flaking. The material is suitable for microlithic tools and tends to accommodate flake and bladelet manufacture.

PHILLITE (P)

Also referred to as Bokkeveld Quartzite, (Thackeray 1977:47). This material is soft and usually has a "bedded" nature, commonly producing elongated, flat section pieces during fracture. It appears as a light grey with small apparently micaceous inclusions. Overall rather soft and gritty. Its nature limits it to very specialised uses and it is not used at all for formal or microlithic forms.

ARTEFACTS: DEFINITIONS AND ABBREVIATIONS USED IN THE TEXT

WASTE:

(i) CHIPS

This class includes pieces on average less than 10 mm maximum dimension which do not show a bulb of percussion. (Thackeray 1977:26). Probably the by-product of lithic reduction.

(ii) CHUNKS

Pieces greater than 10 mm maximum dimension. Are commonly more bulky than chips and often show one or two flake scars. Probably a product of lithic reduction.

(iii) CORES

Pieces commonly showing the removal of three or more flakes or blades. The size can vary quite considerably. Specific types of cores have not been examined though a note of their form has been made at some sites in the Putslaagte.

(iv) FLAKES

Pieces showing a bulb of percussion which vary in dimension with the original size of the raw material. They show no sign of retouch. These pieces are probably the concious, attempted result of lithic production since it is seen that many formal pieces are made on flakes or blades.

(Specialised technology debris - see end of section)

CLASSES SHOWING UTILIZATION:

(* See Deacon, J 1981 for illustration of typical examples.)

UTILIZED PIECES*

Flakes, chips etc. showing some form of use in the form of small flakes removed from the edges which is clearly not intended as retouch.

PIÈCES ESQUILLÉES*

These are pieces which have crushing and splintering along straight or slightly curved chisel-like edges. Deacon (J, 1981:11) notes that in form these are similar to core reduced pieces and that the damage may have been produced during attempts to remove further flakes from the piece.

GRINDSTONES: UPPER AND LOWER

Upper grindstones are characteristically made on quartzite cobbles of varying size although usually fairly small. They show one or more smooth, flat grinding surface and may have a pecked depression in the grinding surface. These grindstones also occasionally show crushing or damage at one end if single faced. This is believed to be the result of use as a hammerstone.

Lower grindstones are also commonly made on quartzite but in this case on slabs of the material rather than cobbles for obvious reasons. They usually show a single ground elongated depression/hollow or a slightly depressed smooth surface. Grinding surfaces may occasionally occur on both sides of a slab.

REAMERS*

Elongated phillite/Bokkeveld quartzite pieces which show smoothing and rounding of the edges and damage at one end in the form of crushing. These pieces are probably used for making the holes in bored stones. (Sampson 1972:186)

FORMAL TOOLS AND AFFILIATES

SCRAPER*

Scrapers are usually made on flakes, but core types are found. They are characterised by two main features: a flat ventral surface that is unretouched and a convex working edge that has been deliberately shaped by secondary retouch. (Deacon, J. 1981:16) Size of the pieces may vary as well as the siting of the secondary retouch. In the Putslaagte these tools are most frequently small, and are of the "thumb-nail" type.

ADZES*

These pieces are commonly made on flakes and in final form are elongated (often showing a bulb on the ventral surface) and having step flaking on a slightly concave working edge. Single and double worked edge types occur (though this occurrence has not been noted for the Putslaagte material). These tools are believed to have been used in wood-working, though experiments conducted by members of the 1981 Honours class University of Cape Town showed that retouching the working edge most frequently produces the form of edge that we observe on field specimens.

M.R.P. (MISCELLANEOUS RETOUCH PIECES)*

These pieces are an extension of the utilized flake class in that they have similar characteristics but the retouch is more deliberate and extends over a longer portion of the tool. (Deacon, J. 1981:30)

LEVALLOIS FLAKES.

Commonly found in quartzite and silcrete. These are large and frequently triangular in overall shape. Platforms often show the presence of preparation indicating that the original striking surface was modified on the core, prior to its removal. These flakes, or this technology, is not common at sites in the kloof.

A: SUMMARY OF SAMPLES

SAMPLE PL I

Refer: TABLES 1:I, 1:II, 1:III

Figures 1:I, 1:II, 2:I, 2:IX, 2:X.

The site occurs next to the Doring River at the mouth of the kloof (see map) and as such occurs at the source of most of the raw materials used at sites in the kloof. The sample of 8 x 2 metres produced a total of 477 pieces of material. (TABLE 1:I) The results show that the material which occurs differs both in morphology as well as percentage of the different raw materials used in other samples. (Fig. 2:X) The assemblage profiles of the samples show this difference very clearly. (Figs. 2:I - 2:VIII) Particular differences occur in the percentage of cores and the types of cores. Cores comprise 10% of the sample, the highest percentage frequency for cores at any sample in the kloof, and some of the types which occur here are unique to the site, i.e. single platform, opposed platform and disc cores. For the most, the cores are of hornfels and quartzite with hornfels being dominant at 75%. (Fig. 1:I) Only one other sample shows the presence of quartzite cores, i.e. PL 26 and this is a low percentage of the core category at that site. We notice that while hornfels is used for irregular cores at other sites, quartz, silcrete and crypto crystalline silicate types are also used to a greater degree than in PL 1. We notice too that the number of chips and chunks is higher than flakes by approximately 20%. All other site profiles (except PL 18) show the opposite to be true, i.e. the percentage frequency of flakes is usually higher than that of chips and chunks. (The situation at PL 18 may be due to some external factors operating on the steep talus.)

Levallois flakes occur in a low percentage, i.e. 1,3%, and unutilised nodules of hornfels, quartzite and phillite also occur in the samples. The most important thing noted at this site, is the almost total lack of any formal artefact element. One silcrete scraper was found but this is a large endscraper and not characteristic of the forms found on sites higher up the kloof. Fig. 1:II shows the artefact classes per raw material.

SAMPLE PL 5

Refer: TABLES 1:IV, 1:V, 1:VI

Figures 1:III, 1:IV, 2:II, 2:IX.

The location of this site is almost the same as for PL I. The only differences being that this site is about 150 metres from the river and is on a talus below some rocks. The sample size was 4 x 1 metres and produced 187 pieces of material. (TABLE 1:IV) Hornfels is the predominant raw material, approximately 75% of the total, in actual terms 141 pieces of the total 187. (Fig. 2:IX) Although the rest of the assemblage only consists of 46 pieces, quartzite is still the second most dominant material forming about 10% of the sample. Only the two samples at the river, i.e. PL 1 and PL 5, show quartzite as being in second position to hornfels as the dominant material. Quartzite drops off progressively in samples up the kloof, although the percentage frequency does vary slightly, from 8,3% to as low as only 1,4%. (TABLE 4:IX) Only 3 cores were found, of which one is quartz. These are irregular types and would produce small flakes rather than blades. All cores found on sites other than PL 1 are on average rather small. Although the number of CCS pieces in the sample is low, i.e. 9, we can see that the material has its highest frequencies in the utilised category, 15,4%, and in the adze category, 33,3%. Six adzes are present in the sample and four are made on hornfels, i.e. 66,7%, and two on CCS, i.e. 33,3%. Utilised pieces are quite high in percentage frequency i.e. 7% of the total assemblage, with adzes forming about 3,2% of the assemblage. The assemblage profile (Fig. 2:II) is similar to the profiles of other samples from the kloof, i.e. with flakes being the highest class represented and a peak forming about this and the adze category. Phillite forms 1,1% of the assemblage or in actual terms, 2 pieces. One of these phillite pieces has been modified to form a reamer. Fig. 1:IV shows the percentage of artefact classes per raw material.

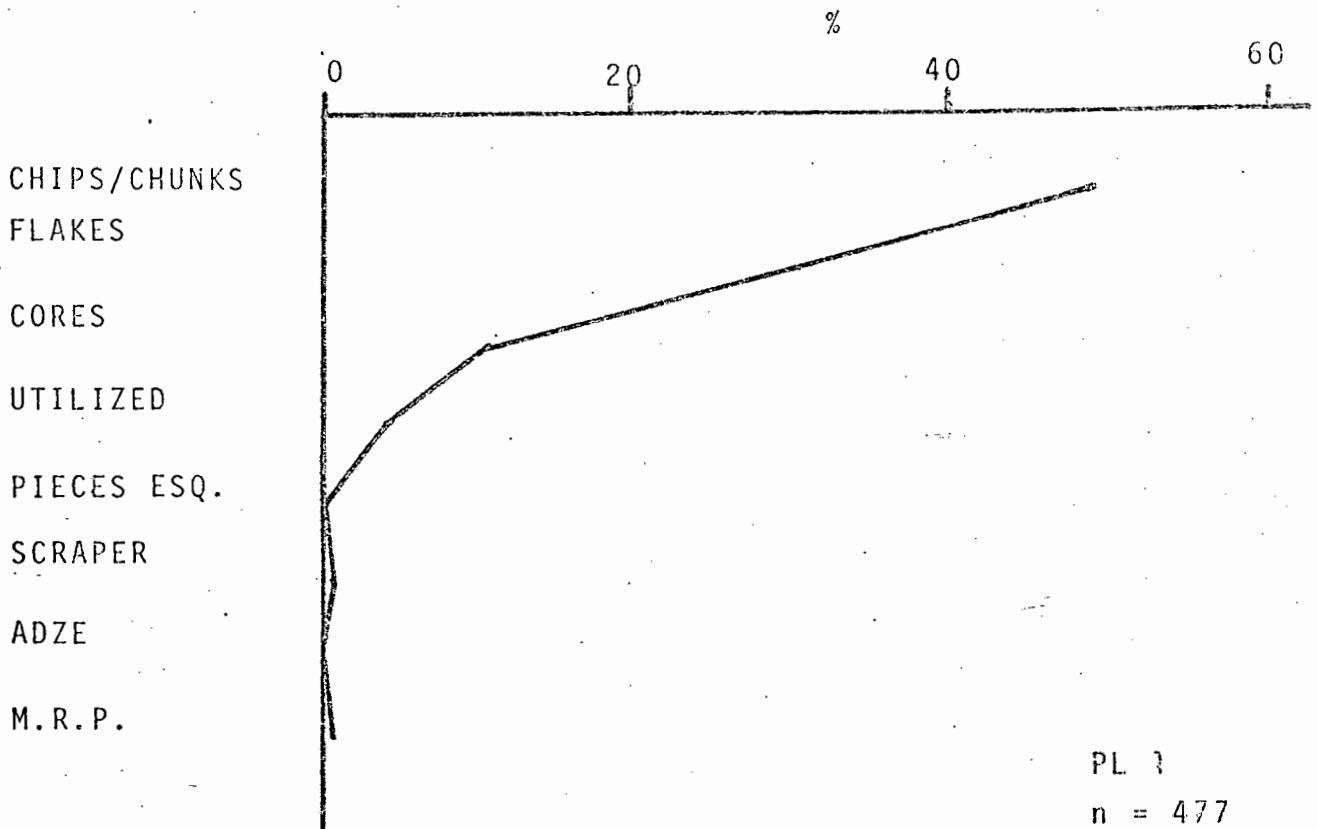


FIG. 2 : I

PL 3
n = 477

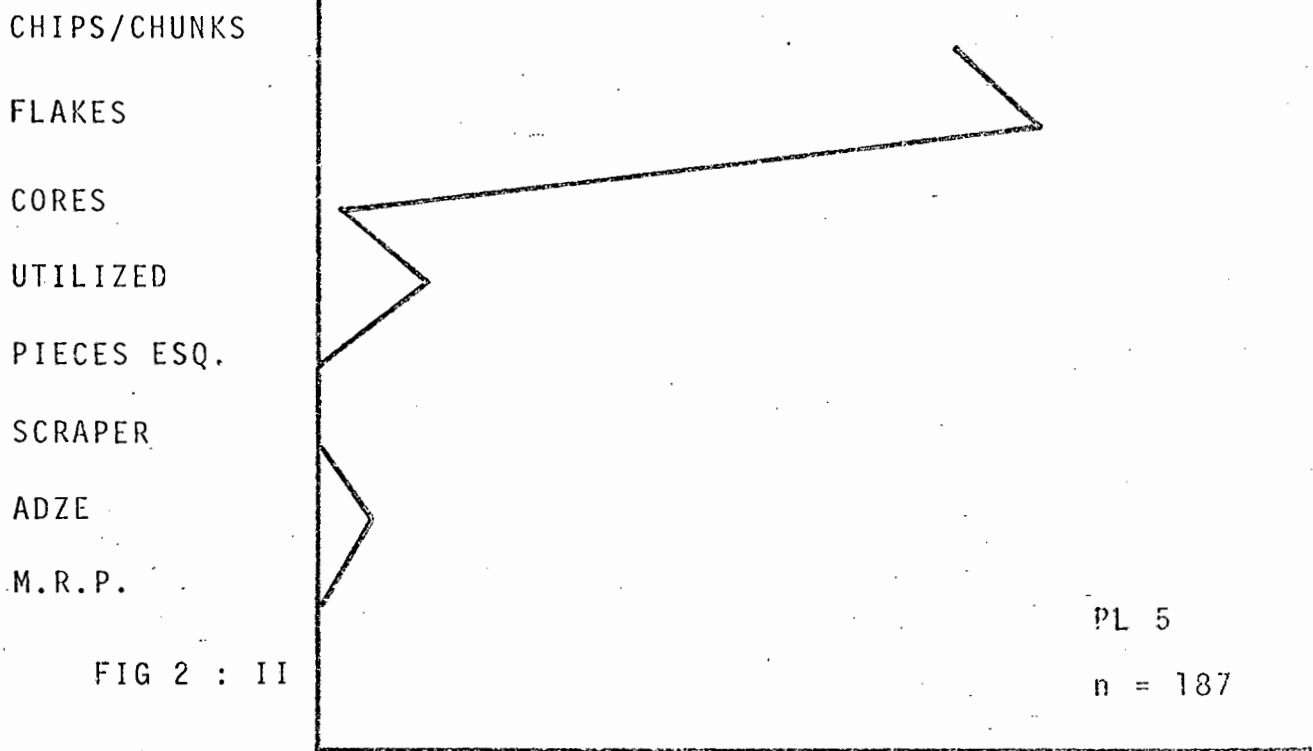


FIG 2 : II

PL 5
n = 187

SAMPLE PL 8

Refer: TABLES 1:VII, 1:VIII, 1:IX, 2:II

Figures 1:V, 1:VI, 2:III, 2:IX, 2:X.

This site is approximately 2,25 kms from the river and is one of a number of sites which forms a cluster in the kloof between PL 18 and PL 6. (Fig. B) Other samples from different situations within the cluster, i.e. PL 16 and PL 18 were made, and several other sites in the cluster also show traces of lithic material. (TABLE 2:II) The artefact scatter at PL 8 occurs on a sward in front of a shelter and a sample of 6 x 1 metres produced 194 pieces of material. (TABLE 1:VII) Hornfels is the dominant material, 69,1%, and quartz is the second most dominant material, i.e. 15,5% of the total assemblage, or in real terms 134 to 30 pieces. Quartzite is reduced and forms 8,2% of the assemblage. CCS and phillite maintain the same percentage of the sample as they did at PL 5, i.e. 4,6% and 1,0% respectively. Certain artefacts which were not noticed at PL 5 or PL 1 are present in this sample, i.e. 1 CCS pièces esquillées and 2 CCS "thumbnail" scrapers. 8 adzes form 4,1% of the assemblage. The assemblage profile (Fig. 1:III) shows 3 peaks, i.e. around flakes, utilised pieces and adzes and resembles the other assemblage profiles except PL 1. The adzes comprise 87,5% hornfels and 12,5% silcrete. No cores are present in the sample and we see that quartz is only represented in the chips/chunks and flakes classes. Fig. 1:VI shows percentage artefact classes per raw material.

SAMPLE PL 16

Refer: TABLES 1:X, 1:XI

Figures 1:VII, 1:VIII, 2:IV, 2:IX.

The site occurs on a gently sloping plain above the west wall of the kloof and is approximately 100 metres above the kloof floor. (Fig. B) The artefact scatter occurs on a stepped talus in front of a small shelter. A 1,5 x 5 metre sample was made on a flat section of ground in front of the shelter and above the lip of the first "step" of the talus. A total of 156 pieces of material were counted. (TABLE 1:XI) Hornfels is the dominant raw material (Fig. 2:IX) but has been reduced to 63,5% of the total sample. Quartzite comprises 8,3% of the sample, very similar to the 8,2% noticed at PL 8 for this material. Both quartz and CCS have increased their percentage representation compared to sample PL 8. They form 18,6% and 7,7% of the sample respectively. At PL 8 these materials comprised 15,5% and 4,6% of the sample respectively. No phillite was noticed in the sample. Silcrete forms only 1,9% of the sample and in fact, if one examines Fig. 2:IX, it is clear that silcrete never forms an important part of any of the samples. In fact it has an average representation of only about 2% in all the samples. Chips and chunks form a smaller proportion of the sample than flakes, i.e. 35,3% to 46,8%. (Figure 1:IV) Adzes form 7,1% of the total and this is in fact the highest percentage representation of adzes in any of the samples. No scrapers occurred in this sample. Cores represent 5,1% of the total and this too is the highest percentage representation of cores in any sample except PL 1. The next highest frequency of cores occur at PL 46, where this class represents 4,5% of the sample. PL 46 also occurs at some altitude above the kloof floor. (This will be discussed in more detail later.) The actual number of cores found at PL 16 is 8 of which 4 are in hornfels, 1 is in silcrete and 3 are in quartz. (Fig. 1:VII) The one pieces esquillees found is made out of silcrete. All 7 utilised pieces are made on hornfels. The assemblage profile (Fig. 2:IV) shows peaks around flakes, cores/utilised and adzes and comparison shows that the profile in general shape is similar to that of other sites except PL 1. No MRP's were noticed in this sample. TABLE 1:XII shows percentage artefact classes per raw material.

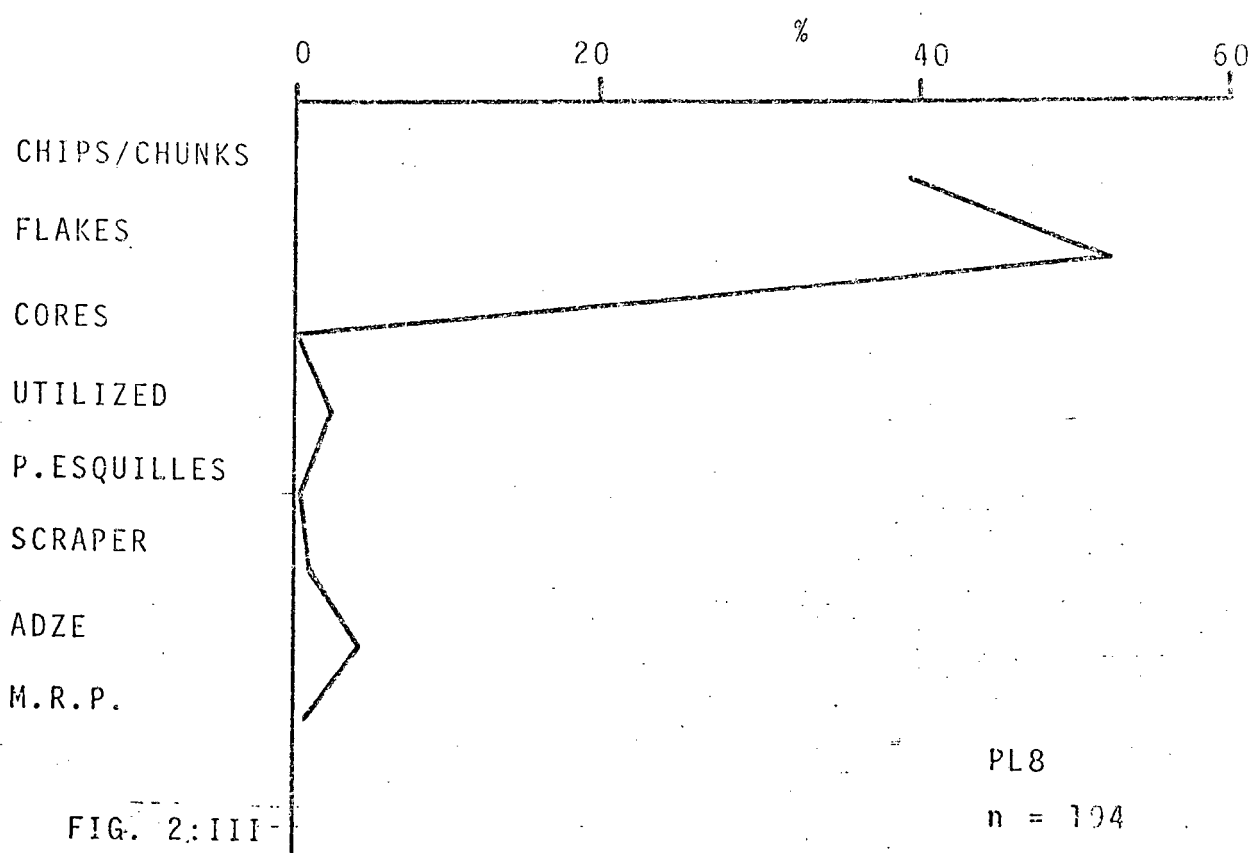


FIG. 2: III-

PL8
n = 194

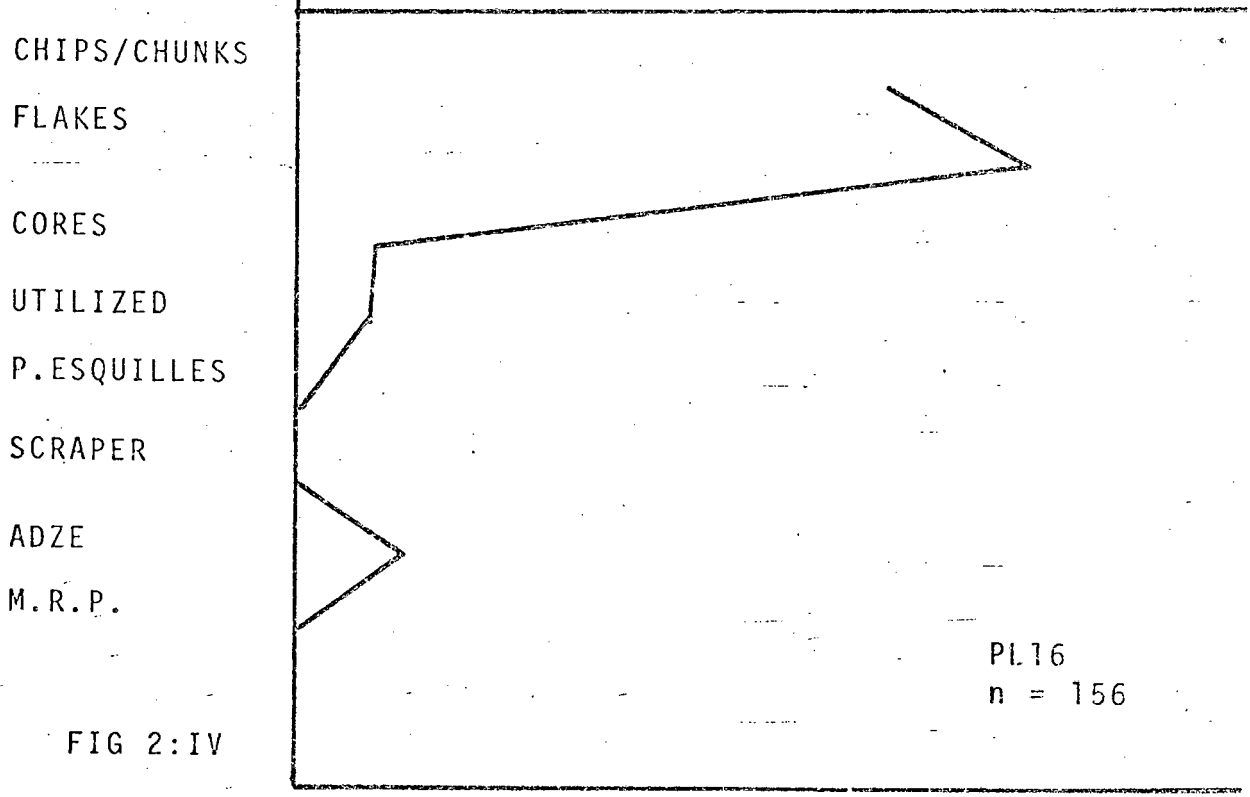


FIG 2: IV

PL16
n = 156

SAMPLE PL 18 (a) & (b)

Refer: TABLES 1:XIII, 1:XIV, 1:XV, 1:XVI, 1:XVII, 1:XVIII
Figures 1:IX, 1:X, 2:IX, 2V.

This is the largest shelter in the kloof and shows high frequencies of all types of archaeological remains and the steep rocky talus is littered with artefacts. It was decided to take two samples of the artefactual material at different places on the talus that would act as checks on each other, since the sampling situation is difficult and results are likely to be affected by the location of the sample grid. The samples designated 18(a) and 18(b) were made at the middle of the talus and some distance apart and both were the same size, i.e. 3 x 1 metres.

18(a). A total of 307 pieces was counted in the sample. (TABLE 1:XIII) Figure 2:IX shows that hornfels dominates both samples although to a lesser extent in PL 18(a), i.e. 62,7%. Quartz has a high representation, i.e. 21,8%. Silcrete, quartzite, CCS and phillite are represented by 2,6%, 4,6%, 6,8%, and 0,7% respectively and this representation is very similar to that of the same materials in PL 18(b). The chips, chunks, and flakes are dominated by hornfels, 63,8% and 50,3% and quartz, 26,2% and 19,8%. (Fig. 1:IX) The reversal of the situation found on other samples, of the frequencies of these two classes might be interpreted as being a factor of the natural activity on the talus. However, on examination of the assemblage profiles of the two samples (Fig. 2:V) we notice that the samples correspond in terms of the higher chips/chunks to flake frequencies. Although the difference between the two classes is in both samples very small, 5,8% in PL 18(a) and 0,9% in PL 18(b), this difference is usually quite marked and reversed in other samples, i.e. PL 46 - 21,3%, PL 26 - 4,7%, PL 60 - 6,3%, PL 16 - 11,5%, PL 8 - 12,9%, PL 5 - 5,4%, with the most noticeable differences being in samples PL 46, PL 16 and PL 8. While the assemblage profiles also show that core, adzes and MRP classes are more or less the same, differences do occur in the frequencies of utilised pieces, pièces esquillées and scrapers. The frequency difference of the last two classes mentioned are small and can possibly be understood in terms of

the sample situation, but a difference of 4,6% in the frequencies of utilised pieces of material must be explained in some other way, possibly different activities at different places on the talus. This does not necessarily mean that the activity took place where the sample was located, though this might be the case, but could also be interpreted in terms of runoff carrying material down the slope from activity areas scheduled at the edge of the shelter floor, i.e. where the floor is level. The 2 cores found are both made on hornfels, the 2 scrapers are made on quartz and silcrete, and 1 MRP is made on hornfels (Fig. 1:IX). The adzes comprise 75% hornfels, 8,3% silcrete and 16,7% CCS. All 3 pieces esquillees are in hornfels. Figure 1:X shows the percentage of artefact classes per raw material.

18(b). This sample produced 337 pieces of material, (TABLE 1:XVI) of which 76,6% or 258 pieces are in hornfels, (Fig. 2:IX) and 11,3% or 38 pieces are in quartz. The other material frequencies are: 1,8% silcrete, 3,6% quartzite, 6,2% CCS and 0,6% phillite. Chips and chunks are dominated by hornfels, 77,1%, with quartz following at 15,0% (Fig. 1:IX). Flakes are similarly dominated by hornfels, 76,0%, with quartz following at 8,7%. No silcrete chips were noticed. Four cores were present in the sample, all of the irregular variety and 1 each of hornfels, silcrete, quartz and CCS. The 18 utilised pieces comprise 83,3% or 15 on hornfels, 5,6% or 1 on quartz and 11,1% or 2 on CCS. No pieces esquillees or scrapers occur in the sample. Adzes are made on the same material as those in 18(a), i.e. 80% or 8 on hornfels, 10% or 1 on silcrete and 10% or 1 on CCS. The only MRP is, as in 18(a), on hornfels. Figure 1:X shows the percentage of artefact classes per raw material.

SAMPLE PL 46

Refer: TABLES 1:XIX, 1:XX, 1:XXI

Figures 1:XI, 1:XII, 2:VI, 2:IX.

The sample was made on an open artefact scatter on a gently sloping sward in front of and below 2 shelters. (Fig. B) The site is about 150 metres above the floor of the kloof. Runoff is likely to have been active at this site and modern domestic animals might have contributed to disturbance as well. A 4 x 1 metre sample was made and produced a total of 286 pieces of material. (TABLE 1:XIX) Hornfels forms 61,9% of the total and the percentage representation of quartz has increased to 27,3% of the total. (Fig. 2:IX) Silcrete quartzite and CCS represent 1,1%, 1,4% and 8,4% of the sample respectively. No phillite is present in the sample. Flakes form the dominant class, 53,1% and chips and chunks represent 31,3%. (Fig. 2:VI) The core frequency is high, 4,5%, and compares well with core frequencies from PL 26, 3,7%, and PL 16, 5,1%. This frequency is even more interesting when one sees that all 13 cores are made on quartz and that these cores include irregular as well as bladelet types. The frequencies of *pièces esquillees*, 2,4%, utilised pieces, 2,1%, scrapers, 2,4%, and adzes, 2,8% are remarkably similar, and in the case of *pièces esquillees* and scrapers are high when compared to the other samples, and this can clearly be seen by examining the assemblage profiles. It is interesting to note that this sample shows a marked difference in the frequencies of chips/chunks and flakes, i.e. 21,3%. (Flakes are dominant.) The 6 utilised pieces comprise 66,7% or 4 hornfels and 33,3% or 2 CCS pieces. The 7 *pièces esquillees* comprise 57,1% or 4 hornfels and 42,9% or 3 quartz pieces. The 7 scrapers comprise 28,6% or 2 hornfels, 28,6% or 2 quartz and 42,9% or 3 CCS pieces. The adzes comprise 50% or 4 hornfels, 12,5% or 1 silcrete and 37,5% or 3 CCS pieces. Both MRPs are on hornfels and comprise 0,7% of the total sample. Only 3 pieces of silcrete were present in the sample, of which 1 was on adze and the other 2 were both flakes. Figure 1:XIV shows the percentage artefact classes per raw material.

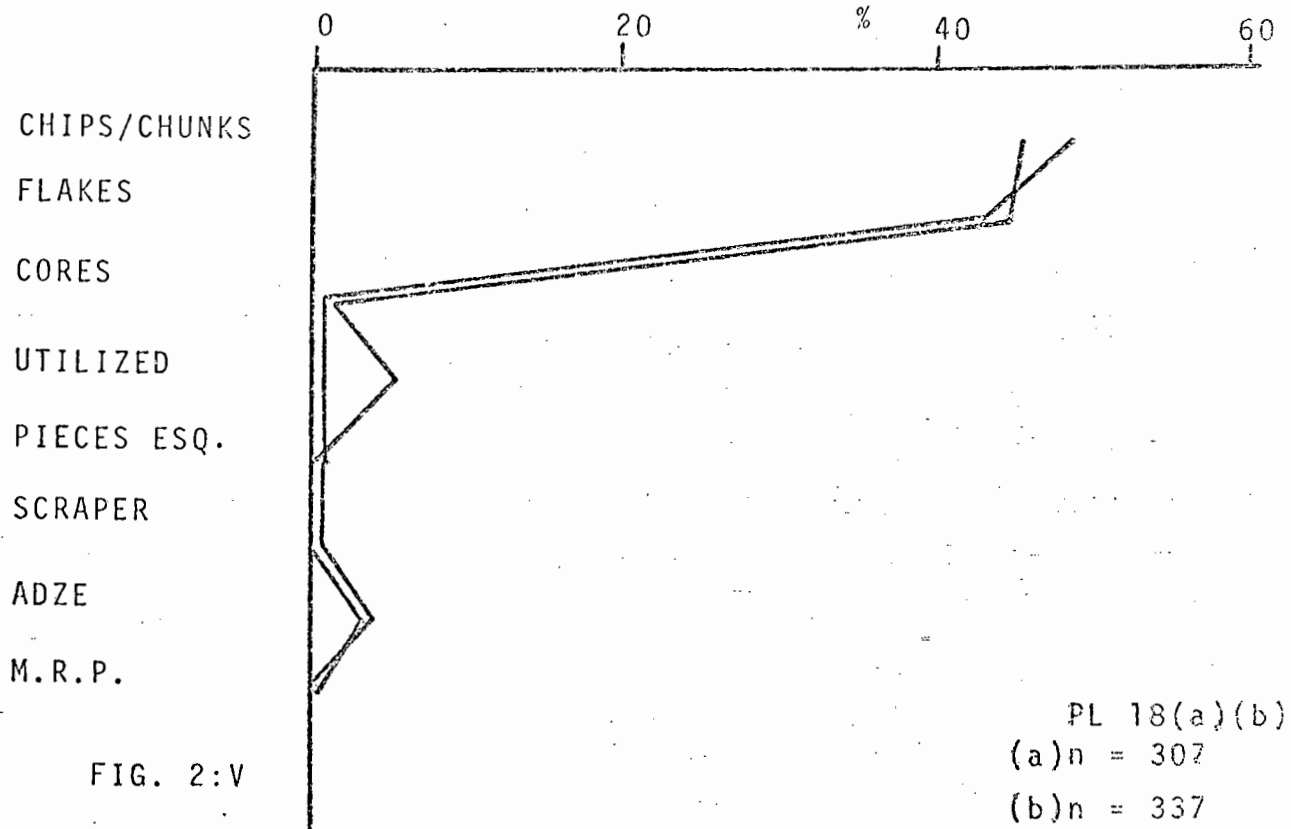


FIG. 2:V

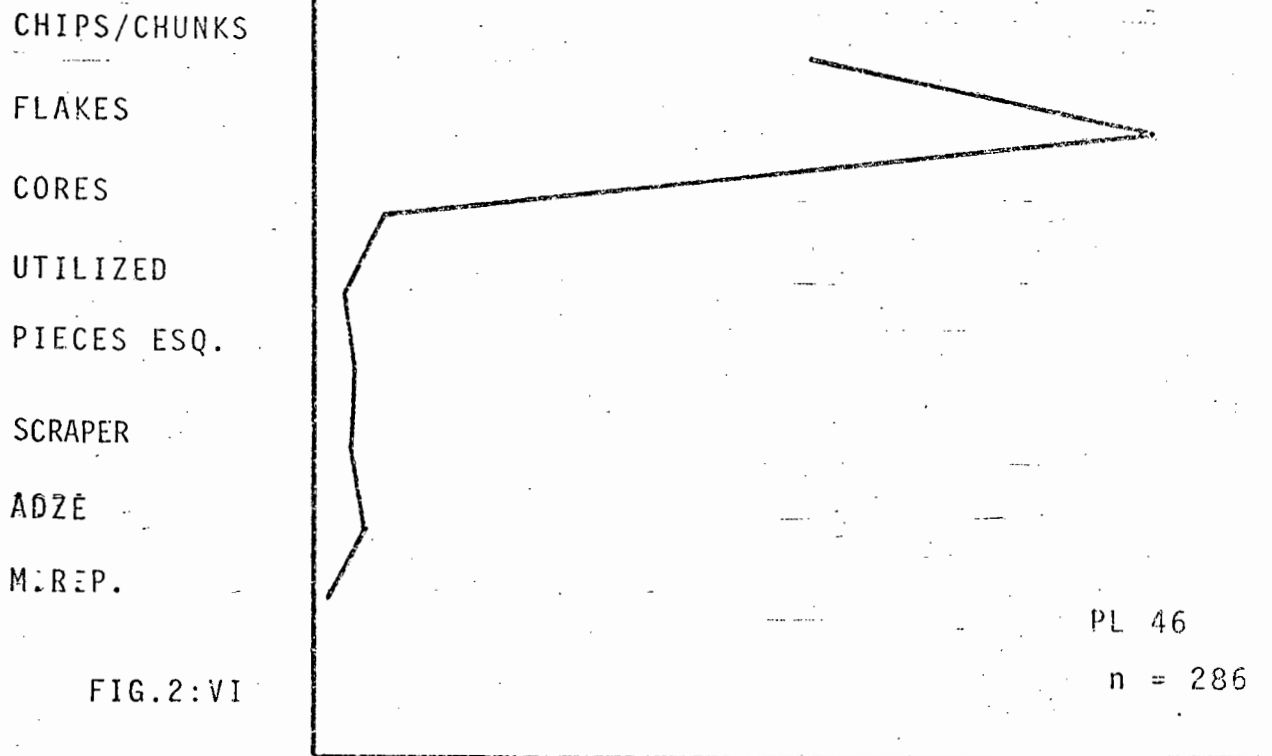


FIG. 2:VI

SAMPLE PL 26

Refer: TABLES 1:XXII, 1:XXIII, 1:XXIV

Figures 1:XIII, 1:XIV, 2:III, 2:IX.

The artefact scatter lies on a sloping sward in front of a very small shelter and is the densest concentration of artefacts in this area (see TABLE 2:II). Runoff and disturbance by animals have both been active on the sward. A 6 x 1 metre sample produced 518 pieces of material. (TABLE 1:XXII) Hornfels is the dominant material, 42,7%, but is considerably reduced and both quartz and CCS show increased frequencies in the sample, i.e. 41,5% and 9,7% respectively. (Fig. 2:IX) This is the lowest frequency of hornfels in any of the samples and on the other hand, the highest frequency of quartz. Silcrete and quartzite form only 3,7% and 2,5% of the total sample respectively. This is the only sample where hornfels has a less than 50% representation. No phillite is present in the sample. Flakes dominate the sample, 47,9%, and chips and chunks form 43,2% of the sample. (Fig. 2:VII) The core frequency is low at 3,7%. Adzes form 2,1% of the sample and is in fact represented by 11 pieces. Pieces esquillees and MRP'S both form 1,0% of the sample and utilised pieces and scrapers each form 0,6% of the sample. The raw material compositions in some cases show interesting deviations from what we have come to expect in other samples. Chips and chunks for example are dominated by quartz, 55,4%, with hornfels forming only 31,7%. (Fig. 1:XV) CCS, silcrete and quartzite comprise 9,4%- 2,2%, and 1,3% of this class respectively.

Flakes are dominated by hornfels, 53,2%, and quartz comprises 29,0% of this class. CCS makes up 10,5% and silcrete and quartz each form 3,6% of the class. The 19 cores are made up of 15,8% or 3 hornfels, 10,5% or 2 silcrete, 5,3% or 1 quartzite, 63,2% or 12 quartz and 5,3% or 1 CCS pieces. The cores include irregular types and quartz bladelet cores. The utilised pieces includes 2 hornfels and 1 CCS piece. The 5 pieces esquillees includes 1 hornfels, 1 silcrete and 3 quartz pieces. All 3 scrapers are on quartz. Ten of the adzes are on hornfels and 1 is on CCS. The 5 MRP's includes 2 hornfels, 2 silcrete and 1

quartz pieces. The assemblage profile shows that this sample is basically the same as others with peaks forming about the flake and adze classes. (Fig. 2:VII) Figure 1:XIV shows the percentage artefact classes per raw material.

SAMPLE PL 60

Refer: TABLES 1:XXV, 1:XXVI, 1:XXVII

Figures 1:XV, 1:XVI, 2:VIII, 2:IX.

The artefact scatter occurs on a large open sward in front of a small shelter. Since the sward hardly slopes, the only possible disturbance could have been produced by animals. The situation of the scatter probably makes this the most reliable sample where natural agents are not seen to have played a major role in altering artefact distributions on the surface. A 4 x 1 metre sample produced 462 pieces of material. (TABLE 1:XXV) Hornfels has increased slightly since PL 26 to 52,6% and quartz has decreased to 29,9%. CCS has increased in proportion, 12,3%, and this is the highest percentage frequency for this material in any sample. (Fig. 2:IX) Silcrete and quartz form only 1,5% and 3,7% of the sample respectively.

Flakes dominate the assemblage at 49,8% with chips and chunks following at 43,5%. (Fig. 2:VIII) The core frequency is low 0,9%, as are the frequencies of scrapers 0,9% and utilised pieces, 0,9%. Pièces esquillées form 0,2% and adzes 3,9% of the sample. The chips and chunks comprise 43,8% hornfels, 0,5% silcrete, 5,0% quartzite, 42,8% quartz and 8,0% CCS. Flakes comprise 60,4% hornfels, 2,6% silcrete, 3,0% quartzite, 21,3% quartz and 12,6% CCS. (Fig. 1:XV) Of the 4 cores found, 1 is on hornfels and 3 on quartz. The 4 utilised pieces include 2 hornfels and 2 CCS pieces and the 1 pieces esquillées is on hornfels. All 4 of the scrapers are on CCS and 12 adzes are hornfels and 6 are CCS. No phillite is present in the sample. It should be mentioned that 13 of the adzes present in the sample come from 1m² within the sample. This seems to suggest that the sample area picked up a feature not related to the general distribution of material. This must probably be seen as a specific discard area but unfortunately at this stage that is all that can be said about this feature. The siting of samples and methods involved will be discussed in more detail at a later stage. The assemblage profile for PL 50 shows a basic similarity to other assemblage profiles, i.e. with peaks forming around flakes and adzes. (Fig. 2:VIII) Figure 1:XVI shows the percentage artefact class per raw material.

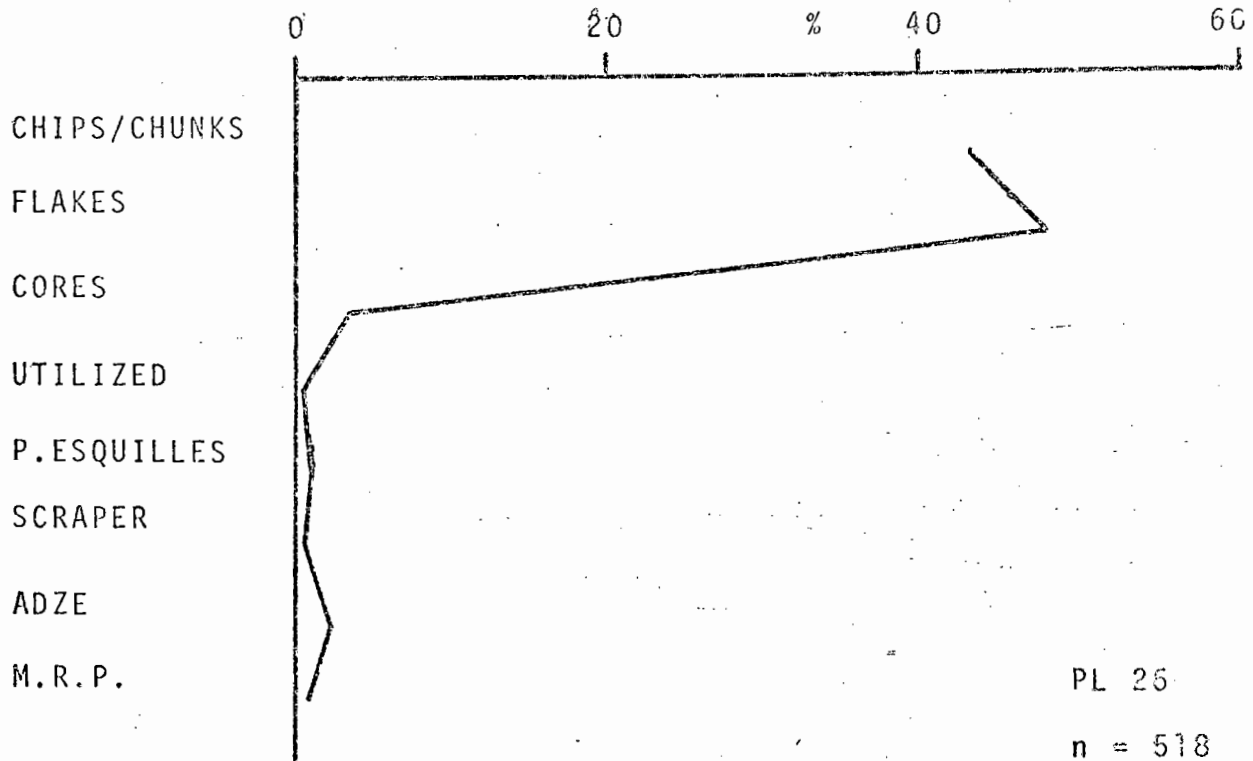
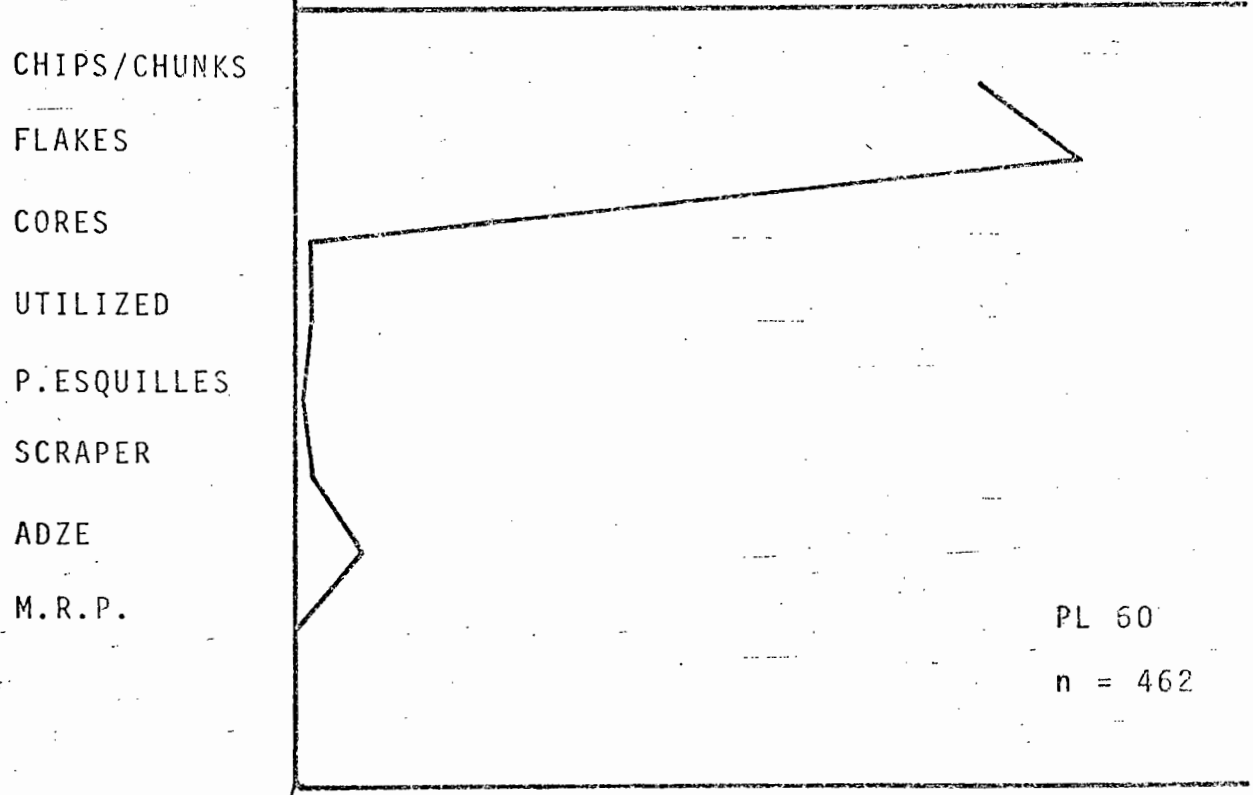


FIG 2:VII



PL 60
n = 462

B: OTHER LITHIC MATERIAL

Of the fifty-five sites located in the survey, eight showed artefact scatters which were considered dense enough to sample. A further thirteen sites showed scatters which were less dense on the surface and eighteen sites showed minor occurrences of lithic material, i.e. less than twenty pieces on average. Fourteen sites, which are defined in terms of the presence of rock paintings had no lithic material present but by virtue of their locations are considered to be associated with sites which do have artefactual material present. Though, as will be seen, the nature of the associated material varies. TABLE 2:I shows the nature of the lithic occurrence at sites and those which are only associated with other sites with material. TABLE 2:II shows the position of scatters or lithic material at the sites and the nature of the occurrence.

From TABLE 2:II we see that no sample was made inside a shelter. This does not imply that artefacts do not occur in suitable densities in shelters, but rather that the scatters in open situations appear dense in some cases because of certain factors, i.e. deflation and runoff, which usually are not active to the same extent inside shelters. This should be further qualified by stating that some shelters or overhangs have no artefacts in them since no deposit is present and the absence can clearly be seen. The presence of artefacts in shelters with deposits can usually be seen by examining the driplines, if they are available, and in some cases artefacts or archaeological material is present on the surface. TABLE 2:III shows the presence of deposit in shelters, estimated depths and the presence of artefacts in the driplines where this was noted.

At some of the sites, including those that were sampled, certain other types of artefacts occurred. These include grindstones, uppers - (single and multi-faceted types, types which show a small pecked depression in the grinding surface, single faced types and those which show use as hammerstones as well) and lowers. One grooved phillite fragment was found - the

groove appears not too deep or wide and is possibly decorative rather than functional. Hammerstones occur and while some pieces show only the characteristic crushing and pecking, others show the presence of at least one grinding surface suggesting that these pieces, for what ever reason, probably availability of raw material, were dual function artefacts. One fairly thick and squarish, rounded edged piece resembling a "pestle" was found. The piece is broken and shows damage at the end and striations on the body. This may be a reamer although the diameter is thicker than would be expected considering the average size of the holes in bored stones. One bi-facial point was found and shows shape and flaking similar to pieces found in Howieson's Poort assemblages. All of the grindstones and hammerstones are made on quartzite. The bi-facial point is made on silcrete, while the "reamer" is made of phillite. Of four bored stone fragments, three consist of shale and one consists of sandstone. The shale does not appear to be phillite and shows none of the small micaceous inclusions which are particular to that material. TABLE 2:IV lists the occurrence and quantity of these artefacts.

While the raw material for upper grindstones comes from the river gravels (this can clearly be seen by the shape and smoothing of the unworked surfaces - cortex), the quartzite used for the lower grindstones occurs in slabs and as such can be found locally, although the material is not quite as hard as that which comes from the river. No grinding surfaces were noticed on the local outcroppings of structural rock at any sites, and this is probably because of its usually friable and grainy nature. The implications of these occurrences will be discussed later.

	S I T E N U M B E R S																	TOTAL		
DENSE (Sampled)	1	5	8	16	18	26	46	60											8	
LESS DENSE	2a	19	20	21	28	29	31	38	41	44	49	55	61						13	
MINOR OCCURRENCE	4	6	7	12	14	15	30	32	33	35	37	42	47	50	51	52	53	56	18	
NO LITHIC MATERIAL*	9	10	11	13	17	34	36	39	40	43	45	54	58	59						14
NO MATERIAL OR ASSOCIATION	48																		1	
DATA N/A	57																		1	
																			55	

*Associated to Sites which do have material

TABLE 2:I NATURE OF THE LITHIC OCCURRENCE ON SITES IN THE PUTSLAAGTE.

	S I T E N U M B E R S															TOTAL																						
DENSE (Sampled)	1	5	8	16	18	26	46	60												8																		
LESS DENSE	2a	19	20	21	28	29	31	38	41	44	49	55	61								13																	
MINOR OCCURRENCE	4	6	7	12	14	15	30	32	33	35	37	42	47	50	51	52	53	56																				18
NO LITHIC MATERIAL*	9	10	11	13	17	34	36	39	40	43	45	54	58	59																				14				
NO MATERIAL OR ASSOCIATION	48																																				1	
DATA N/A	57																																				1	
																																					55	

*Associated to Sites which do have material

TABLE 2:1 NATURE OF THE LITHIC OCCURRENCE ON SITES IN THE PUTSLAAGTE.

1					D	
5						D
8	MO		D			
16	MO			D		
18	MO			D		
26			D			
46			D			
60	MO		D			
2a	MO			MO		
19	MO			MO		
20			S			
21			S			
28			S			
29	MO		S			
31	MO		S			
35				MO		
38	MO		S			
41	MO		S			
44	S					
49					S	
55			S			
61					S	
4	MO					
6	MO					
7	MO					
12	MO		MO		MO	
14	MO					
15	MO					
30	MO					
32	MO				MO	
33	MO		MO			
37	MO					
42	MO		MO			
47					MO	
50	MO		MO			
51	MO					
52			MO		MO	
53	MO		MO			
56					MO	

SYMBOLS: D - DENSE S - LESS DENSE MO - MINOR OCCURRENCE

TABLE 2:II POSITION OF OCCURRENCE AND NATURE OF SCATTERS

SITE	DEPOSIT		ESTIMATED DEPTH	ARTEFACTS IN DRIPLINE
	SHALLOW	DEEP		
8	X		10 cm+	X
12		X?	0,5 m +	N/A
16	X		20 cm-	X
18		X	0,5 m +	X
19*	X		5 cm+	X
28	X		5 cm+	N/A
30	X		10 cm+	N/A
31	X		5 cm+	X
35	X?		10 cm+	N/A
38		X	40 cm+	X
41	X		25 cm+	X
56	X		5 cm+	N/A
60	X		10 cm+	N/A

* disturbance N/A: data not available

TABLE 2:III ESTIMATED NATURE AND DEPTH OF DEPOSIT IN
SITES AND THE PRESENCE OF ARTEFACTS IN THE DRIPLINE.

SITE NO	GRINDSTONE				BORED STONE(fragments	REAMER	GROOVED PIECE	BIFACIAL POINT	HAMMERSTONE(only)	IN SHELTER	AREA OUTSIDE SHELTER	ON OPEN SCATTER
	single face	upper		lower								
	pecked	multi-faceted	Gs/hammerstone	single depression								
1	3											X
5		1				1	1					X
8	1			2						X		
12	1										X	
15		1								X		
16			1								X	
18	5		1	2	1			1		X		
19			1								X	
20	1										X	
21*	1				3							X
29	4								1		X	
41	1			1						X	X	
42			1								X	
46					1	1			1			X
49	1								1			
50	3	1		1						X		
51				3						X		
52				1							X	

* in proximity to PL 21

TABLE 2:IV OCCURRENCE AND QUANTITY OF SPECIFIC ARTEFACT TYPES IN THE PUTSLAAGTE

POTTERY

Pottery of various types occurs in different frequencies at seventeen of the fifty five sites located in the survey. TABLE 2:V lists the occurrences and the types which occur. It should be noted that this table was assembled from data which was not as complete at some sites as it was at others various reasons. This includes pottery which occurred at sites which were sampled as well as in other areas and since no rigid sampling technique was employed no total counts can be presented. The types presented in the table certainly present a fair representation of the variation in the ceramic material, i.e. various tempers, finished, thickness, etc. Rim sherds are usually rounded and in some cases thickened and everted. The three decorated sherds all come from the neck area and one sherd shows decoration on the area below a thickened everted rim. In all cases the necks appear to be straight or slightly curved. The decoration is the same on all three sherds, i.e. a series of horizontal incised lines. One base nipple was found suggesting that bases on some pots were rounded or conical and required stabilisation. Certain of the base sherds are round and slightly thicker than the sections which adjoin the body. No conical bases were noticed but it should be mentioned that generally sherds are less than 5 cm² and frequently very fragmented. One perforated lug was found. It has been produced by moulding a lump of clay to the body prior to perforating it. (see photograph)

Certain of the sherds have quartzite chips included as a temper while other sherds are rather gritty with the temper being smaller and reminding one of temper found in pottery at coastal middens. (Rudner 1968) No plant material has been used as a temper in any of the sherds which were examined. Burnishing appears to have been done when the pottery was still damp and ochre has been applied during the burnishing process in some cases. The colour of the sherds varies from black through to a very bright orange colour.

SITE	UNDECORATED						DECORATED					BURNISH			TEMPRE		THICKNESS		
	RIM	NECK	BODY	BASE	LUG	BASE NIPPLE NOT IDENTIFIABLE	RIM	NECK	BODY	BASE	NOT IDENTIFIABLE	BURNISHED	RED/OCHRE	BURNISH UNBURNISHED	COARSE	FINE	THICK	MEDIUM	THIN
2a						X						X	X	X			X	X	
8						X													
12							X					X			X				X
16						X								X	X			X°	
18		X				X						X	X	X		X			
19						X						X	X		X	X			
26						X						X			X				
28		X												X	X	X		X	
29		X																	
38		X				X													
41						X						X	X	X	X	X			
43		X	X	X		X	X					X	X	X	X	X		X	X
46					X	X								X	X				
49		X				X						X	X						
52		X										X							
55	X					X								X	X				X
60	X			X		X	X-X					X			X		X	X	X

TABLE 2:V OCCURRENCE OF POTTERY ON SITES IN THE PUTSLAAGTE

MARINE SHELL

Marine shell is found at two sites in the kloof, i.e. PL 41 and PL 18 but the frequency is extremely low, i.e. one fragment at PL 41 and two fragments at PL 18.

The piece at PL 41 is Choromytilis meridionalis (black mussel) and occurs at many places along the west coast of southern Africa. (Day 1969:144)

One fragment of Donax serra (white mussel) is present at PL 18 and this type is also common on sandy beaches along the west and east coasts of southern Africa. (Day ibid)

The other shell here is an almost whole specimen of Glycimeris queketti, broken at the anterior margin of the hinge. Although this mussel is not presumed to have been used to any degree for its meat fraction, which would be very small, this type of shell is frequently used for pendants. Its use as such is documented at Die Kelders (Schweitzer 1979: 145, 148) where a high frequency were also ochre stained. This shell is often found washed up after storms at sea and frequently has a natural perforation at the anterior margin of the hinge.

Experiments conducted by the author have shown that it is easy to punch out a section at the hinge leaving a hole which facilitates stringing. A hole may also be produced by grinding the hinge away on some abrasive surface and while this may take a little longer, one has a higher success rate as the punch technique must be precise or the whole ventral margin shatters. The specimen at PL 18, though broken shows the remains of a regular, circular hole suggesting that after grinding or punching the hole was further enlarged, intentionally or due to abrasion while being worn.

Both black and white mussel shells are found in middens at coastal sites or at sites close to the coast. White mussel shells are found frequently to have a hole on the dorsal or ventral valve surface, about the size of the tip of a thumb, and frequently also show trimming around the margin opposite the hinge. (Schweitzer 1979:154) The use of these shells

is not known. The presence of *Chorymitilis* 'crescents' is also noted at Die Kelders. (ibid 155) Again these are enigmatic and as Schweitzer notes "they remain a somewhat dubious entity". Nevertheless,* either for natural lustre, i.e. Turbo or Haliotis, or the way in which the form of the shell provides for easy perforation. The shell should also presumably be of a durable nature. While both *Donax* and *Chorymitilis* share some of these attributes, i.e. they could be perforated, or worked to a 'usable' size they do not seem to have been used to the same degree for decorative purposes as have other species of shells.

This leads one to question their presence at inland sites such as Boomplaas in the eastern Cape (*Donax*) and at De Hangen (*Chorymitilis*) and the Putslaagte (*Donax* and *Chorymitilis*). (Deacon et al 1978; Parkington and Poggenpoel 1971 (a)) Parkington (1971 (a):26) suggests that shells (*Chorymitilis*?) may have been used as spoons or scoops. However, in a report dated 1695 A.D. on the Hottentots of the Cape, Grevensbroek (Schapera 1933:253) mentions that they used their fingers and sea-shells for smoothing the insides and outsides of their pots. Clearly, both *Donax*, and to a lesser degree *Chorymitilis*, would work well as burnishers on pottery and it is suggested that this, together with the possibility that *Donax* was used for decorating pots (Wilson and Halkett 1980: 43) may account for their presence at inland sites. They may also have been used to hold pigments when painting was carried out. More specimens will be needed to examine the frequency of ochre staining on these shells.

*(Nevertheless, it seems clear that certain types of shells are more sought after for decorative purposes.....)

TABLE 2:VI lists the presence of these materials at sites in the Putslaagte. Other than presenting this table, there is not much to be said about these materials. It is widely accepted that OES in their whole state could be perforated and used as water containers and probably the contents would be consumed too. A fragment of OES from PL 18 shows a series of fine, parallel striations running across it and suggest that at some stage this might have formed part of a decorated water container. No fragments showing traces of perforation were found. No beads were seen at any of the sites.

Bone is usually found at sites where there are high frequencies of artefacts (see TABLE 2:VI) and at this stage one can only comment on its presence as no identification or samples of this material were undertaken. One would probably not be wrong to infer these being the remains of hunted or scavenged animals and indicating a meat portion of the diet. The bone in the open situation is extremely fragmentary and certainly better samples will be provided if excavations, of for instance PL 18 or 41, are undertaken. (We realize that bone may also have other uses but no worked pieces were observed on the surfaces of any of the sites.)

NOTE: The information presented in the table should be considered incomplete since the presence of this material was not always noted.

SITE NUMBER	OES	BONE
5	X	X
8	X	
12	X	N/A
16	X*	X
18	X	X
26	X	X
28	X	
29	X	X
31	X	
38	X	X
41	X	X
43	X	X
46	X	X
60	N/A	X

*Burnt fragments included

TABLE 2:VI PRESENCE OF BONE AND OSTRICH EGGSHELL
AT SITES IN THE PUTSLAAGTE

BEDDING

Two shelters show traces of vegetable material which has been tentatively classified as "bedding". At sites PL 41 and PL 18, patches of this material were noticed occurring along portions of the back walls of the shelters. Only a preliminary examination of the material has been conducted with the help of Peter Linder of the Bolus Herbarium, UCT.

The significance of this material lies in that similar material has been noticed at other sites, e.g. De Hangen (Parkington & Poggenpoel, 1971) and at Andriesgrond (Parkington pers comm).

A closer examination is needed before more can be said about this material.

next at 31,6%. Hornfels and silcrete both represent 10,5% of this class. Adzes are predominantly on hornfels, 76,2%, and followed by CCS at 19,0%. Silcrete adzes represent 4,8% of this class. MRP's are predominantly on hornfels, 66,7%, with silcrete, quartz and CCS representing 16,7%, 8,3% and 8,3% respectively. Overall these results show a tendency for formal tools to be made on fine-grained materials. It also shows that there is a conscious selection of materials other than hornfels for production of scrapers, i.e. CCS and quartz.

Figure 2:XII shows raw material frequency in the total sample. Hornfels is the dominant material, 61,1%, with quartz next important at 20,9% and silcrete, quartzite and CCS forming 2,1%, 8,8% and 7,1% respectively. (This excludes phillite which has an almost negligible percentage occurrence.)

	PL5		PL8		PL16		PL18(a)		PL18(b)		PL46		PL26		PL60	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
UTILIZED	13	61,9	5	29,4	7	70,0	2	10,0	18	60,0	6	20,0	3	11,1	4	14,8
PIECES ESQUILLEES			1	5,9	1	10,0	3	15,0			7	23,3	5	18,5	1	3,7
SCRAPER			2	11,8			2	10,0			7	23,3	3	11,1	4	14,8
ADZE	6	28,6	8	47,1	10	20,0	12	60,0	10	33,3	8	26,7	11	40,7	18	66,7
M.R.P.	1	4,8	1	5,9			1	5,0	2	6,7	2	6,7	5	18,5		
REAMER	1	4,8														
TOTAL	21	100	17	100	18	100	20	100	30	100	30	100	27	100	27	100

TABLE 2:VII FREQUENCIES AND PERCENTAGE OCCURRENCE OF UTILISED AND FORMAL PIECES PER SAMPLE

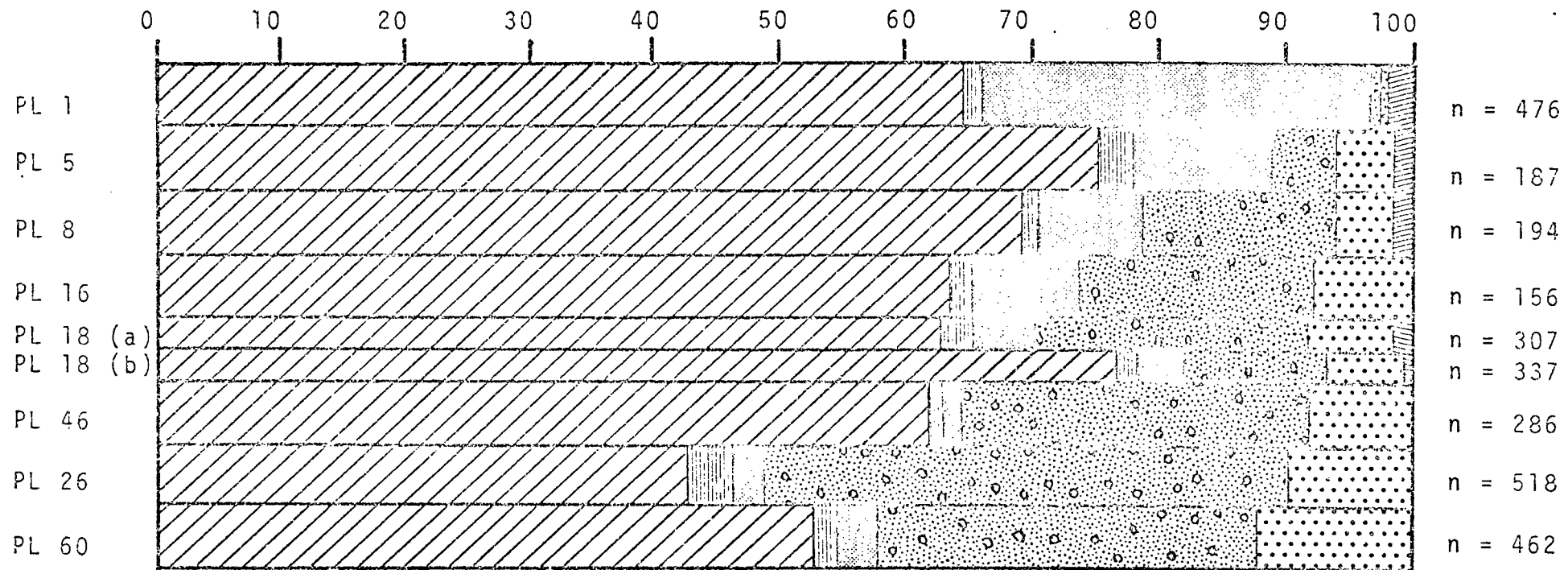


FIG 2 : IX PERCENTAGE TOTAL RAW MATERIAL PER SITE

with other samples, although some large hornfels flakes are also present. This might also have to do with the abundance of this material in the river but compared to PL 5 does not suggest this to be true. The core types are not reminiscent of those commonly found in typical L.S.A. assemblages and are also believed to represent an earlier period of different technology.

This site would in all likelihood be used by the later groups as well since the raw material and water at the river must have been important. While no formal artefacts were found here, this is not surprising since no good shelter is available in this area, and, even if it was, perhaps this area would not be scheduled for occupation, since the river at this point is likely to attract wild animals, and any groups occupying the immediate vicinity would tend to cause animals to drink away from the area. The higher frequency of chips and chunks and the lower frequency of flakes is probably explainable if one considers that these classes include high frequencies of hornfels and much lower almost negligible frequencies of CCS and silcrete. Hornfels occurs in large chunks in the gravels which probably were rendered into smaller pieces at PL I, or in the vicinity, to facilitate carrying to other sites up the kloof. Thus chips and chunks would be produced in abundance during the reduction process, and whatever usable flakes were produced were carried away to be used. The low frequency, irregular core type, characteristic of the other sites, or of the core technology there, is not present at PL I suggesting that deliberate flake production was not done at the site during the earlier periods, but rather that pieces were carried away to be used later. CCS and silcrete pieces are much rarer in the gravels but when they do occur, they are smaller in size than hornfels or quartzite and are easily carried without needing to be reduced for transportation. Furthermore, we see that the CCS representation occurs in greater frequencies at sites further away from the river suggesting that this material is carried until other material runs out at which time its nature allows it to be used for most formal artefacts. (This will however need testing in other similar situations.) This situation for PL I would then fit its artefact pattern, i.e. as a raw material procurement and

primary modification site, but the situation is somewhat complicated by the occurrence of another dense artefact scatter with an assemblage profile suggesting the same range of activities noticed at other sites higher up the kloof. i.e. PL 5.

No Levallois element occurs here and the core frequency and morphology are quite distinct from those at PL I. A reversal of the chip/chunk to flake relation occurs with flakes forming the higher amount of these classes. The site obviously does not serve the same purpose as PL I. The choice of location shows no affinity for a shelter or any particular geological feature. Bone and ostrich eggshell fragments are present but no pottery was noticed. The presence of pottery was noted at every other site which was sampled except PL I, but this is perhaps to be expected here when its function is considered. PL 5 shows greatest affinities to PL 16 since both show high frequencies of utilized pieces, 61,9% and 70,0% respectively, and the presence of adzes in approximately the same frequencies, 28,6% and 20,0% respectively. But this does not help in clarifying site function. The absence of pottery here could well suggest that the site was not used after pottery made its appearance in the kloof and since those sampled sites with pottery don't show startling assemblage differences, we assume that the pottery did not accompany a change in basic culture or at least not as far as we can see from the artefactual material. The implication, it would seem then, has to do with the possible use of pottery at a later stage in the kloof's history as storage vessels for water which permitted utilising sites further away from permanent water sources with the knowledge that the need for collecting water would be minimised if it could be stored in reasonable quantities. Of course, this argument has many flaws. Leather water containers could have been used to the same end, as could ostrich eggshells, but in the latter case less water could be stored. If we assume that leather water bags were not available in the pre-pottery period, then certainly it would be preferable to set up a residential camp close to a water source. Of course here too we need data from other situations. For example, if we can test whether the frequency of pots/ceramics increases, the further a site

is from water, this may supply some interesting results. This is not intended to suggest that pots were only used for this purpose. It is almost certain that pots were also used in the preparation of food and perhaps for storage of other types of resources.

One of the two reamers found during the survey appeared in this sample, i.e. PL 5. Reamers are suggested to be boring implements used during the perforation of cobbles for use as digging stick weights. (Deacon, J. 1981: 26) The process of boring is likely to take some time and would in all likelihood take place within the confines of a residential or base camp situation. The reamer at PL 5 as well as the one at PL 46 is made of phillite and reamers of the same material, although termed Bokkeveld quartzite, are found at Klipfonteinrand (see fig. A) (Thackeray. 1977:47). Deacon (1981: 26) suggests that preferred materials for reamers are quartzite and hornfels, but clearly these latter two materials, though they are abundant in the river gravels of the Doring, are not selected for use in this area. (Klipfonteinrand & Putslaagte) It has been suggested to the author (J.C. Lanham pers. comm.) that a softer material would provide a better boring tool in the case of quartzite bored stones, since clearly it would not polish in the same way during use as would the same tool made from quartzite or hornfels. It therefore would not lose its abrasiveness, since rather than polishing, as does a hard material, the surface actually crumbles during use and constantly supplies a "fresh" grinding surface as well as adding a grit to the process. Lanham also suggests that the use of phillite would reach its maximum efficiency if water was used during the process to flush the grinding and ground surfaces, so preventing both surfaces from being clogged by the ground material which reduces the effectiveness of the process. One would then presume the opposite to apply if a softer material was used for the eventual bored stone. Although replication tests have not, to the author's knowledge, been conducted on bored stones, or reamers, and we accept that perhaps water is an "essential" agent in the process where hard materials are used for the weight, then we can perhaps expect the process to take place near to a source

of water. Although the frequency of reamers is low in the kloof, one is found at a site close to the river, about 150 metres, and while the actual process may not have taken place at this exact spot (probably down at the river itself) the tool may have been carried back to the site after use and eventually broke and was discarded.

The question will now be asked - why the reamer at PL 46? Some doubt was expressed earlier about the form of this artefact. Certainly it is made from phillite and shows striations on the "body" and has a damaged end, but the size and slightly rectangular shape, suggest its being much too large for boring (considering the average hole size of the bored stones). As such this may represent an artefact for another purpose. If it is a reamer, its presence could be explained by saying that it was intended that it be used again but was discarded for some reason.

The presence of reamers in high quantities at Klipfonteinrand 2, about 20 (Parkington Pers. comm.) and the three found in the excavation (Thackeray 1977) suggests that this site was important for production of reamers and possibly the bored stones which they were used to make. Anyone familiar with the location knows that the site is some distance from the Doring River. But, while this fact is not mentioned by Thackeray, the author has heard that a permanent spring occurred (it is no longer providing water) in the proximity of this site and as such this would hold important for the very location of this site and may well reinforce the possibility that water is an important part of bored stone production.

We notice from fig. 2:IX that phillite occurs in only four samples, i.e. PL 1, PL 5, PL 8 and PL 18 (a)(b), sites all within easy reach of the river. We see from table 2:IV that five broken bored stones were noticed in the kloof. One fragment at PL 46, one fragment at PL 18, and three in proximity to PL 21/26. Of these 1 is quartzite, 1 is a friable sandstone and three are shale (not indurated). The fact that they are broken suggests that they were discarded but they appear to have broken at residential or home base sites. (Distribution of

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these stones is often plagued by the fact that they are often picked up by farmers or others for use as doorstops etc.)

The absence of certain formal tools in some samples must be explained in terms of sampling problems. For example, PL 5, 16, 18(b). All these samples were made on rocky swards or on talus slopes and can only serve to warn against samples from similar situations. The reliability of such samples can perhaps not always be guaranteed. Much larger samples might have picked up other types of material. It was realised while examining the results of the samples, that if the micro-scale of examination is to be of use, we will have to sample all the material at sites to really get a true picture of the situation. We will also have to sample those occurrences which would not be important at the macro-scale level (less dense and minor occurrences). These samples would show possibly the assemblage that we could expect at "single visit", specific purpose sites. For example, a hunting stand, or a site used during foraging for plant foods etc. There would seem to be no other way to make these distinctions otherwise.

The only information available for these types of sites, from the 1981 survey are rough notes based on visual sighting of materials and is not accurate enough to facilitate comparison. This mistake was realised too late to rectify the situation, but certainly will be done at some future date. Only by sampling whole scatters can we hope to eliminate the problem of spatial distribution of artefacts on the surfaces of sites.

The presence of grindstones at some sites needs explanation and interpretation. Grindstones are made exclusively on quartzite cobbles (uppers) and slabs (lowers) and while there is some variability in the form of the upper grindstones (Table 2:IV) the lowers usually have a single depression or hollow on the grinding surface. The average size of these lower grindstones is approximately 30 x 30 cm and the thickness is variable but usually fairly thin. As has been noted, quartzite slabs can be found in the proximity of some sites, and it was also mentioned that no grinding surfaces were noticed on the basal rock at any of the sites. Lower grindstones are not seen as

items which will be carried around on camp moves since these items are fairly heavy. Their presence at some sites then may be regarded as items of "site furniture" (Binford L.R. pers. comm.) - those items found at sites which are likely to remain there for use at other times, but not carried away when a residential move takes place. These items may be left in the site itself or cached away for later use. Table 2:IV shows the distribution of lower grindstones - 5 lower grindstones occur in shelters with deposit, 1 occurs inside a small walled-up shelter, and 4 occur in shelters which are not believed to have been scheduled for extended occupation or residential use. Surprisingly, the highest frequency at any one site (3) occurs at PL 51. As seen from the site description, this site shows very few traces of occupation, apart from some Levallois material.

The occurrence of grindstones in "non-residential" sites, i.e. PL 50, 51, suggests perhaps a cache strategy, i.e. PL 51 is in proximity to PL 46 and PL 50 is in proximity to PL 41 (and walled-up) etc. although the situation at PL 51 is a little more difficult to understand (see description PART I). The access is steep and not that easy to reach from PL 46 etc. As mentioned in the site description, a small hollow at the base of the back wall of the cave has had rocks piled into it. It was not clear what lay behind these rocks, but it is certain that this is a result of human action. It may represent a similar cache situation to that at PL 50. The occurrence of 1 lower grindstone at PL 52 cannot be explained in these terms. Table 2:II shows that a minor artefact scatter occurs here and the presence of a grindstone may then reflect its use as an occupation site but not occupation of extended length or frequency.

The occurrence of upper grindstones varies (Table 2:IV) but this situation could be expected if one considers the transportability of these artefacts as far as weight is concerned. Cobbles of quartzite must be collected at the river and possibly even partly prepared there, i.e. using water as a part of the original shaping/grinding process. Hence the presence of upper grindstones at PL 1. In 10 cases, the presence of upper grindstones is related to dense artefact scatters or deposit (Table 2:II

Table 2:III) and in other cases they occur at sites with minor artefact occurrences which are closely associated to dense artefact scatters. Therefore, it would seem that grindstones are associated with sites which show periods of occupation in most cases.

The very presence of grindstones suggests that preparation of certain types of food did take place or certain types required preparation of this nature to render them edible. Johan Nieuhof (in Raven-Hart 1971 1:13) writing about his visit to the Cape in 1654 notes: "A certain little root grows in the earth which the Hottentots roast in winter and use it in place of bread. Some grind these roots to meal. The taste is like earth-nuts (aart-ekelen) or chestnuts, although others taste like aniseed, and sweetish." Now this refers to his observation at the Cape itself; but it does show that this method of preparing a type of plant food was used. Similar roots or tubers could possibly occur in the area of the kloof.

While on the subject of food preparation (specifically: plant foods), we must consider the "technology" involved. Preparation of plant food without the use of items which facilitate boiling, i.e. pots, must be conducted by roasting, either directly in a fire or with the use of fire heated rocks. Roasting in a fire is likely to be a little more wasteful as a portion of the corms or tuber will be charred and hence probably not eaten. Cooking with the use of fire heated rocks usually occurs at places where suitable rock is available for this purpose. As we have seen, cobbles of a suitable nature can only be found at the river and the presence of whole cobbles is not marked at sites higher up the kloof. Roasting could of course also be accomplished by burying the corm in the hot sand beneath a fire, but we will not see this in the archaeological record. Therefore we could in fact see a technological difference present in the artefactual material, i.e. grindstones perhaps used for preparation of food before ceramic vessels were available for boiling and less wasteful preparation. Of course this would need testing and we realise that the possibility exists that certain plant foods because of their nature or intended use would always require this treatment. What plants

would require such treatment is not clear at this stage since the botanical survey completed in the kloof by Peter Linder (Bolus Herbarium) is still being examined by him. (These results will hopefully be available at a later stage.) It is important to note that below ground resources are most abundant and usable during spring, i.e. September/October.

LOCATION OF SITES AND IMPLICATIONS

While we realise that dense artefact concentrations probably represent home-base or frequently visited sites, the implication is that these sites are located where they are for specific reasons. Possible reasons could be: exclusively because attractive living situations are presented (i.e. "shelters") or because these sites are in proximity to specific resources. Seasonal and social factors may also form part of the reason for the choice of particular sites.

It is not really possible to examine what aspect would be favoured for a site if it was to be used as a home base. This is for the simple reason that the position of shelters in the kloof and hence their aspects are governed by the basic geology and orientation of the kloof. One also needs negative data i.e. what shelters are not used before any definitive statements about specific location or site choice is made. Table 2:VIII shows the aspects of sites having artefacts present in them, and those having no artefacts i.e. rock art only. One should consult fig. B in conjunction with this table to assess the effect of the basic kloof orientation at points where the sites occur. On consideration of this data we can see that the greatest frequencies of sites occur in north-east and south-west facing shelters. All this serves to show is that general site location is related to the basic north-west/south-east orientation of the kloof. There seems to be no correlation therefore between choice of site and orientation. While this is in some ways a negative correlation, this seeming random aspect choice could indicate that prevailing seasonal weather conditions were not important during the times when the kloof was inhabited. Various factors already mentioned i.e. general

ASPECT*	S I T E N U M B E R S																	TOTAL
N	41	30	31	20	21													5
NE	7	8	11	12	13	49	16	17	18	47	33	35	43	44	45	52	19	17
NW	48																	1
S	4	32	56	58	59	60												6
SW	9	10	14	15	34	51	55	38	39	40								10
SE	2(a)	42	57	53														4
W	54																	1
E	6	29	37	36	28													5
NW - NE	1																	1
N - NE	5																	1
NW - SE	46																	1
NW - E	26																	1

*Magnetic bearing

TABLE 2:VIII SITE ASPECT

climatic conditions in summer or at least early or late summer, and availability of below ground plant resources, could indicate that the kloof was used during early summer and possibly after this time. Although the winter climate is mild during the day, nights are cold and the occasional violent rain and windstorms would require shelter, but certainly not in shelters which would receive these adverse conditions. Certain sites are not seen as being affected by the climatic conditions since the use of these is apparently minimal and time of use can be chosen according to prevailing conditions (i.e. rock art sites). It would seem then that sites may be chosen because of their prominent nature rather than having any particular or specific purpose. The variation in size of shelter at some sampled sites suggests maybe that not all were used by the same size groups, e.g. PL 8, 16 versus PL 18, 38 (no sample here but does show depotis). Larger groups would perhaps use larger shelters as foci, and vice versa. This might explain the proximity of large and small shelters, fairly close to one another showing traces of residential debris, i.e. PL 8, 16, 18. These were probably occupied at different times, since clearly it cannot be expected that all 3 sites, if inhabited by large groups at the same time, would occur in such close proximity, since the food resource base was probably not substantial enough to carry too great a "predatory" load. The location of some sites at higher altitude is not seen as having any great significance i.e. PL 38, 46 etc.

It is not possible from the available evidence to see the significance of hunting apart from the presence of bone on some sites. This way of course will not always be related directly to hunting. Hunting stands/observation points are not expected to show much distinctive material on the surface and the location of butchering sites are likely to be in the veld and thus not easily seen during a survey of this nature.

RAW MATERIAL OCCURRENCE AT SAMPLED SITES AND THE IMPLICATIONS

Most of the raw material used for stone artefact manufacture in the kloof comes from the gravels of the Doring river and is easily accessible to all sites in the kloof. The only materials which are not likely to have their sources in the gravels are quartz (though it is present should the need be felt to get it from this source), and the quartzite slabs used for lower grindstones which are both locally available with quartz being the most abundant.

Indurated shale/hornfels is available in large quantities in the gravels and though the size of the pieces varies, it is expected that larger pieces were selected and then reduced for transportation since this material is fairly brittle and the success rate in producing usable blades is on average low, with many smaller chips and various size chunks being by-products of the process. The material probably derives from the Witteberg series, occurring some distance to the south-west of the site, and is carried down the Doorn River during periods of flooding to form exotic occurrences along the whole course of the Doring River. (Fig. E) Quartzite cobbles also occur in high frequencies in the gravels, and while the nature of the materials varies from a very hard, crystalline type to a softer, less crystalline type, it is expected that they both have the same source, i.e. in the Table Mountain series. The shape of the materials, i.e. rounded and smoothed, is a factor of aggradation caused by transporation as part of the load of the Doring Rivier. In the conglomerates of the Table Mountain series are also found small numbers of highly variable fine-grained materials, but these are not believed to form an important source of these materials as far as the gravels go. Rather, the fire-grained, crypto-crystalline silicate materials, e.g. cherts, jaspers and chalcedonic rocks are expected to derive in greater numbers from the Dwyka tillites which also lie to the south-west of the area. These materials are rare in the gravels (at present) and the frequencies of the material in samples suggest that this was always the case. The nature of the occurrence is usually in small nodules which by virtue of their size and weight would be easily transportable. The relatively standardised

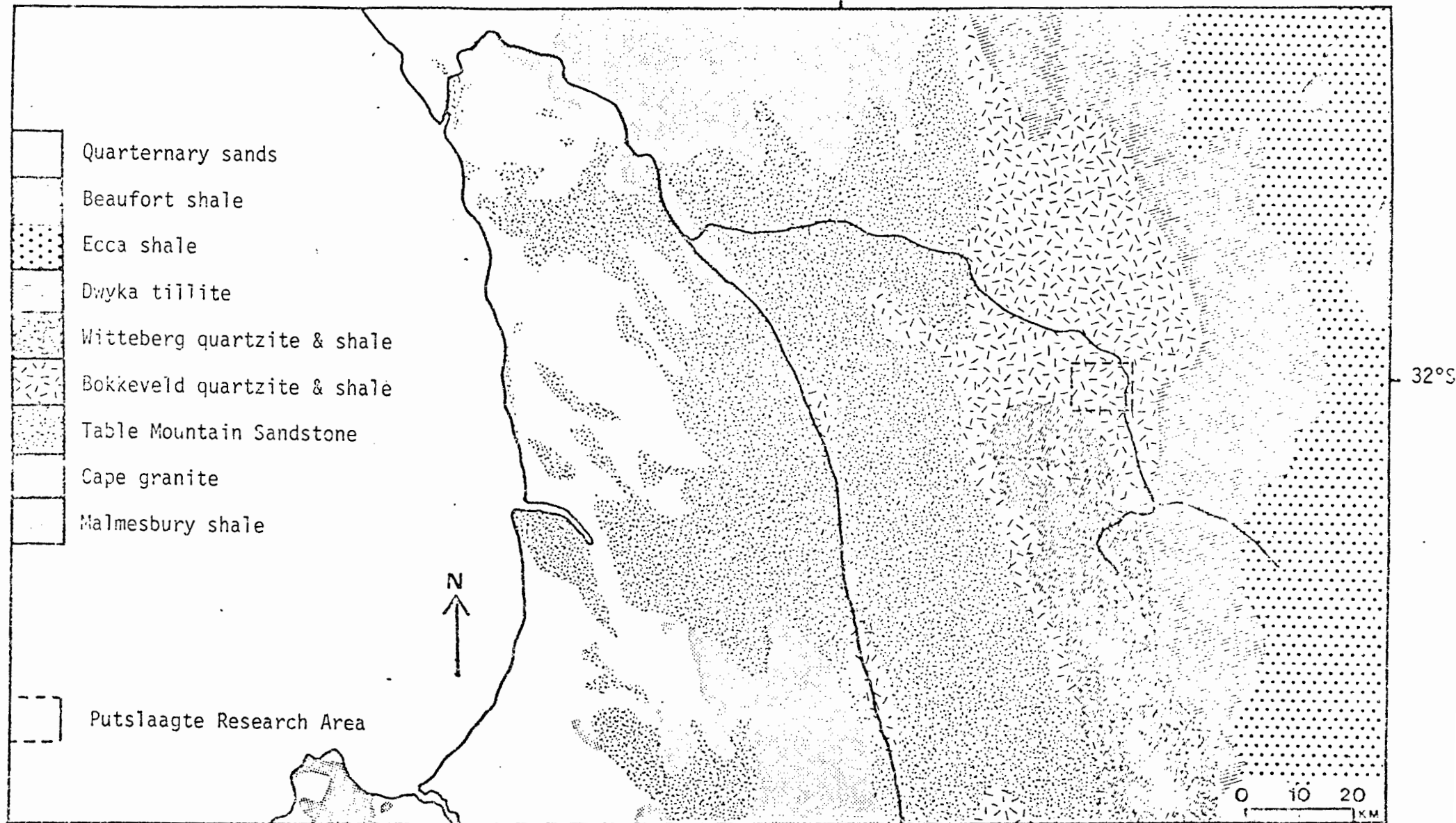


FIGURE E : BASIC GEOLOGY OF THE WESTERN CAPE (after - Mazel , 1978)

frequencies of silcrete in the samples would seem to indicate a source other than the river for this material though the occasional piece may occur in the gravels. Chunks of phillite/Bokkeveld shale occur in the gravels and this material is derived from the Cape system of rock lying in close proximity to the north-west, west and south-east of the Putslaagte. It occurs in very low frequencies in only some samples and as it has been mentioned earlier, this material seems to have a specific use, and as such, its presence would perhaps not be expected at all sites. Three of the bored stone fragments appear to be made on Beaufort shale of the Karoo system and this material, though the occasional piece might occur in the gravels, may have to be transported from occurrences further afield. Quartz, as mentioned, is locally available in the area, although its use seems to be of more importance away from the river where other lithic materials do not abound. Crystals were noticed on some sites. (Discussion of this use aspect follows later.) The frequency of silcrete in the samples is low. Personal experience has shown that the occasional piece of silcrete can be found in the veld in most areas though more abundantly around outcrops of this material. Its use in the Putslaagte is limited therefore, being replaced by other fire-grained materials.

While sampling may not be as accurate as we would hope it to be, it is expected that the percentage raw material frequencies will nevertheless indicate its use at any site and also show what raw materials are preferred for particular artefacts. Some interesting facts emerge when the raw material frequencies in the samples are examined. Table 4:VIX lists the percentage raw material frequencies in the samples and shows their distances from the river (measured in a straight line on a 1:50 000 topographical map and not taking into account altitude changes). The results are presented graphically in Figure 2:IX. From this we see a situation where certain materials, i.e. hornfels, and quartzite, decrease for the most as we move away from the river, and the frequency of quartz and CCS pieces increases at the same places, although the increase in CCS is less noticeable than quartz. Silcrete and phillite have low frequencies and where they do occur, one usually of more or less the

same frequency. This suggests that hornfels is less commonly used as one moves from the river. This may be a factor of its transportability and brittle nature, i.e. the material is used with more abandon closer to the source, thus having a higher waste factor whereas away from the river, the material is either used with more care or is not used to the same extent because of the weight factor involved in transporting reduced, and usable pieces of this material. (We have seen the technological limitations of this material elsewhere.) Therefore this material must be replaced by others which will be as effective in the final tool form, and will be easier to transport as well, (where materials from the rivers are concerned) and possibly show a higher flake success rate which will be required if frequent trips are not going to be made to raw material sources. The increased frequency of quartz is seen perhaps as the use of a local raw material replacing the need for trips to a source of "exotic" material. Although frequency representation is sometimes a dangerous comparative "tool", because of other variables involved, if we look at the actual counts of these materials, we see that they do increase and thus the percentage frequencies are representative of their increased use. Figure 2:X shows graphically the occurrence of certain raw materials in the samples and their distances (straight line) from the river. What we see is basically a mirror correlation between quartz and hornfels or in other words, quartz replaces the diminishing use of hornfels on the whole, although we can see that at some sites, the reverse is true, i.e. PL 60. At PL 18(a) the mean of the two samples (a) and (b) was used as the frequency occurrence for that site. We see a gradual increase in the frequencies of CCS materials which do not seem to correspond to the frequencies of the other two materials.

Figure 2:XI shows the raw material percentage of selected artefact classes for the total sample. From this it can be clearly seen that certain of the formal artefact classes appear to be made on specific raw materials. For example, utilised pieces are predominantly on hornfels, 50,5%, followed by CCS, 13,9%. Pieces esquillees are made on hornfels, 50,5%, quartz 33,3%, and silcrete and CCS, 11,1%, and 5,6% respectively. Scrapers show a predominance of CCS, 47,4%, with quartz being

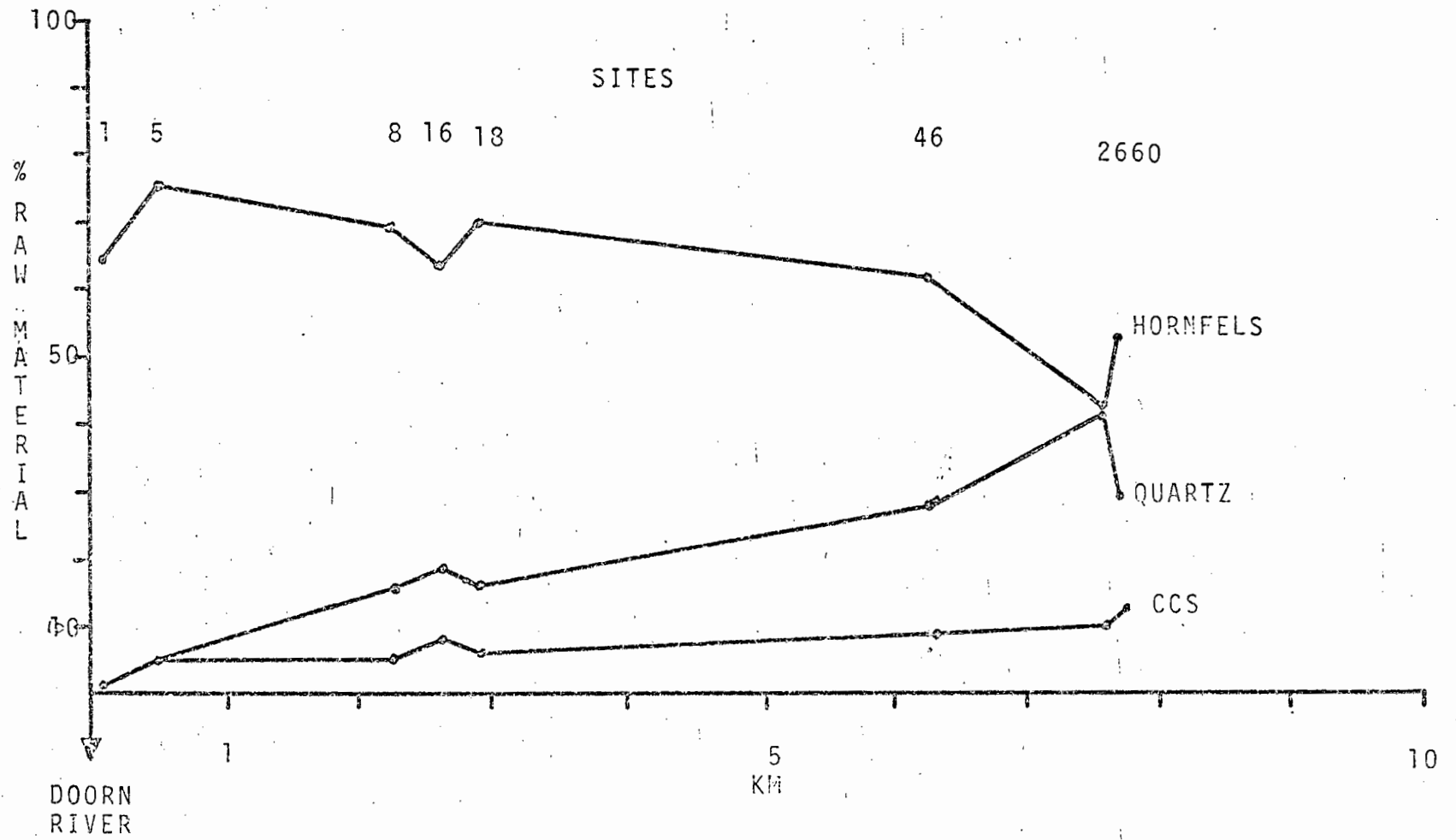


FIG 2 : X : PERCENTAGE REPRESENTATION OF QUARTZ, C.C.S. AND HORNFELS IN SAMPLES AND DISTANCE FROM THE MOUTH OF THE PUTSLAAGTE

PERCENTAGE RAW MATERIAL FOR SELECTED ARTEFACT CLASSES ALL SITES
AND NOT INCLUDING PHILLITE

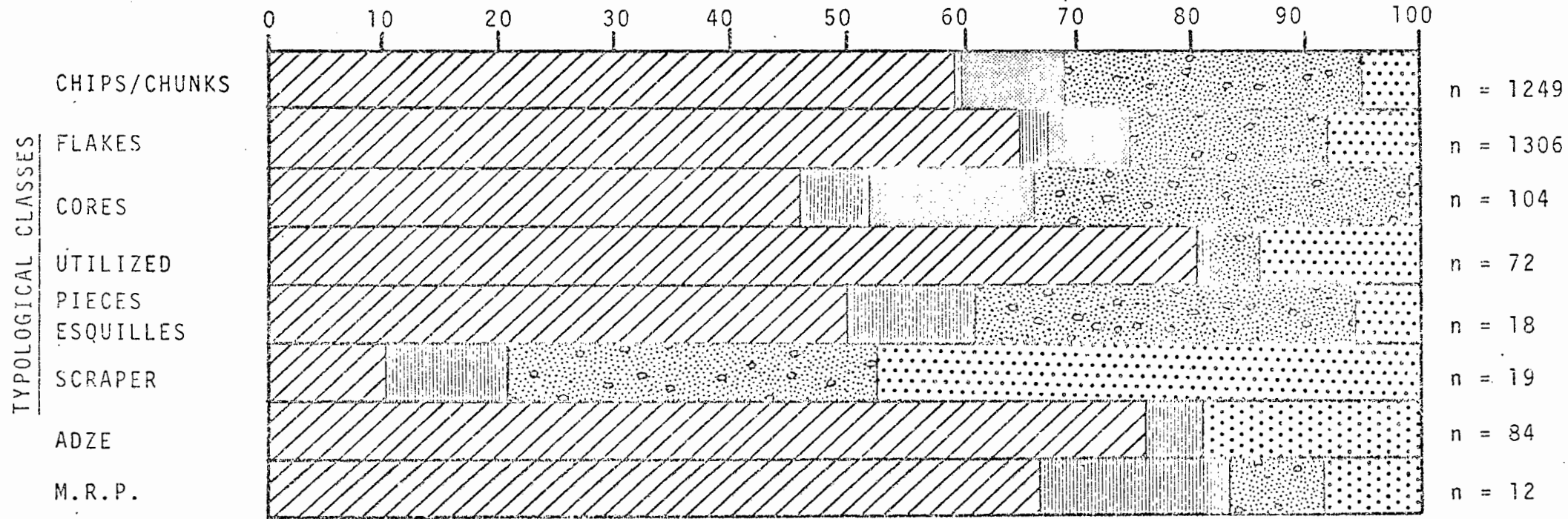


FIG 2 : XI SELECTED ARTEFACT CLASSES AND RAW MATERIAL TRENDS WITHIN THOSE CLASSES (EXCLUDING PHILLITE)

composition of assemblages, reflect the relative importance of tool related activities at those sites. Certainly these observations can be accepted if tools really are functionally specific. The examination of fluctuation in assemblages from areas which differ both climatically, geologically and in terms of resources can provide some interesting observations on the tool/resource procurement strategies pursued in those areas. This is a macro-scale observation though; and while we may see some very interesting results at this level, it should not be forgotten that within this lies the micro-scale situation which is perhaps likely to enable the archaeologist to see certain other environmental, possibly human, related fluctuations. One of the major problems with both macro and micro-scale artefact related studies is that we are limited to comparing the nature of the samples made in these areas and as has been noted, these samples are usually made at dense scatters which would seem to indicate that they reflect extended occupation or frequent visits of that area at the same time. The surface assemblage, undated, can at best show us the range of activities which were pursued at, or from those sites over a range of time. Since these sites may reflect extended occupation or frequent visits, probably for particular locational reasons, one has the problem of dealing with multiple tool assemblages which detract from the specific uses of particular tools.

If however we also sample minor occurrences of artefacts we may be able to see single function assemblages or specific resource manipulation situations not related to attractive localities used for occupation and hence having multiple function connotations. As Binford (1981:14) notes, one of the more distinctive features of human systems is their spatial focus on a "home base" or a residential camp and that at any one time the way in which a group uses its habitat is directly conditioned by the pattern of moving out and then returning to the residential camp. We then are sampling what are probably residential situations although sometimes this may not be the case. In the Putslaagte for instance, several sites clearly represent residential situations, i.e. located near or at a shelter, and accumulation of deposit, whereas others, while they show concentrations of material do not

show a residential situation as clearly, though they may in fact be such in some cases. Some of the minor occurrences noted in the kloof may well represent areas visited for particular purposes during occupation of a residential locality or to use a Binfordian term, those sites which fall within the "camp range" (Binford 1981(b):15) and were used as minor bases during the procurement of certain resources, for example, plant foods, wood, meat during hunting, and collecting of water and raw materials. While residential camps will tend to locate at the same place from year to year, these places may only be used until the renewable food resources of that area are used up or depleted to such an extent that the time and effort outlay in procuring them no longer makes it a viable occupation area. The group may then move to another area where food is more plentiful and a new camp range will be established and other sites used as temporary bases. The new residential site may now locate at a place that was used as a temporary base during the previous camp range and as such may already reflect that use in the artefacts present there (if any), and the old residential site may now form a temporary base of the new camp range, perhaps as a hunting stand or observation post.

In other words, sites may change in their function as the effective environment changes, either because of seasonal factors or because of the human activity in that area, for example, plant food resources being diminished or not occurring during a particular season. Some sites may however never change in function, for example, raw material procurement sites, though the frequency of that use may change.

Binford made a number of these observations during his examination of a group of eskimos in Alaska (Nunamiut) and while we realize that the environment of this area and the Putslaagte differ considerably, the site patterning probably reflects a similar foraging system, common to groups pursuing a hunter/gatherer existence. (Binford 1978, 1980, 1981 (a) (b)) Similar patterns of residence camp movements have also been noted by Richard Lee among the !Kung Bushmen (Lee 1965, 1979).

It has been postulated (Parkington, 1976 (b), Mazel and Parkington

1981) that prehistoric groups moved in a regular fashion across adjacent resource zones between the coast and mountains so as to exploit the complementary nature of the resources and achieve an adequate and varied diet. It has also been implied that the annual round took these groups to the coastal areas in winter and to the mountains in summer because of the seasonally available resources which occur in these areas. Contacts with the coast can clearly be seen by the presence of marine shell at sites in the mountains (e.g. Parkington and Poggenpoel 1971). Marine shell does occur at sites in the Putslaagte, as well as at sites in an area around the farm Teekliphuis on the eastern flanks of the Northern Cedarberg Range to the north of Clanwilliam. (These occurrences were noticed during fieldwork undertaken early in 1981 by the author and hopefully the observations made here will be available in print later in 1982.) This would then suggest that the Putslaagte could be included as an area exploited during this overall seasonal migration system. (Other evidence is available from the rock art and will be presented later in this thesis.)

Presented above are several hypotheses and observations which can hopefully be tested by examining the evidence from the research undertaken in the Putslaagte.

We assume that the localities where dense artefactual material occurs (and where samples were taken) represent places which were frequently visited or occupied for extended periods during the time that the kloof was used by prehistoric groups. It remains to be seen whether any of these localities show any indication of their particular use within the occupation cycle, on the basis of the lithic artefact types as well as other non-lithic remains found there. An examination of the assemblage profiles (Fig. 2:I - Fig. 2:VIII) shows that all except one (PL I) have similar shapes meaning presumably that all the sampled sites express a range of activities which are the same. Of course some differences occur in the frequencies of the occurrence which possibly indicate longer periods or more of the particular activity but this is difficult to know since no information is available on the duration of use of particular tools commonly found in the assemblages.

Table 2:VII shows that certain tools do not always occur. However if we examine the frequency of occurrence in samples where they do occur, we see that this is usually very low, e.g. scrapers and pièces esquillées. This could well be a product of the sampling method and not at all related to the function of the particular tool. If we examine the formal tool occurrence in the samples from PL 18, we see that 18(b) showed no scrapers or pièces esquillées, and were this the only sample from that site, our interpretation based on the tools would be different to that of the material in 18(a). We do however see from the profiles that a definite difference exists between the sample from PL 1 and all other samples made in the kloof. No formal tools (except 1 scraper and 1 M.R.P.) are present here and these are somewhat different in morphology from other such pieces found in other samples. There is also a high core frequency and a difference in core morphology compared with other samples. The presence of a number of Levallois flakes and a higher chip/chunk to flake frequency as well as the other variations suggests that this site is different from any other in the kloof.

The precise nature of the difference could be due to several factors. One is its site history. Its location in close proximity to the river would suggest its use as a primary modification site for chunks of raw material too large to carry to sites higher up the kloof. The debris also seems to suggest that the site was used at a much earlier period in the kloof's history, when the technology of lithic production and probably the response to the local environment was different from what it was during the later periods of occupation from which much of the material cited here seems to come. The Levallois method of flake production is common in that period of the prehistory of southern Africa termed the Middle Stone Age and is dated at many stratified sites to the late Pleistocene and early Holocene. Only two other sites (PL 61 & 51) show this type of technology in the material suggesting that much of the kloof was not used or may not have presented the same situation which made it attractive to later groups. The characteristic material of the M.S.A. is quartzite and if we examine fig. 2:IX we see that this material occurs in a relatively high frequency compared

MATERIAL IN THE KLOOF

At this point it is expected that the reader has some idea of the site distribution in the kloof and the nature of the sites themselves. This discussion will limit itself to the data which has been presented up to this point and at a later stage it will be discussed in terms of other archaeological remains which are present, i.e. rock art. This section will not deal with observations from sites outside the research area.

We have seen that the lithic material varies in a number of ways in its occurrence in the research area. From TABLE 2:II we see that material is present at thirty-nine of the fifty-five sites recorded and that the occurrences vary in density from site to site and within the single site context as well. We have also seen that certain differences occur in the nature of the material at the sites, i.e. variability in raw material, morphology and types of artefacts. "Quite obviously, stone tools were used by prehistoric groups to enable them to extract particular resources from the environment to turn them into tools or process them as foods, and in the former case, to maintain the the tools in a usable condition." (Mazel and Parkington 1981:18) This would refer to what the archaeologist calls formal tools since clearly some other pieces which we find are produced during the production of the specific formal tools, i.e. cores, chips/chunks and flakes. The term 'tools' will hereafter refer to those items in the assemblages which show similar morphology from site to site and apparently have specific functions. The term 'assemblage' will hereafter refer to all types of artefacts found within a single sample at different sites.

Mazel and Parkington (1981:18) also note that in order to extract and manipulate chosen resources, prehistoric groups needed to engage in specific activities, some of which involved the use of stone tools and that consequently the accumulation of stone tools at a site reflects, albeit in a complex way, the range of activities pursued there and that further differences between the

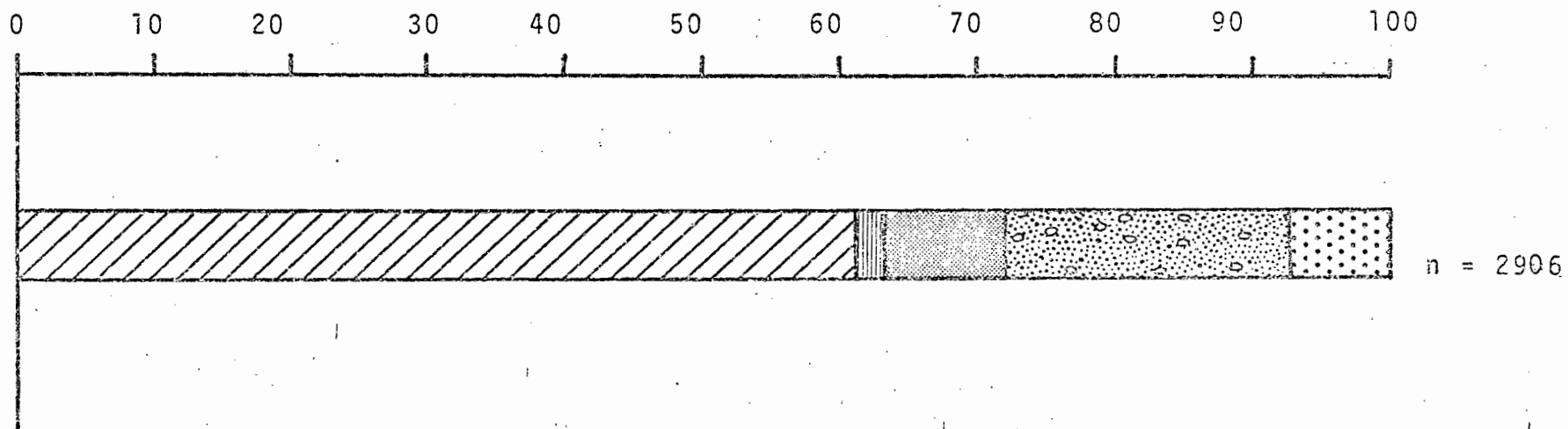


FIG 2 : XII PERCENTAGE RAW MATERIAL OF THE TOTAL SAMPLE
(EXCLUDING PHILLITE)

COMPARISON OF THE ARTEFACTUAL MATERIAL TO THAT OF OTHER SITES AND THE IMPLICATIONS

Much of the archaeological research conducted in the western Cape, and specifically in the area shown on figure A, has been constructed to test Parkington's hypothesis that groups used the area between the coast and the mountains on a seasonal basis. (Parkington 1976 (b), 1979, 1981; Parkington and Poggenpoel 1971 (a); Mazel and Parkington, 1981; Mazel 1978). Reasons for this movement have been cited as the differential seasonal nature of food resources in this area providing a balanced diet. The hypothesis, though it might be correct, relies heavily on the information provided by the stone artefacts and sometimes other material. The recent paper by Parkington, "Time and Place", (1981) drew heated comment from some quarters about the presumed use of certain artefacts and how these inferred uses have been cited in support of the seasonality hypothesis. (Vide: comments by various reearchers same volume: 1981). While the article may be controversial, it was decided that it would form an excellent framework in which a discussion of the Putslaagte material could take place as well as incorporating some of its possible wider implications.

While on the whole the author (this thesis) agrees with a seasonal hypothesis, he argues that some of the criticisms are valid. For example, and Parkington admits to this in his reply, (same volume) "I must submit to Janette Deacon's accusation of having rather uncritically accepted the correlation between tools described by early travellers as the woodworking spokeshaves and the adzes of our stone tool assemblages." Nevertheless, this is a small point since in his reply, Parkington cites the work of Clarke (1950, 1958, 1959) and (Gould et al 1971: Gould 1978) as substantiating the use of similar pieces for wood-working in the western Cape.

Deacon (J, 1981) has presented two factors which may indicate that adzes are not related to digging stick manufacture, or maintenance in only particular situations. She says: "There are many ways of making a digging stick and employing an adze is not one of them. The damage on an adze is caused as much

by the way it is held and the angle at which it is used as by the fact that it is used on wood. A plain flake if used at the same angle, is as efficient in sharpening a digging stick and shows little or no wear." Personal experiments have proved to the author that some force is necessary to accomplish the sharpening procedure on unseasoned wood and the effort and force required for the same procedure on seasoned wood is even greater. Therefore, the use of an unhafted flake during sharpening seems most unlikely. One expects that some effort was involved in hafting an adze, or at least a flake that was used like an adze, and as such would not be discarded after one use. The experiments show too that given a carefully selected flake, the effectiveness is maintained for some time even after retouch (which incidently would seem to be what causes the step flaking characteristic of these pieces, and not the actual use on wood). We expect usable digging sticks to be seasoned since clearly unseasoned wood would tend to "fray" at the end during use and quickly lose its effectiveness.

She also cites some observations made by Steyn (1971:311) that the present day Nharo who live in the sandy Kalahari in Botswana and Namibia, ensure maximum effectiveness by regularly sharpening their digging sticks. Regular sharpening may not imply a lot of sharpening and it would seem that sandy soil will not cause much damage apart from blunting due to abrasion. But consider the use of even a seasoned digging stick, with the added weight of a bored stone in rocky soils and one clearly has a situation where the chance of serious damage in the form of splintering, fraying and even breakage is possible. These sticks would also require "regular" sharpening but to a greater extent than a stick that was merely blunted. One would expect a digging stick to be "curated" to some extent and not just discarded if it splintered or frayed.

Blake's observation, cited by Parkington and Mazel (1981), that people of the Kalahari who had to use digging sticks in hard veld, tipped them with bucks horns, also needs some consideration. The structure of a horn is fibrous and brittle when dry. Extended use of such a tip is likely to render it useless fairly quickly. Now, what kind of horn frequency are we talking about?

Would a supply of horns be kept for tipping digging sticks? We must consider too, what animals have horns which could be used for such a tip. Clearly, it would have to be a fairly substantial horn to accommodate the dimensions of a digging stick (see the size of holes in bored stones), and also a horn which had the right shape, i.e. one cannot use a bontebok or a hartebees horn because these are curved. A straight, substantial horn is needed. The eland has such horns, as does the gemsbok. Rhebuck and klipspringers have straight horns but these are far too small to be used for such a purpose. It would seem then that it would be far easier to forget about horns as tips, since it would be far easier to merely sharpen the stick. A piece of what is probably a digging stick discovered at De Hangen (Parkington and Poggenpoel 1971:Plate II (b)), shows a spatulated end and this would not seem to indicate the use of a horn tip. Its shape also reinforces the belief that such sticks could be easily damaged.

Now, while we should not dwell on the subject for too long, it is perhaps necessary to state that it is not believed that adzes were used only for sharpening digging sticks. On the contrary, the De Hangen remains include various wooden artefacts all of which were probably prepared using adzes. Bows and arrow shafts probably also required shaping.

But if we consider the frequency of bow shaping/planing or shaft production, or other wooden artefacts, it is clear that these will not require much treatment and as such while adzes may be used, it will not probably be to the same extent. Shaving bark off a green wood can easily be accomplished with any reasonably sharp, unhafted flake. It is on the basis of the above argument that it will be presumed that adzes are strongly related to the maintenance of, and the production of digging sticks.

While the problem of the dating of surface scatters may never be resolved it is clear from the evidence that low adze frequencies are noticed in excavated sites prior to 2000 BP or even as early as 3500 BP. (Thackeray 1977; Parkington 1981) We notice that at Klipfontein and that right up to the horizons above spit I, that scrapers dominate the assemblages and that backed pieces,

including segments are also noted. These assemblages are aceramic and thus probably indicate their presence as certainly being older than 2000 BP. Only one shard was noticed in Spit I but we know that the upper levels of this site are disturbed. We notice that Klipfonteinrand 2 OPEN has 52 adzes compared to 5 scrapers and pottery litters the area of this scatter. If we consider the evidence from the Putslaagte in the light of the Klipfonteinrand assemblage we notice several striking factors. Most of the sampled sites show adze domination as far as the actual "formal" classes go. The only samples which do not fit totally into the established pattern are PL I (and we probably have explained this rather different assemblage) and PL 5, which shows a domination by utilised pieces and PL 46 which shows an almost equal representation of utilised, pièces esquillees, scrapers and adzes. No sample showed anything resembling a backed piece and even the MRP class is very low. PL 5 was the only sampled site which had no pottery present, as far as could be seen (it was looked for). The sample also had no scrapers or pièces esquillées present and it is tempting to explain this in terms of sampling. But, as has been hinted at in an earlier section, the aceramic nature of this site may account for some of its differences. This site contained the only definite reamer and therefore forms a very minor occurrence in the kloof. At Klipfonteinrand, only three were found in the deposit, but occur in high frequencies, approximately twenty, on the open scatter at Klipfonteinrand 2 which has ceramics associated with it. Although clearly this is not the same in any sites in the Putslaagte but nevertheless it may indicate a greater presence of this tool post 2000 BP and hence reinforces the high plant food dependence theory for this time.

Other sites may also have shown this profile at one stage, but have probably had ceramic related assemblages laid down on top of them or become mixed with them. On the whole then we would seem to have a similar pattern of assemblage noticed at other mountain sites (open + ceramics), i.e. adze domination and a lack of any backed forms. If we are to assume then that adzes equal plant predation and scrapers are related to hunting, the assemblages indicate a predominantly plant-based existence with some hunting! Other evidence from the kloof, i.e. bedding

is interesting when compared with other sites in the area. It is not possible to see this feature at Klipfonteinrand because the relevant levels were probably removed by the farmer. De Hangen has bedding around the back of the shelter and this has been dated. One of the dates CAR 1/9, was obtained on a bundle of grass bedding and gave a date of 390 ± 45 BP AD 1560 (Pta/346 De Hangen CAR 1/9).

The other dates gave a range between 1850 ± 50 BP and 90 ± 50 BP. (Pta/127 and Pta/167) (Parkington and Poggenpoel 1971:31) It would indicate then that the bedding in the Putslaagte at PL 18 and 41 might represent the same range of time as that at De Hangen. Certainly both of these sites (PL 18 and 41) have ceramics associated with them. Bedding is also present at Andriesgrond and Renbaan as well, also adze dominated and having ceramics associated. (Parkington 1981) This should be qualified by stating that only the open scatters in front of the shelters of De Hangen and Andriesgrond are adze dominated but as Parkington (1981) has noted this may be due to different activities taking place on the talus. (See also Mazel 1977.)

PL 18 shows a substantial deposit, and clearly this must be excavated. Its implication is that the site was used for quite some time, and may supply us with the situation which was lost at Klipfonteinrand, re the last 5000 years.

Raw Material is on the whole expected to be affected to a large degree by the availability of sources of the materials and as such assemblages from different areas will have a characteristic raw material pattern. The sandveld assemblages sampled by Mazel show in most cases high quartz and slightly lower silcrete values. The assemblages at Andriesgrond also showed a sandveld raw material pattern although silcrete is slightly more frequent. (Mazel 1978: figure 5:7 following page 57; Mazel 1977:figure 6(a)) The assemblage at De Hangen shows quartz as the dominant raw material with silcrete having dropped right off. Crypto crystalline rocks and hornfels are increasing and have higher representations in the total assemblage here than at any site in the Sandveld (Mazel 1977:figure 6(a)). The total Klipfonteinrand assemblage shows hornfels is increased and quartz decreased compared to De

Hangen. (Mazel 1977; Thackeray 1977) The assemblage at Aspoort shows hornfels to be the dominant material.

It should be remembered that the above data is based on the total material representation of the entire period of occupation and as such probably indicates the raw material options which are available around the sites. More meaningful results about possible raw material trends can be gained by examining dated assemblages, i.e. Klipfonteinrand. We can see from (Thackeray 1977:figure 18) that in fact in the four spits very little actual change is present in the frequency of raw material. The layers/s that are missing may have provided the information we really need, i.e. did hornfels increase in importance after 5000 BP and particularly with the introduction of ceramics? The open Klipfonteinrand 2 assemblages seems to suggest that it might have but since frequencies of waste pieces are not presented this is difficult to say with any certainty. (Parkington 1981:table I(b)) The total sample from the Putslaagte (Figure 2: XII) shows hornfels to be the dominant type with quartz next most important but to a reduced extent. We must realize of course that total assemblages (waste included) will probably also reflect to some degree the nature of the raw materials. By that is meant certain materials because of their natural properties or "abundance" in the landscape, will show a higher waste frequency than a less brittle, easier worked material. The abundance probably would allow use of the material with less care and also some experimentation can be undertaken to obtain the best usable flakes. Consequently, higher non-used flake frequencies may occur where raw material is reduced, i.e. factory sites since only the best flakes are taken away. (Binford, pers comm. observations among Australian aborigines.)

By examining the respective tool classes of the total sample and from single samples, where more than one is available, we can get some idea of raw material preferences. For example, on the east side of the Cedarberg mountains along the Doring Rivier, or in proximity to it, adzes are preferentially made on hornfels, silcrete and ccs, and scrapers on a range of fine grained materials, i.e. hornfels, silcrete, quartz and ccs with silcrete and ccs predominant at Klipfonteinrand (Figure 16) and quartz

and ccs most used in the Putslaagte. (Figure 2:XI)

We must also consider what other types of artefactual material can provide us with a more definite link between sites which we assume, on the basis of similar artefact types and ceramics, to date to the same period (may be quite broad). Clearly, certain ceramic motifs may provide an excellent link between sites where decoration is present on the pottery. The problems of motif proliferation during the iron age in southern Africa is not the case during the stone age, certainly not in the western Cape. Thus pottery style may have a very fixed group, or cultural connotation. While ceramics are present in most sampled sites in the Putslaagte, we have seen (TABLE 2:V) that three decorated sherds were found, as well as one lug. (see photograph 79). While some rim sherds were found, these do not provide good bases for comparison at this stage.

Two lugs from De Hangen, one illustrated (1971: figure 14, 141 and 140) clearly show the same technology of production as the lug as PL 60, although no decoration is noticed on this sherd. If we consider number 140 (1971: figure 14) it could be that the Putslaagte sherds, all show the same decorative pattern, i.e. incised horizontal lines and it can be accepted that the decoration occurs on the neck section of the pots. None of De Hangen sherds illustrated show a similar style. The author (this thesis) knows of the location of a whole broken pot, showing line decoration on the neck, in a shelter near the mouth of the Brandewyn River and this will be collected sometime in the future.) Ceramic material can provide us with some interesting observations and we must increase the sample if possible.

Similarly the presence of shell pendants, may provide us with observations of links between various sites and may also have a wider significance than has previously been realized. Certainly much of the shell found at sites in the overall Elands Bay - Doorn Rivier research area, are west coast derived species and this can be expected considering the seasonal nature of movement between the mountains and the coast. However, examination of reports (in print) shows that not only west coast species

from the Elands Bay area are involved. Turbo certainly does not occur around Elands Bay at present and probably did not in the past either since few if any of these shells are ever found in the deposits of caves or in open coastal middens. Turbo does occur around Yzerfontein and Saldanha and possibly at some other places higher up the west coast. This situation or distribution of Turbo sarmaticus, in particular, is somewhat different to the distribution for this species cited in Day (1969) and this can only caution one against using similar distribution data without questioning others who have first-hand knowledge acquired through diving in these areas.

A Turbo sarmaticus pendant is present in Spit I at Klipfonteinrand (Thackeray 1977:24) and two perforated Turbo pendants are also present at De Hangen. (One of these pendants has been classified as Chorymitilis but subsequent examinations have showed that this is clearly Turbo. (PLATE IV extreme left and extreme right, Parkington and Poggenpoel, 1971). Turbo pendants are also present at Andriesgrond (unpublished report:examination by permission of J.E.Parkington). Some perforated Glycimeris queketti shells also occur at both De Hangen and Andriesgrond. It has been reported that Glycimeris is found in the area of the Berg River mouth (Barnard, 1969), and as such the presence of these shell types indicates some form of contact with the west coast further afield than Elands Bay.

Shell pendants abound at Die Kelders from layer 12 to layer 1 and pottery also occurs in these layers as well. (Schweitzer 1979:152 & 156). Turbo pendants, with similar decoration to that present on the small rectangular piece from De Hangen occur at Byneskranskop 1 and 3 (Schweitzer and Wilson: in press). Layer 12 at Die Kelders is dated 1960 ± 85 BP (5568 year-half-life) and 2019 ± 85 BP (5730 year-half-life) (GX-1688). Dates for Byneskranskop 1 were not available at the time of writing.

The presence of the west coast species at inland sites, considerable distances from the known source, may provide some important links between these areas. Links not only in terms of geographical space, but also in the social or cultural sense.

Sheep bones have been identified from various excavations of South African Later Stone Age sites. Die Kelders (Schweitzer & Scott;1973),

Scott's Cave (Klein & Scott; 1974), Hawston (Avery; 1974), Nelson Bay Cave (Klein & Inskeep - pers. comm. in Schweitzer; 1974), De Hangen (Parkington and Poggenpoel; 1971), Elands Bay (Parkington pers. comm. in Schweitzer; 1974) and Dikbosch I (Humphries; 1974). It has been concluded that the possibility exists that the earliest southern African sheep were derived from the known domestic sheep which spread from north to east Africa during the first millenium B.C. (Schweitzer 1974:75). Their presence at southern African sites along with ceramics, is usually noticed after about 2000 years ago. The presence of the sheep, certainly at Die Kelders, cannot definitely be related to the use of this site by herders. It suggests rather the availability of a new resource, i.e. sheep to the original hunter/gatherer population existing in that area. It also suggests adoption of items which were not present in the "culture" of the hunter/gatherers, i.e. ceramics and decorative object (pendants). Sheep may have been stolen at first and perhaps herded at a later stage but probably the latter will not easily be proved. The lack of apparent change in the lithic artefacts suggests that the original "culture" was not replaced but rather that certain new inputs were included in that culture. (Schweitzer; 1974).

This leads us back to the western Cape where we apparently see an increase in the dependence on plant foods after about 2000 years ago. Sheep were certainly present at the Cape by 1591 AD and an early visitor, Sir James Lancaster, (in Raven-Hart 1967 (a):15) noted the following: "The sheepe are very big and very good meat; they also have no woll on their backs but haire and great tailes like the sheep in Syrie." Other travellers have also attested to the presence of herders in the Piquetberg district and surrounding area. This presence, probably implies the presence of herders in the western Cape by or soon after 2000 BP, (Khoi-Khoi peoples) who may very well have moved to this area via an east coast route possibly because of the better grazing provided on basically shale derived soils. It implies that they might have introduced items which were part of their "culture/s" and not found in this area before. These items could well have been acquired by the indigenous (San) hunter/gatherers, either through trade, or by stealing. Trade may have taken place for particular items such as pottery. Sheep could also have been traded but stealing is also likely to a certain degree if what follows later is true.

Other archaeological similarities can perhaps be recognised in the rock art between the two areas and I will just mention this briefly at this point prior to more detailed discussion in PART 3 of the Rock art data. Recently (Van Rijssen - pers comm) a painted site was found in the vicinity of Stanford near die Kelders. The author has visited this site and it lies at some altitude up a steep mountain gorge. This is the only painted site known in the whole area at present and its significance lies in the fact that present at this site are decorated handprints characteristic of the type found at Elands Bay.

Some archaeology III students at UCT have conducted examinations of handprints, and their statistical relation to other items of the archaeological record. Tony Manhire, in his Honours thesis (1981; UCT) noted that there may be a link between the presence of herders and these images. It may be unwise to suggest that these were necessarily executed by herders and we will examine this later.

Parkington (1981) was criticised for including some comments on population growth noted by Cohen (Cohen; 1977), that overpopulation may cause groups to alter their subsistence base in order to feed more people. He argues that what is likely to happen is that on the one hand, people begin to tap resources nearer the base of the food chain, i.e. plants and small but fairly abundant primary consumers. Parkington clearly does not intend overpopulation among the L.S.A. hunter gatherers as being the cause for the apparent increase in primary production "predation" or utilisation. Nor does he intend overpopulation to be used in the strict sense for herding groups. Rather he implies that the appearance of pottery involved movement of more people to this area from other regions who had sheep. The added weight of the people plus their sheep was probably sufficient to upset the "equilibrium" which had existed for the hunter gatherer groups in that area previously. The increased load would probably not have been felt at first, and it could be expected that a period of interaction i.e. trade, may have ensued in which the ceramics items themselves or the technology was introduced to hunter gatherer groups. When the effects of the

increased load was felt later, the San hunter gatherers may have been forced to move into more marginal areas that would not otherwise have been used to the same extent, i.e. east of the Cedarberg, and Karoo, and areas which were not utilised by herders, at all or at least not to the same extent. Herders may well have penetrated into the Brandewyn Valley and as such may have utilised some of the sites in the Putslaagte. The frequency of paintings of fat-tailed sheep in the mountains is far higher than it is in the Sandveld and clearly the area supports modern sheep populations so it is not impossible that earlier herders also used this area. Whether these paintings were done by San or Khoi is not clear and we will probably have to have a lot more data before we can make any definitive statements. This will be discussed again in PART 3.

In this discussion I have attempted to analyse some of the possible causes for assemblage differences noticed in the overall research area, and have included my own thoughts in some cases. I realise that the argument may be tentative due to the lack of data from some areas, but the argument might, like Parkington's borrowing from Cohen's thesis, "Add to, rather than detract from, our understanding of the holocene sequence."

PART III

INTRODUCTION

In recent years we have seen an increase in the attention paid to rock art and its study in various areas of Southern Africa. These have taken place in the Drakensberg and surrounding areas, and in the Western Cape probably because these are where the vast majority of the paintings occur.

While proper "scientific" studies of the art can be considered as recent phenomena, the paintings have always held a special interest for the "man in the street" probably due to the fanciful and sometimes sensationalist interpretations of certain painted scenes. These interpretations were often a product of a basic lack of knowledge of other paintings as well as sometimes rather ethnocentric views about the people who were believed to have executed the paintings. One thinks particularly of the now famous "White Lady of the Brandberg" and its interpretation by the Abbè Breuil and some other interpretations by him as well. (1949:39-50)

Nevertheless this prompted others to go and search for rock art sites and begin that aspect of archaeology which today has culminated in a greater understanding of the paintings and their distributions and has led to some important studies e.g. "People of the Eland" (Vinnicombe, 1976), "Seeing and Believing" (Lewis-Williams 1977), "Rock Art of the Sandveld" (Manhire, 1981). Other projects do exist but the author considers the aforementioned perhaps to be the most important.

There are those who still question the time and effort spent in analysing rock art, saying that we cannot really know anything about the meaning of art or its significance until we are able to date the material. This is a defeated view and one can only direct such sceptics to the work of David Lewis-Williams to show what we can find out from the art. (Lewis-Williams 1977;1981)

Datable or not, the art can tell us many things about the people who painted them even if we are not sure about their exact identity i.e. Khoi or San, though the scenes overall would seem to indicate execution by San with perhaps later, some of the "paintings" being done by Khoi groups (Manhire, 1981).

As in artefact studies, rock art can also be conducted at the macro-scale as well as the micro-scale. The following section will deal with the rock art present at sites in the Putslaagte with a view to seeing both micro and macro-scale implications.

RECORDING PROCEDURES

DEFINITION OF TERMS:

A breakdown of the rock art for individual sites has been provided at the end of each site description in Part I to ensure that these are viewed in the single site context. (Tables 1 - 44 (a) (b)). The reader will have seen that certain terms are used to describe the types of images that occur at sites, and some of these may require clarification.

Humans, handprints and animals require no further definition, except that male, female and indeterminate categories exist for humans and animals. Sexual characteristics must be visible for the figures to be assigned to these categories i.e. males - presence of penis.

females - presence of breasts.

Equipment or other sexual features were not considered as items by which sex could be determined. As far as the animals are concerned, there is a noticeable lack of sexual features and this will be discussed later. Many of the inanimate classes are obscure and should be explained. This general inanimate class is perhaps most open to the interpretation of the recorder and as such these classes must always be defined in any work (even though these images are not usually interpreted to any extent in works of this nature).

FINGER SMEARS:

Horizontal or vertical lines executed by applying pigment to the wall with the finger and usually occur in the form of a line.

AREA OF FINGER SMEARS:

As above except very often the demarkation is not precise and the number of finger lines cannot be computed.

MARKS:

Paint which is not applied with the finger and often not in lines. Usually smaller and scrappy.

DAUBS:

Patches or lines applied to the wall which do not indicate whether the finger was used.

AREA OF PAINT:

Large or small areas of staining on the surface of the wall. Often very faded and not indicating how it was applied.

LINES:

Usually fine and probably executed with chunks of ochre or ochre "crayons". Usually single or double.

AREA OF LINES:

As above except more than two are executed at the same time.

"ZEPPELINS":

Areas of lines as above but arranged in a double pointed oval.

PATCHES:

Darker areas of paint smaller than the areas of paint mentioned above and not showing method of application.

PALETTE:

Small areas of paint apparently applied to the wall for use during painting of association images.

SHAPES:

Obscure images apparently consciously executed but not showing any similarity to common objects usually seen. (abstract forms?)

SMEARS:

Areas of paint which indicate no conscious execution for any purpose except maybe to remove paint from the hands or other articles. Some of these may be smeared figures.

BAGS:

These occur occasionally not associated to humans and as such have been included in the inanimate category.

RECTANGLES:

Not very common images but are consciously executed in this form at some places.

DOTS:

Usually very small and not executed with the finger.

Where recognisable shapes are present, a note has been made in the single site table breakdowns i.e. PL 44 where an ox-wagon is believed to be painted.

TYPES OF RECORDING:

A written record of the paintings at each site was made and accompanied by both black and white and colour slide photographs where the nature of the paintings allowed this form of recording to be used. In most cases the photographic record was not completed in any systematic way and was rather selective in that only certain images or panels were recorded. A more precise, and clearly more meaningful system for providing a photographic record of the art has been suggested by P. Bordill and L. Smits. (1981) in a paper they presented recently at the SA₃ congress in Pretoria.

The photographic record of the Putslaagte material is housed in the Archaeology Department at U.C.T. and the black and white negatives will also be housed there. The type of film used was:-

colour slides	- 64 ASA Kodakrome	(Kodak)
B/W	- 400 ASA Tri-X	(Kodak)

Where this was possible, a photograph of the site showing its approach and content was taken, and many of these accompany the site reports in PART I of this thesis.

Tracings were also made of subjects of particular interests e.g. the group and "dance" scenes in PL 18 and the dance scenes at PL 45. These will be housed along with the site record forms and B/W negatives.

On return to the laboratory, all the written records and photographs were examined and a coding system was devised to facilitate a quantitative analysis of the determinate images. Coding systems were devised for humans, animals and handprints and the master code charts for these are presented in appendix The charts include:-

HUMANS	- CODING FOR ANATOMICAL PARTS AND RELATED ASPECTS
	- CODING FOR CLOTHING, EQUIPMENT, DECORATIVE ITEMS.

ANIMALS - CODING FOR ANATOMICAL PARTS AND RELATED ASPECTS.

HANDPRINTS - CODING FOR THE TYPES FOUND IN THE PUTSLAAGTE
AND IN OTHER AREAS.

The coding charts for the most were confined to aspects which had been noted during visits to many painting sites, both in the Putslaagte and other areas. Unfortunately the subsequent coding of human, animal and handprint images relied heavily upon what had been noted during the writing of the reports in the field situation and clearly showed that the reports were often unsatisfactory in certain ways. Frequently aspects were neglected or not described fully. Where the information was provided it often was interpreted differently at different sites by those who carried out the descriptions and thus made it difficult to quantify certain aspects in a definite way.

Coding of every human, animal and handprint was completed and in each case can be considered to be an accurate reflection of those figures or images. (The coded material will be housed with the photographs etc). Coding of the images provided a means of completing a far more complete quantitative analysis of the human figures and the related items of equipment, clothing, decoration etc. (Some of the results will be discussed later).

An alternative coding system for rock art has been described by Patricia Vinnicombe (1967), and as can be seen on examination, that while the method differs, the attributes which were assigned codes, are very similar to those which were used in the coding system devised by the author.

At this point some comments are required on future recording of rock art. If we are to say anything meaningful about rock art, we need to improve our methods considerably. For a start, a standard coding procedure for all researchers in this field will eliminate personal biases and interpretations and facilitate comparison of the data from different areas in a more meaningful way and also compare items which previously

were not available to be compared e.g. the occurrence of equipment, clothing decoration etc.

If we are going to say anything meaningful about the spatial distributions of specific rock art items, it is clear that the use of computers is going to be necessary, since clearly the volume of material from a wide area i.e. the Western Cape is going to be vast once a total sample is available, and clearly one must know all or at least more than 80% of the painted sites before we can make definitive statements about its implications. Evans (1971) has suggested a system for recording information in rock painting, so that this material may be used for a computer analysis.

Written records must be eliminated or only used to record distances between images, panels etc. All the image details should be put straight into code form while still in the field to avoid having to use projected slides to get at this information. Photographic records both black and white, and colour must be made but in the way or a similar way suggested by Bordill and Smits (1981) and mentioned earlier. (For more details of the methods and equipment used by the Project ARAL team - see Aifers, J.C. 1981).

ROCK ART SITES IN THE PUTSLAAGTE AND IMAGES HAVING SPECIFIC
IMPLICATIONS FOR THE OCCUPATION OF THE KLOOF

Table 3:1 lists the rock art sites, the number of images at each site, and a general breakdown of the image types. This table should be examined in conjunction with tables 1:1(a)(b) - 1:44(a)(b).

It is estimated that 98% of all the painted sites in the kloof were located, but as has been mentioned some could not be recorded because of the short period that was allowed for the research (due mainly to lack of sufficient finance). Nevertheless these sites only contribute about 2% of the total and frequently are not significant in terms of the small amount of material in them.

The exact link between the rock art and the artefactual material found at sites has been speculated about for a number of years. Dating of the paintings is not possible at present by any direct means and as such we have no way to link the paintings directly to the assemblages that we find in shelters. In cases where painting depicts objects related to European occupation, we can be sure that these were executed during the last 300 years or so, probably considerably less than that, say 150 years being more realistic. But painting was probably in use some time before European occupation and as such we have to look for other associated objects in the paintings which are dated or at least fairly well dated. The one object that is found in the paintings of the Western Cape which was introduced in pre-colonial times, is the fat-tailed sheep. Some discussion has already taken place on this subject in PART 2 and from the evidence we know that sheep were in the vicinity of the Southern Cape by about 2000 years ago and in the Western Cape by about 1500 years ago.

Sheep /goat is present at De Hangen (Parkington and Poggenpoel 1971:72) and we have seen that the site has a range of dates from about 100 AD through to 1600 AD.

TABLE 3:1

SITE NO	HUMAN	ANIMAL	HANDPRINT	INANIMATE	TOTAL
2(a)	5			43	48
4		4		1	5
6	7	8		5	20
7	2		1	4	7
8	3	3	2	27	35
9	6			11	17
10	18			27	45
11	14	10		22	46
12	107	14		87	208
13		2		3	5
14				61	61
15		2		7	9
16			14		14
17	19				19
18	143	34	8	60	245
19			8		8
21	115	7		13	135
28	8	1		10	19
29	109	7	3	62	181
30	8			11	19
32	4			10	14
33	2	2		16	20
34	5			11	16
35	13			14	27
36	5	1		3	9
37	1			10	11
38	46	13	14	21	94
39				11	11
40	1			1	2
42		2		5	7
43	4	5		10	19
44	45	4		21	70
45	52	3			55
47	15			3	18

TABLE 3:1
(contd)

SITE NO	HUMAN	ANIMAL	HANDPRINT	INANIMATE	TOTAL
48			13		13
51	4			12	16
52	33	2		36	71
53	19	7		4	30
54				4	3
56	3	16	50	3	72
57	17			24	41
58	7				7
59	1			2	3
60	3			11	14
TOTAL	844	147	113	686	1790

HUMANS		ANIMALS		HANDPRINT		INANIMATE		TOTAL
f	%	f	%	f	%	f	%	
844	47,2	147	8,2	113	6,3	686	38,3	1790

TABLE 3:1 TOTAL IMAGE COUNTS FOR SINGLE SITES AND THE TOTAL SAMPLE

The deposit was only about 8 centimetres deep, but the exact provenance of the sheep remains are not mentioned in the article and so we are not sure of the precise associated date. However we assume sheep to have been in this area sometime after 100 AD at the earliest.

At Site PL 12 (Putslaagte), 7 fat tailed sheep are found painted on the rock wall. These are executed in dark red and are directly associated to two male figures carrying frontal bags, painted in exactly the same colour. These paintings are well preserved and superimposed over some more faded human figures. (see photographs 14 and 15) These then would seem to indicate some occupation of the Putslaagte after 100 AD. The fact that these paintings are superimposed on much more faded images suggests that these were done during an earlier occupation.

The appearance of sheep has also been linked to the appearance of ceramics in many areas. We have seen that ceramics occur at several sites in the Putslaagte (TABLE 2:V) in most cases related to the occurrence of lithic material as well. (The presence of lithic material is noted in Table 2:I). It was mentioned too, that on the basis of the assemblage profile of the one aceramic sampled site, that there seemed to be no drastic artefact morphology and assemblage profile difference noticeable in other ceramic associated samples, suggesting that while pottery had been introduced, no basic cultural change accompanied this occurrence except maybe in the frequency in which certain tools occurred. If this is correct, and the assumption is very suspect considering the assumed link between the ceramics and the surface assemblage, then perhaps we can postulate that the ceramics were not present on the sites due to the direct presence of herders (who are believed to have introduced the potting technology) but rather that pottery had been adopted by hunter/gatherers who subsequently occupied the kloof and whose forefathers may have occupied the kloof before them. Likewise the paintings of sheep may have nothing to do with the direct presence of herders in the kloof, but rather were painted by the hunter/gatherers who had adopted ceramics and had very likely seen sheep as well. They

PART III

INTRODUCTION

In recent years we have seen an increase in the attention paid to rock art and its study in various areas of Southern Africa. These have taken place in the Drakensberg and surrounding areas, and in the Western Cape probably because these are where the vast majority of the paintings occur.

While proper "scientific" studies of the art can be considered as recent phenomena, the paintings have always held a special interest for the "man in the street" probably due to the fanciful and sometimes sensationalist interpretations of certain painted scenes. These interpretations were often a product of a basic lack of knowledge of other paintings as well as sometimes rather ethnocentric views about the people who were believed to have executed the paintings. One thinks particularly of the now famous "White Lady of the Brandberg" and its interpretation by the Abbè Breuil and some other interpretations by him as well. (1949:39-50)

Nevertheless this prompted others to go and search for rock art sites and begin that aspect of archaeology which today has culminated in a greater understanding of the paintings and their distributions and has led to some important studies e.g. "People of the Eland" (Vinnicombe, 1976), "Seeing and Believing" (Lewis-Williams 1977), "Rock Art of the Sandveld" (Manhire, 1981). Other projects do exist but the author considers the aforementioned perhaps to be the most important.

There are those who still question the time and effort spent in analysing rock art, saying that we cannot really know anything about the meaning of art or its significance until we are able to date the material. This is a defeated view and one can only direct such sceptics to the work of David Lewis-Williams to show what we can find out from the art. (Lewis-Williams 1977;1981)

Datable or not, the art can tell us many things about the people who painted them even if we are not sure about their exact identity i.e. Khoi or San, though the scenes overall would seem to indicate execution by San with perhaps later, some of the "paintings" being done by Khoi groups (Manhire, 1981).

As in artefact studies, rock art can also be conducted at the macro-scale as well as the micro-scale. The following section will deal with the rock art present at sites in the Putslaagte with a view to seeing both micro and macro-scale implications.

RECORDING PROCEDURESDEFINITION OF TERMS:

A breakdown of the rock art for individual sites has been provided at the end of each site description in Part I to ensure that these are viewed in the single site context. (Tables 1 - 44 (a) (b)). The reader will have seen that certain terms are used to describe the types of images that occur at sites, and some of these may require clarification.

Humans, handprints and animals require no further definition, except that male, female and indeterminate categories exist for humans and animals. Sexual characteristics must be visible for the figures to be assigned to these categories i.e. males - presence of penis.

females - presence of breasts.

Equipment or other sexual features were not considered as items by which sex could be determined. As far as the animals are concerned, there is a noticeable lack of sexual features and this will be discussed later. Many of the inanimate classes are obscure and should be explained. This general inanimate class is perhaps most open to the interpretation of the recorder and as such these classes must always be defined in any work (even though these images are not usually interpreted to any extent in works of this nature).

FINGER SMEARS:

Horizontal or vertical lines executed by applying pigment to the wall with the finger and usually occur in the form of a line.

AREA OF FINGER SMEARS:

As above except very often the demarkation is not precise and the number of finger lines cannot be computed.

MARKS:

Paint which is not applied with the finger and often not in lines. Usually smaller and scrappy.

DAUBS:

Patches or lines applied to the wall which do not indicate whether the finger was used.

AREA OF PAINT:

Large or small areas of staining on the surface of the wall. Often very faded and not indicating how it was applied.

LINES:

Usually fine and probably executed with chunks of ochre or ochre "crayons". Usually single or double.

AREA OF LINES:

As above except more than two are executed at the same time.

"ZEPPELINS":

Areas of lines as above but arranged in a double pointed oval.

PATCHES:

Darker areas of paint smaller than the areas of paint mentioned above and not showing method of application.

PALETTE:

Small areas of paint apparently applied to the wall for use during painting of association images.

SHAPES:

Obscure images apparently consciously executed but not showing any similarity to common objects usually seen. (abstract forms?)

SMEARS:

Areas of paint which indicate no conscious execution for any purpose except maybe to remove paint from the hands or other articles. Some of these may be smeared figures.

BAGS:

These occur occasionally not associated to humans and as such have been included in the inanimate category.

RECTANGLES:

Not very common images but are consciously executed in this form at some places.

DOTS:

Usually very small and not executed with the finger.

Where recognisable shapes are present, a note has been made in the single site table breakdowns i.e. PL 44 where an ox-wagon is believed to be painted.

TYPES OF RECORDING:

A written record of the paintings at each site was made and accompanied by both black and white and colour slide photographs where the nature of the paintings allowed this form of recording to be used. In most cases the photographic record was not completed in any systematic way and was rather selective in that only certain images or panels were recorded. A more precise, and clearly more meaningful system for providing a photographic record of the art has been suggested by P. Bordill and L. Smits. (1981) in a paper they presented recently at the SA₃ congress in Pretoria.

The photographic record of the Putslaagte material is housed in the Archaeology Department at U.C.T. and the black and white negatives will also be housed there. The type of film used was:-

colour slides	- 64 ASA Kodakrome	(Kodak)
B/W	- 400 ASA Tri-X	(Kodak)

Where this was possible, a photograph of the site showing its approach and content was taken, and many of these accompany the site reports in PART I of this thesis.

Tracings were also made of subjects of particular interests e.g. the group and "dance" scenes in PL 18 and the dance scenes at PL 45. These will be housed along with the site record forms and B/W negatives.

On return to the laboratory, all the written records and photographs were examined and a coding system was devised to facilitate a quantitative analysis of the determinate images. Coding systems were devised for humans, animals and handprints and the master code charts for these are presented in appendix The charts include:-

HUMANS	- CODING FOR ANATOMICAL PARTS AND RELATED ASPECTS
	- CODING FOR CLOTHING, EQUIPMENT, DECORATIVE ITEMS.

ANIMALS - CODING FOR ANATOMICAL PARTS AND RELATED ASPECTS.

HANDPRINTS - CODING FOR THE TYPES FOUND IN THE PUTSLAAGTE
AND IN OTHER AREAS.

The coding charts for the most were confined to aspects which had been noted during visits to many painting sites, both in the Putslaagte and other areas. Unfortunately the subsequent coding of human, animal and handprint images relied heavily upon what had been noted during the writing of the reports in the field situation and clearly showed that the reports were often unsatisfactory in certain ways. Frequently aspects were neglected or not described fully. Where the information was provided it often was interpreted differently at different sites by those who carried out the descriptions and thus made it difficult to quantify certain aspects in a definite way.

Coding of every human, animal and handprint was completed and in each case can be considered to be an accurate reflection of those figures or images. (The coded material will be housed with the photographs etc). Coding of the images provided a means of completing a far more complete quantitative analysis of the human figures and the related items of equipment, clothing, decoration etc. (Some of the results will be discussed later).

An alternative coding system for rock art has been described by Patricia Vinnicombe (1967), and as can be seen on examination, that while the method differs, the attributes which were assigned codes, are very similar to those which were used in the coding system devised by the author.

At this point some comments are required on future recording of rock art. If we are to say anything meaningful about rock art, we need to improve our methods considerably. For a start, a standard coding procedure for all researchers in this field will eliminate personal biases and interpretations and facilitate comparison of the data from different areas in a more meaningful way and also compare items which previously

were not available to be compared e.g. the occurrence of equipment, clothing decoration etc.

If we are going to say anything meaningful about the spatial distributions of specific rock art items, it is clear that the use of computers is going to be necessary, since clearly the volume of material from a wide area i.e. the Western Cape is going to be vast once a total sample is available, and clearly one must know all or at least more than 80% of the painted sites before we can make definitive statements about its implications. Evans (1971) has suggested a system for recording information in rock painting, so that this material may be used for a computer analysis.

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The exact link between the rock art and the artefactual material found at sites has been speculated about for a number of years. Dating of the paintings is not possible at present by any direct means and as such we have no way to link the paintings directly to the assemblages that we find in shelters. In cases where painting depicts objects related to European occupation, we can be sure that these were executed during the last 300 years or so, probably considerably less than that, say 150 years being more realistic. But painting was probably in use some time before European occupation and as such we have to look for other associated objects in the paintings which are dated or at least fairly well dated. The one object that is found in the paintings of the Western Cape which was introduced in pre-colonial times, is the fat-tailed sheep. Some discussion has already taken place on this subject in PART 2 and from the evidence we know that sheep were in the vicinity of the Southern Cape by about 2000 years ago and in the Western Cape by about 1500 years ago.

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10	18			27	45
11	14	10		22	46
12	107	14		87	208
13		2		3	.5
14				61	61
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21	115	7		13	135
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30	8			11	19
32	4			10	14
33	2	2		16	20
34	5			11	16
35	13			14	27
36	5	1		3	9
37	1			10	11
38	46	13	14	21	94
39				11	11
40	1			1	2
42		2		5	7
43	4	5		10	19
44	45	4		21	70
45	52	3			55
47	15			3	18

TABLE 3:1
(contd)

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48			13		13
51	4			12	16
52	33	2		36	71
53	19	7		4	30
54				4	3
56	3	16	50	3	72
57	17			24	41
58	7				7
59	1			2	3
60	3			11	14
TOTAL	844	147	113	686	1790

HUMANS		ANIMALS		HANDPRINT		INANIMATE		TOTAL
f	%	f	%	f	%	f	%	
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The appearance of sheep has also been linked to the appearance of ceramics in many areas. We have seen that ceramics occur at several sites in the Putslaagte (TABLE 2:V) in most cases related to the occurrence of lithic material as well. (The presence of lithic material is noted in Table 2:I). It was mentioned too, that on the basis of the assemblage profile of the one aceramic sampled site, that there seemed to be no drastic artefact morphology and assemblage profile difference noticeable in other ceramic associated samples, suggesting that while pottery had been introduced, no basic cultural change accompanied this occurrence except maybe in the frequency in which certain tools occurred. If this is correct, and the assumption is very suspect considering the assumed link between the ceramics and the surface assemblage, then perhaps we can postulate that the ceramics were not present on the sites due to the direct presence of herders (who are believed to have introduced the potting technology) but rather that pottery had been adopted by hunter/gatherers who subsequently occupied the kloof and whose forefathers may have occupied the kloof before them. Likewise the paintings of sheep may have nothing to do with the direct presence of herders in the kloof, but rather were painted by the hunter/gatherers who had adopted ceramics and had very likely seen sheep as well. They

may of course have had sheep but whether they herded them at that stage is not known. We must assume then also that the paintings present in the kloof were executed by hunter/gatherers at different times during the occupation history of the kloof.

The kloof was also occupied during colonial times and this is attested to by the presence of what is most likely interpreted as an ox-wagon painted in a small shelter designated PL 44 (see photograph 53)

How long the kloof had been occupied before the arrival of ceramics and sheep is not clear and won't be until we are able to conduct excavations at some of the sites e.g. PL 18. We may see a time range here for occupation, similar to that at Klipfonteinrand and certainly the presence of Levallois material suggests that the kloof may have been a focus for human activity for many thousands of years.

Exactly how far back painting occurred may never be solved if dating techniques for the pigment are not developed. If we are very lucky, we may at best hope for an "Apollo 11" situation where a section of rock wall with "paintings" on it, had flaked off and fallen onto the surface of the cave to be covered by deposit as time went by. It was possible to date these "paintings" therefore by associated radio-carbon dates for that layer. (Wendt 1976)

If painting did not occur beyond the recent past we face the question why? Is painting a local and natural process in the area, which became a part of hunter/gatherer culture via an evolutionary process, or was the concept introduced from elsewhere as was ceramics and domestic sheep? This is a question we may never be able to answer!

We have tried, via the arguments above, to establish the identities of the painters and at least part of the time span for the kloof's occupation. But there are other factors which must also be considered in the light of the rock art. Factors which will never present themselves in

the lithic or artefactual material. I think here of particular social arrangements within groups who occupied the kloof and subsequently, having established certain social organisation, how these can further aid us in isolating the identity/s of the groups by comparing these social arrangements to ethnographic cases of groups who are believed to have some link with the people whose "remains" we are studying.

Lee (1979) has showed that strict division of labour exists among !Kung bushmen and the equipment used by the sexes also differs accordingly for the work that they are assigned. For example, women often carry sticks which they use to dig up plant foods and men have bows, arrows, quivers, clubs etc as part of their personal equipment. In Chapter 5 Lee describes the equipment in some detail and also illustrates some of this equipment. In fig 5:2 he also shows some common carrying positions of equipment and other goods. (p 131). In the light of this (expecting that the reader is familiar with this data) if we examine Tables 3:2, 3:3 and 3:4, we get some idea of the types of equipment and clothing depicted in/with paintings of humans in the Putsplaagte.

STICKS

If we examine Table 3:8 we see that of the total human sample, 108 were males, 81 females and 844 were not sexable. In the light of these totals, we can see that not much variation occurs between the male and female totals and as such the equipment connotations for male and female images are not expected to be affected by the fact that there are many more males than females.

In Table 3:2 we see that a total of 79 humans were depicted carrying sticks in various ways. Of this total, 19 females and 9 males were depicted carrying sticks.

We can assume then that the depiction of sticks is more common than with female figures and in some cases we see that the way in which this equipment is depicted as being carried, is more common in females than males. For example,

CODE	DESCRIPTION	♂		♀		?		TOTAL	
		f	%	f	%	f	%	f	%
11/22	STICK LEFT HAND	1	4,6	13	59,1	8	36,4	22	100
11/23	STICK RIGHT HAND	4	23,5			13	76,5	17	100
11/22/25	STICK (CURVED) LEFT HAND	1	100					1	100
11/15	STICK IN BAG					17	100	17	100
11/27	STICK OVER SHOULDER	2	11,8			5	71,4	7	100
11/28	STICK IN QUIVER					1	100	1	100
11/20	STICK IN HAND (?)			1	25,0	3	75,0	4	100
11/22/23/26	STICK HELD HORIZONTAL					1	100	1	100
11/23/27	STICK IN RIGHT HAND/OVER SHOULDER			2	100			2	100
13/22/26	STICK WITH WEIGHT/HORIZONTAL/BOTH HANDS					1	100	1	100
13/23	STICK WITH WEIGHT/RIGHT HAND			1	100			1	100
13/22	STICK WITH WEIGHT/LEFT HAND			1	100			1	100
12/22	STICKS/LEFT HAND			1	50,0	1	50,0	2	100
12/15	STICKS IN BAG					1	100	1	100
16/28	STICK (CLEFT) IN QUIVER	1	100					1	100
	SUB TOTAL-STICKS	9	11,4	19	24,1	51	64,6	79	100

TABLE 3:2 (contd.Over page)

CODE	DESCRIPTION	♂		♀		?		TOTAL	
		f	%	f	%	f	%	f	%
1/5	BOW ON BACK					2	100	2	100
1/15	BOW IN BAG	1	50,0			1	50,0	2	100
1/22	BOW/LEFT HAND	2	66,7			1	33,3	3	100
1/23	BOW/RIGHT HAND	3	100					3	100
1/2/23	BOW WITH STRING/RIGHT HAND	4	80,0			1	20,0	5	100
1/2/27	BOW WITH STRING OVER SHOULDER	2	100					2	100
1/6	BOW IN FRONT					1	100	1	100
1/28	BOW IN QUIVER					2	100	2	100
1/22/23	BOW/BOTH HANDS	1	100					1	100
1/20	BOW IN HAND (?)					1	100	1	100
1/2/15	BOW WITH STRING IN BAG	1	50,0			1	50,0	2	100
1/2/22	BOW WITH STRING/LEFT HAND	4	54,1			3	42,9	7	100
1/27	BOW OVER SHOULDER	1	50,0			1	50,0	2	100
3/4/22	TRIPLE CURVE-BOW W/STRING L/H			1	100			1	100
1/7/23	BOW AND ARROWS/RIGHT HAND	1	100					1	100
1/11/27	BOW AND STICK/OVER SHOULDER					2	100	2	100
1/22/26	BOW/LEFT HAND/HORIZONTAL					1	100	1	100
1/2/28	BOW WITH STRING IN QUIVER					1	100	1	100
7/28	ARROWS IN QUIVER					6	100	6	100
7/31	ARROWS IN FLIGHT	1	50,0			1	50,0	2	100
7/15	ARROWS IN BAG	1	100					1	100
	SUB TOTAL BOWS/ARROWS	22	45,8	1	2,1	25	52,1	48	100

TABLE 3:2 (contd. Over page)

CODE	DESCRIPTION	♂		♀		?		TOTAL	
		f	%	f	%	f	%	f	%
1/7/23	BOW AND ARROWS/RIGHT HAND	1	100					1	100
1/11/27	BOW AND STICK/OVER SHOULDER					2	100	2	100
1/22/26	BOW/LEFT HAND/HORIZONTAL					1	100	1	100
1/2/28	BOW WITH STRING IN QUIVER					1	100	1	100
7/28	ARROWS IN QUIVER					6	100	6	100
7/31	ARROWS IN FLIGHT	1	50,0			1	50,0	2	100
7/15	ARROWS IN BAG	1	100					1	100
	SUB TOTAL BOWS/ARROWS	22	45,8	1	2,1	25	52,1	48	100
19/27	CLUB OVER SHOULDER					3	100	3	100
19/23	CLUB/RIGHT HAND	2	66,7			1	33,3	3	100
19/22	CLUB/LEFT HAND	2	66,7			1	33,3	3	100
	SUB TOTAL CLUBS	4	44,4			5	55,6	9	100
	GRAND TOTAL	35	25,7	20	14,7	81	59,6	136	100

TABLE 3:2

EQUIPMENT DEPICTED IN THE TOTAL SAMPLE

sticks carried in the left hand is far more commonly depicted for female figures by a factor of 13:1. We also see that special classes of this equipment type are depicted and this too varies according to the sex of the figure depicted carrying it. For example, the only cleft stick noticed was carried by a male.

BOWS AND ARROWS

Of the 48 figures depicted carrying this type of equipment we see from Table 3:2 that 21 are males and only in one case is a female carrying such equipment. (This one case is a very specialised bow i.e. triple curved or at least resembling this specific bow type. What connotations this has, is not clear at this stage). We can therefore assume that the depiction of bows or arrows with males is well documented in this data.

BAGS AND QUIVERS

From Table 3:3 we see that of the 158 humans carrying this equipment, 8 females carry bags only, and 42 males carry both bags and/or quivers. We see also that bags vary in form and frequency of occurrence with the figures. For example, the only double bag present with a definitely sexed figure, is carried by a female and likewise the only bag depicted on the side of the body is carried by a female.

CLOTHING AND DECORATION

Similarly, we can see from Tables 3:4 and 3:5 that certain clothing and decoration is depicted on figures and also has definite sex connotations. The same is true for the position in which certain anatomical parts are depicted i.e. leg and arm positions. (Tables 3:6 and 3:7)

A problem is encountered in sexing certain figures wearing particular clothing types. For example, the long body kaross usually covers sexual features, though sometimes the nature of the kaross leaves the penis or breasts exposed. (see kaross types - Table 3:4)

CODE	DESCRIPTION	♂		♀		?		TOTAL	
		f	%	f	%	f	%	f	%
5/12	BOB/QUIVER/DIAG	8	34,8			15	65,2	23	100
1	BOB/SINGLE	7	13,5	4	7,7	41	78,9	52	100
1/4	BOB/SINGLE WITH TASSLES	1	12,5	2	25,0	5	62,5	8	100
1/5/10	BOB/SINGLE/QUIVER ABOVE DIAG	21	52,5			19	47,5	40	100
1/5/11	BOB/SINGLE/QUIVER BELOW DIAG	1	100					1	100
2	BOB/DOUBLE			1	7,1	14	93,3	15	100
5/13	BOB/QUIVER/HORIZ	1	20,0			4	80,0	5	100
2/5/10	BOB/DOUBLE/QUIVER BAG BELOW					1	100	1	100
1/9	BOF/SINGLE	2	66,7			1	33,3	3	100
1/5/10	BOF/SINGLE/QUIVER					1	100	1	100
1/4/14	BOF/SINGLE/TASSLES					1	100	1	100
5/12	BOF/QUIVER					1	100	1	100
1/13/14	BOS/SINGLE SIDE & QUIVER					1	100	1	100
1/13	BOS/SINGLE/RIGHT SIDE					3	100	3	100
?	BOS/SINGLE			1	100			1	100
5/15	BOS/QUIVER	1	50,0			1	50,0	1	100
	TOTAL	42	26,6	8	5,1	108	68,4	158	100

BOB - BAG ON BACK BOF - BAG ON FRONT BOS - BAG ON SIDE

TABLE 3:3 BAGS AND QUIVERS DEPICTED IN TOTAL SAMPLE

CODE	DESCRIPTION	♂		♀		?		TOTAL	
		f	%	f	%	f	%	f	%
KA 1	KAROSS FOOT LENGTH					11	100	11	100
KA 2	KAROSS KNEE LENGTH					23	100	23	100
KA 3	KAROSS THIGH LENGTH	13	20,0	4	6,2	48	73,9	65	100
KA 4	KAROSS SLOPES LEFT	12	85,7			2	14,3	14	100
KA 8	KAROSS BUTTOCK LENGTH					1	100	1	100
	SUB TOTAL KAROSS	25	21,9	4	3,5	85	74,6	114	100
CL 1	CLOAK BACK			24	100			24	100
CL 2	CLOAK FRONT			2	100			2	100
CL 3	CLOAK BUTTOCK LENGTH			7	100			7	100
CL 4	CLOAK THIGH LENGTH			3	100			3	100
CL 5	CLOAK CALF LENGTH			5	100			5	100
CL 6	CLOAK ANKLE LENGTH			5	100			5	100
CL 7	CLOAK WAIST LENGTH			2	100			2	100
CL 8	CLOAK			1	100			1	100
CL 10	CLOAK BELOW BELLY			1	100			1	100
CL 11	CLOAK KNEE LENGTH			2	100			2	100
	SUB TOTAL CLOAK			52	100			52	100
OC 3	LOIN CLOTH(BACK/FRONT)					1	100	1	100
OC 4	LOIN CLOTH (BACK)					1	100	1	100
	SUB TOTAL L/C					2	100	2	100
	GRAND TOTAL	25	14,9	56	33,3	87	51,8	168	100

TABLE 3:4 CLOTHING DEPICTED IN TOTAL SAMPLE

CODE	DESCRIPTION	♂		♀		?		TOTAL	
		f	%	f	%	f	%	f	%
DT 7	TASSLES/SHOULDER					4	100	4	100
DT 1/8/9	TASSLES/HEAD (BOTH SIDES)					1	100	1	100
DT 1/10		1	50,0			1	50,0	2	100
DB 2/3/4	BEADS WAIST/KNEE/ANKLE					4	100	4	100
DB 1/2/3/4	BEADS NECK/WAIST/KNEE/ANKLE					2	100	2	100
DBA 7	BANDS AROUND KNEE					4	100	4	100
H 9	HEAD	1	33,3			2	66,7	3	100
H 10	HEAD					2	100	2	100
	TOTAL	2	9,1			20	90,9	22	100

TABLE 3:5 DECORATION DEPICTED IN THE TOTAL SAMPLE



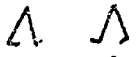
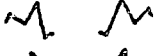



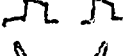


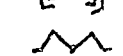


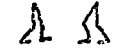
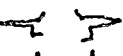

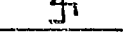

CODE	DESCRIPTION	♂		♀		?		TOTAL	
		f	%	f	%	f	%	f	%
BL 1		4	26,7	3	20,0	8	53,3	15	100
BL 2/10		25	16,0	51	32,7	80	51,3	156	100
BL 3/11		43	24,6	11	6,8	121	69,1	175	100
BL 4/12						4	100	4	100
BL 5/14		5	31,3			11	68,8	16	100
BL 6/13		2	28,6			5	71,4	7	100
BL 16/17		4	36,4			7	63,6	11	100
BL 36/35						1	100	1	100
BL 19/18		2	7,7			24	92,3	26	100
BL 21		1	50,0			1	50,0	2	100
BL 22/23		1	12,5			7	87,5	8	100
BL 24						3	100	3	100
BL 25/26		1	20,0			4	80,0	5	100
BL 27/28		2	33,3			4	66,7	6	100
BL 29/30		2	50,0	1	25,0	1	25,0	4	100
BL 31/32						1	100	1	100
BL 33/34		2	66,7			1	33,3	3	100
BL 15		1	100					1	100
TOTAL		95	21,4	65	14,6	284	63,9	444	100

TABLE 3:6

LEG POSITIONS DEPICTED IN THE TOTAL SAMPLE

ever seen in the Western Cape i.e. the body of an eland directly above and within the outline of another. 14 of the eland here are crayon drawings of whole animals which also is an unusual feature. 2 of these are partly superimposed on top of the superpositioned eland torso previously described. The identification of these crayon animals as eland, has been achieved by the presence of horns on two of the animals and the presence of dewlaps and humps on several others.

There is good evidence here for two styles of eland drawing i.e. the whole crayon animal and the normal torso type. It seems then also that this site has a particular association with eland or at least the drawing of eland and at more than one period of time in the kloof's history. On the basis of the evidence at these two sites, it can be suggested that eland in some cases have a special, though enigmatic connotation. In the case where one or two of these animals are depicted in occupation sites, the connotation may not be the same i.e. this may well reflect the dietary input of these animals.

From Table 3:10 we see that elephant, where they are painted in any frequency, are related to occupation sites.

In the same way as eland are believed to have special meaning in some cases, certain other animals can be seen as related to social events or belief systems as well. For example, the rhebuck. This statement is made on the basis of 3 of the 4 rhebuck of the total sample occurring as part of what is probably a trance dance at PL 45. As Biesele (1978:930-931) notes when talking about the concepts of trance: "Essentially, these experiences consisted in a movement from this world to the beyond, a movement accomplished by the 'strong' metaphors of animals: it is animals, imbued with !gi and possessed by medicine men, which have the power to transform". Once the medicine man has, by the animal metaphor, transcended the restrictions of ordinary people, he can cure the sick. All these supra-normal experiences

are sustained by !gi: which is derived from the zoomorphic metaphors of potency and activated by the dance. But again this can only be suggested for animals which are related to trance scenes.

The other animals in Table 3:9 are suggested to be related to sightings or to their dietary input.

One important point which should not go unmentioned, is the frequent lack of sexual characteristics both primary and secondary on animals painted. No sexual organs are ever depicted on males and animals are frequently painted without horns, denying the use of that sex difference among certain animal species i.e. rhebuck. Both male and female eland have very similar horns (the female being slightly smaller) and so the presence or absence of these on this animal when painted are not likely to make much difference sex-wise. At PL 56, however, two of the crayoned animals had horns depicted.

Recently, while viewing a wildlife film, the author noted that young eland, while resembling the adults in most ways, (except size) did not show the presence of horns. It could then be, although this is stated with some reservation, that the crayoned eland at PL 56 consist of two adults and twelve youngsters.

No elephant in the Western Cape paintings is ever depicted as having tusks, and it is possible that this is related to the dietary options available to these animals in certain areas of Southern Africa (Manhire 1981:34).

In PL 15 two animals have been drawn with crayon on the rock wall. On the basis of the horn shapes, these have been identified as bontebok. (Damaliscus dorcas dorcas) and a roan antelope (Hippotragus equinus) Bontebok are very infrequently recognisable in the paintings of the Western Cape and certainly the roan is the only one to have been recognised in the paintings. Bontebok are present in the faunal remains at Elands Bay cave

suggesting that it could and did survive in the Sandveld environment. There is no reason therefore why they should not have survived in the mountains. The style in which they are executed suggests that they may be allied to the 14 eland at PL 56. Van Bruggen (1959:199) notes: "the bleubuck (Hippotragus leucophaeus) never occupied a large area in the Cape, since the scanty records available show that it occurred only in the Karroo districts and southern parts of the Cape Province. Various early travellers and naturalists reported having seen this buck but none mentions them in large numbers or even small herds." This was one of the first antelope species to be exterminated in South Africa and had disappeared by the beginning of the 19th century. The fact that the horns are a similar shape to those of the bloubok must be mentioned. If one compares photographs of roan (Dorst and Dandelot 1972:88) and sable (Hippotragus niger) we see that sable antelope has a much longer set of horns and both have substantial bodies. Van Bruggen presents a photograph of a bloubok (Hippotragus leucophaeus) and clearly the horns are fairly substantial but the animal is generally small in size and the body is not pronounced in any way. From this evidence and comparing the above species to the photograph of the animal in PL 15, (PART I) it seems likely that this is a roan antelope. Skead (1980:556) notes that the roan does not appear to have penetrated to any extent into the western and south-western Cape but clearly we have the case of one being seen in the area of the Putslaagte, if not in the kloof itself.

It seems significant that two rarely painted and rarely seen antelope are the only animals, and in fact, the only true drawings which occur at PL 15 since the rock surface is good and the site lies directly opposite PL 18.

In Table 3:9 certain other animals are mentioned as being painted. While common names are cited these can be further identified by examining historical records and habitat preferences.

The Rhino is likely to be a black rhino (Diceros bicornis) (see Du Plessis, S.F. in Skead 1980:276). The Zebra (Equus zebra) or true quaggas (Equus quagga). It is difficult to be precise. Certainly the equids painted show stripes on the neck and as such may be Equus quagga. John Barrow (in Skead 1980:331) writing of a trip he made to the Vanrhyndorp/Calvinia area, mentions seeing both quagga and zebra and this was in 1798. It suggests that 2 types were still present in this area at that time and conceivably the paintings could date from after this time. Van Bruggen (1959:198) presents two photographs of quaggas (one male and one female) and it can be clearly seen that stripes only occur on the neck. (A photograph of some of the equids and one with stripes on the neck is presented in one of the photographs for PL 18 in PART I).

The hyena is clearly Crocuta crocuta (spotted hyena). A photograph of the painted animal is available in PART I in the description of PL 13.

The Hartebees are likely to be red Hartebees. Some confusion reigns in its scientific name. Skead (1980:554) uses Alcelaphus buselaphus (Pallas 1766) whereas Dorst and Dandelot refer to it as Alcelaphus caama (G. Cuvier) and say that it is conspecific with the Bubal Hartebees which they term (Alcelaphus buselaphus) but which has a different habitat preference to the red Hartebees. Nevertheless the Alcelaphines painted are probably red hartebees.

The aardvark (Orycteropus afer) is the smallest animal painted in the kloof. (see photo PART I PL 53). 4 of these animals are painted in a group suggesting that this may be a female and youngsters. In other situations they occur singly (Dorst and Dandelot 1972:151). Females regularly return to the same burrow. They feed at night usually and almost exclusively on ants and termites. They have powerful claws with which they dig out termite mounds to get at the insects with a long tongue.

It is believed that the clay for some pots may derive from

termite mounds. Would it not be likely that the presence of this otherwise insignificant animal would be more noticed if people were using the already broken down termite hills as a source of potting clay. In other words, the aardvark had already done some of the work in preparing the clay and this was recognised by the San who recorded this recognition in the paintings?

HANDPRINTS IN THE KLOOF

A total of 113 handprints occur in the total sample. It is not intended to present detailed breakdowns of these images but rather just to note their presence.

These images occur at 9 recorded sites and at 1 unrecorded site and the sites in which they occur can be found by examining Table 3:1. From this table we can see that there is no relationship between this and any other image type, or to the presence of artefacts of any type.

The highest number of handprints occurs at PL 56, i.e. 50 and it is tempting to relate this occurrence to the high frequency of eland which also occurs at this site. However this relationship is not borne out at any other site. The occurrence of handprints can at best be said to be a factor of the use of the same sites by people who painted this image, and people who painted other images and we notice that in only 2 cases handprints are the only images that occur at those sites. i.e. PL 16 and 48. It would be tempting from this to relate the handprints at PL 16 to the artefact scatter but this cannot be done unless we can date the artefact scatter and the handprints in some definite way. As it stands the 2 may be totally unrelated. Manhire (1981) has proposed that handprints are related to herders and pottery. There is no evidence from the Putslaagte to bear out this proposal. It should be mentioned that no decorated handprints occur at any of the sites in the kloof and these are executed by painting the hand with pigment and then applying it to the wall leaving a positive print.

Recently, the third year archaeology class at U.C.T. (1981) did some statistical tests on handprints and their relation to other images and artefactual material, specifically pottery. (Bester, A and Graham T, 1981; Atmore, J, Elzinga, W and Law, J, 1981). The tests were conducted on only selected features of the art and selected artefacts. All that can come of such tests are unusable relationships and associations. All we can really show is that the same sites were used by different groups (not necessarily culturally different) during the sites' history and as such tests of this nature should be viewed with suspicion with the absence of dating methods.

THE TOTAL ROCK ART SAMPLE FROM THE PUTSLAAGTE AND COMPARISONS
WITH OTHER SAMPLES

Table 3:11 lists the total sample and shows the frequency occurrence of the different image classes within the sample.

Rock art samples are usually made in selected areas and often do not reflect total environment and ecological units i.e. a total mountain sample versus a total Sandveld sample. Comparison of different size samples therefore can be dangerous if one draws any final conclusions about the different representations of different image types.

It is clear that we only have to miss a site, which for arguments sake has an above average number of particular images, to make the total sample reflection null and void. Samples also reflect the different preservation of paintings in different areas i.e. if a human or animal figure fades completely, it leaves us with a distorted view of what remains and the way in which the recorder breaks down or sexes certain images. While realising that problems exist, we can compare the Putslaagte sample to those of other areas but no final conclusions will be drawn.

Table 3:11 shows a comparison of the Putslaagte rock art data with the data from Van Rijssens' Olifants River sample and Manhires' Sandveld sample.

These two samples presented all the required classes whereas Maggs' 1967 Pakhuis samples do not mention the inanimate class making it difficult to use for comparative purposes.

The Sandveld and Olifants River samples are far larger than the Putslaagte sample and therefore probably are representative of whole areas rather than the Putslaagte which could be classed as a single ecological unit of a whole area.

Nevertheless the comparison shows that the only significant

SAMPLE	HUMAN		ANIMAL		HANDPRINT		INANIMATE		TOTAL	
	f	%	f	%	f	%	f	%	f	%
PUTSLAAGTE	844	47,2	147	8,2	113	6,3	686	38,3	1790	100
SANDVELD	2171	31,2	610	8,8	2218	31,6	1964	28,2	6963	100
OLIFANTS RIVER	2374	45,3	697	13,3	144*	2,7	2030*	38,0	5245	100

* Not stated exactly : Extrapolated

SANDVELD SAMPLE - AFTER MANHIRE 1981

OLIFANTS RIVER SAMPLE - AFTER VAN RIJSSSEN 1980

TABLE 3:11 COMPARISON OF ROCK ART SAMPLES

difference occurs in the frequency with which handprints occur in the total sample. i.e. 6,3% Putslaagte, 2,7% Olifants River and 31,6% Sandveld. There seems to be a definite predominance of handprints in the Sandveld.

Table 3:12 shows the same samples compared for human elements. Examination shows that not much difference exists in the male component of all 3 samples but the frequency with which females are depicted does differ i.e. Putslaagte 9,6%, Sandveld 1,8% and Olifants River 4,1%. We have mentioned the division of labour which is evident from the equipment in the paintings. Recognising this now leads us to consider the apparent increase in the percentage of females in the Olifants River and Putslaagte samples. We have spoken about groups being forced to the base of the food chain in marginal areas as a result of influx of Khoi herders and their stock. Does the increase in the females painted indicate a greater recognition of the position of the female as a now more important link in the acquisition of essential plant foods. In other words, the emphasis shifted from hunting and the position of the male, to some extent, and began concentrating more on the part played by the female in the "new" subsistence strategy? Does this bear out the increase in adze frequencies in the mountains, and reinforce the idea that adzes are primarily related to digging stick manufacture and maintenance if we assume that perhaps maintenance is done by the user i.e. females?

As mentioned in the artefact section, aspect and altitude do not affect the choice of sites.

SAMPLE	MALE		FEMALE		INDETERMINATE		TOTAL	
	f	%	f	%	f	%	f	%
PUTSLAAGTE	108	12,8	81	9,6	655	77,6	844	100
SANDVELD	208	9,6	38	1,8	1925	88,7	2171	100,1
OLIFANTS RIVER	232	9,8	98	4,1	2044	86,1	2374	100

TABLE 3:12 COMPARISON OF THE HUMAN ELEMENT

THE ROCK ART OF THE PUTSLAAGTE AND ITS WIDER IMPLICATIONS

Apart from just providing evidence about the occupation of the kloof, the rock art can provide the basis for looking at links (direct and indirect) between various areas, sometimes far apart geographically. We have mentioned sheep and their significance at an earlier stage, but there are some other aspects which provide us with information about the use of the area by certain groups and in some cases we can probably even identify paintings done by the same artist in different areas.

"GROUP" SCENES

Maggs (1971) has discussed this phenomenon in some detail. Briefly, these consist of groups of figures sitting close together apparently in shelters or in caves, and often equipment is depicted hanging from pegs or from the "roof" of the enclosure. This seems to be a phenomenon of the paintings of the Mountains i.e. The Pakhuis pass area, Teekliphuis, Kleinkliphuis and at least one can be found in the Putslaagte, although the figures here are not too clear. (For examples of some of the Pakhuis group scenes see - Rock Art - Elizabethfontein, 1980 3219 AA 17 (RHINO CAVE) and 3219 AA 18 (ELEPHANT CAVE)).

The group scene in the Putslaagte occurs in PL 52 and photographs of this can be found in the site description in PART 1. At present the precise significance of these types of image are not clear but could have cultural or group significance. The style of execution of these scenes varies to some degree and it cannot be said that they are representative of the same group. But it is certain that they occur only in a small geographical area i.e. the mountains of the Northern Cedarberg and areas close to them. It is possible that these types of paintings are late in the sequence and are the product of new felt pressures from two quarters i.e. herders and European colonists. If the latter pressure was the reason we may understand the distribution more clearly. The Cedarberg mountains would provide a refuge situation for San and perhaps Khoi as well

in some instances. San who had previously existed in the Sandveld could not stay there or visit the area any longer since the presence of white settlers and commandos made them susceptible to attack. It is possible that we are seeing a phase of painting not present in the Sandveld i.e. some of the mountain paintings are younger than any of the Sandveld ones because of the refuge situation similar to that which occurred in the Drakensberg in the 19th Century. The high frequency of trance scenes in the mountain art may, as Van Rijssen (1980) has noted, have been the result of increased stress and the accompanying social tensions.

PAINTINGS APPARENTLY DONE BY THE SAME ARTIST OR IN A
VERY STANDARDIZED STYLE IN DIFFERENT GEOGRAPHICAL AREAS

There occurs in Site PL 18, two types of figures which can be related to similar ones in other areas.

A group of 6 figures one depicted in bright red carrying bags and quivers. They all have beads around the neck, waist, knees and ankles, executed in white. (see detail of 1 figure in PART I as well as figure from Driehoek Cave near Clanwilliam). An almost exact replica of these figures occurs at Driehoek Cave near Clanwilliam. Clearly we are talking about a direct link between the Putslaagte and this area of Clanwilliam.

The other figures are 3 females with large buttocks, pendulous breasts and raised and bent right arms. These females are remarkably similar to a female figure seen at Cave below Hunters (3219 AA 10) on the farm Elizabethfontein. (photographs of the females in PL 18 are available in the site description in PART I. Unfortunately the reader will have to consult the volume ROCK ART - ELIZABETHFONTEIN, 1980 for a photograph - VII in the report of 3219 AA 10).

Other similarities are noticed in clothing types and equipment in the Teekliphuis, Elizabethfontein areas but these will have to wait until more time can be spent studying these features.

HANDPRINTS

We have already mentioned that 113 of these enigmatic images occur in the Kloof. All are plain i.e. full hands for the most sometimes having the thumb missing and occasionally showing a clear spot in the area of the palm where this part of the hand has not been able to be impressed against the rock. No attempt was apparently made to fill in this area after the imprinting.

Handprints in the Putslaagte are frequently superimposed on other paintings and in no case is anything superimposed

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over a handprint. This was also noticed by Manhire (1981) in the Sandveld handprint sample.

This superimposition state suggests that these images are late in the sequence of paintings.

The other type of handprint which is not as common, is the decorated handprint. The decoration usually occurs on the palm and it appears as if the pattern was made by removing paint from the hand and then impressing the hand on the wall. The patterns which are commonly seen consist of U-shaped lines on the palm i.e. the handprints at Elands' Bay Cave, lines which begin below the fingers and slope away to the side of the hand.

Less common are handprints with vertical striations on the palm, a shield shape on the palm, or a vertical "zeppelin" shape on the palm. The latter two appear to be modifications of the natural clear patch which often occurs. These may have been accentuated by adding pigment after imprinting on the wall.

The shield, vertical "zeppelin" and vertical line decoration was noticed at Handprint Cave (3219 AA 15) (Rock Art Elizabethfontein, 1980). These are not common and are the only types that the author has seen in the mountains.

The U-shape motif is common in the Sandveld (Manhire 1981:53) but also occurs in the mountains in lower frequencies. The author and John Lanham have visited sites near the farm Papkuilsfontein, about 30 km north-west of the Putslaagte, which show both the U-shaped and the sloping striation decoration patterns. Van Rijssen (pers comm) recently noted the presence of decorated handprints across the Doring River towards Van Rhynsdorp. As mentioned in an earlier section, he has also noted the presence of decorated handprints in a cave near Stanford in the Southern Cape (near Gansbaai). Decorated handprints are also found near Port Elizabeth and are of the sloping striation decoration type.

There will be other sites showing this type of decorated handprint, and these must be found, for clearly this motif has a greater significance than may have been realized.

While the evidence is still patchy in this respect, it is tempting to suggest that the U-shape and sloping striation decoration on handprints may be related to Khoi herders and was only introduced to the western and southern Cape after 2000 B.P. along with potting technology and domesticated sheep. What the exact meaning the handprint had for the Khoi cannot be suggested. Whether the U-shape and the sloping striation type were introduced at the same time or by the same group is also not clear.

Willcox (1959) has presented the case for the common undecorated handprint which indicates that these are made by people who are physically Bushmen. Maggs (1967) has also conducted tests on the length of the painted handprints and agrees with Willcox i.e. that they indicate execution by physically Bushmen type people. Unfortunately none of these two authors mention the measurement of decorated handprints. Manhire does not mention any handprint lengths.

A test was conducted on the 35 measured handprints at PL 56. (These were not measured with extreme accuracy as they probably should have been). Nevertheless, 22 were 14 cm long, 7 were 15 cm long, 4 were 16 cm long, 1 was 14,5 cm and 1 was 13 cm long. An average length of 14,38 cms was obtained with a standard deviation of 1,12. This mean length is almost identical to the 14,40 cm obtained by Maggs and multiplication by the factor of 1,112 suggested for the conversion the actual hand length a result of 15,996 cm was obtained, very similar to the 15,94 cm obtained by Willcox and almost identical to the 16,01 cms obtained by Maggs.

Tracings of two handprints with shield and "zeppelin"

decoration pattern marks on the palm are presented in the report of Handprint Cave, Elizabethfontein (3219 AA 15). Measuring of a tracing may be dangerous, nevertheless these two showed lengths of 14,7 cm shield shape and 14,3 cm vertical "zeppelin" shape, both within the Bushman physical type average. Manhire's measurements for U-shape decorated handprints were not available at the time of writing but these results are awaited with interest.

What we can say is that many of the plain and certain decoration type handprints were executed by Bushmen. If the other decorated handprints are Khoi related then it seems likely that this new image was copied by San artists and included in the image repertoire perhaps to the detriment of other naturalistic paintings. Admittedly, much of what has been said here is hypothetical but hopefully it will prompt others to research this aspect in greater detail in the future-

CONCLUSION

Many aspects have been discussed during the course of this thesis. Many of the ideas are likely to be controversial but hopefully not too much so.

It became clear to the author that a study of site patterning on the micro-scale as was attempted for the Putslaagte, requires a new set of recording techniques to be adopted. Whole scatters of artefacts must be sampled to eliminate the spatial distribution of artefacts within scatters which can affect the results of small selective samples. This could also apply to the macro-scale level of archaeology where comparisons of artefact components of sites from different geographical areas are made.

The study of rock art must also be standardized and a case has been presented to show the results which can be gained using a coding system without the use of a computer. Clearly a coding system is necessary too to eliminate personal bias and to enable the use of computer analysis of much greater volumes of material than is possible at present.

The evidence from the Putslaagte indicates its use as a focus for human occupation for many centuries with an increased focus being noticed after the arrival of Khoi herders and white colonialists in the Western Cape. The evidence bears out the increased dependence on plant foods and the increase of equipment related to the exploitation of these plant foods.

It has been suggested that items of the rock art not found in the Sandveld are present in the mountains because of their use as a refuge during the latter years after colonisation by white settlers began and is later than the elements found in the Sandveld. The increased frequency of females depicted in the mountain art is suggested to imply that recognition of the female in San society became

more important and recognised because of their role as the suppliers of plant foods to the band. The increased level of social tension is probably evidenced by frequent depictions of trance scenes and the occasional fighting scene.

With the arrival of Khoi pastoralists came new inputs into San culture. i.e. pottery, possibly some decorative items and sheep, but apparently not changing the basic hunter/gatherer strategy that had been the way of life for many centuries.

Rock art and artefact scatters are probably associated.

There are many aspects which can be studied to increase our knowledge of this important section of the prehistory of Southern Africa, and the results of further research in this field are awaited with great interest.

The Putslaagte is a unique situation in the Western Cape and can be examined in even more detail. Excavations must be carried out here and examinations of other sites and similar situations along the Doring Rivier will provide interesting tests of some of the ideas put forward in this thesis.

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	H		S		QZ		QTZ		CCS		TOTAL	
	F	%	F	%	F	%	F	%	F	%	F	%
CHIPS/CHUNKS	724	58,0	10	0,8	127	10,2	325	26,0	63	5,0	1249	100
FLAKES	849	65,0	33	2,5	95	7,3	224	17,2	105	8,0	1306	100
CORES	48	46,2	6	5,8	15	14,4	33	31,7	2	1,9	104	100
UTILIZED	58	80,5	1	1,4			3	4,2	10	13,9	72	100
PIECES ESQUILLEES	9	50,0	2	11,1			6	33,3	1	5,6	18	100
SCRAPER	2	10,5	2	10,5			6	31,6	9	47,4	19	100
ADZE	64	76,2	4	4,8					16	19,0	84	100
M.R.P.	8	66,7	2	16,7			1	8,3	1	8,3	12	100
TOTAL	1762	100	60	100	237	100	598	100	207	100	2864	100

TABLE 4:VIII

PERCENTAGE RAW MATERIALS IN SELECTED ARTEFACT CLASSES - TOTAL FOR ALL SITES (EXCLUDING PHILLITE)

SITE PL	H	S	QZ	Q	CCS	P	KM'S
1	64,8	1,3	30,6	0,8	0,8	1,5	0,1
5	75,4	2,7	11,2	4,8	4,8	1,1	0,5
8	69,1	1,5	8,2	15,5	4,6	1,0	2,25
16	63,5	1,9	8,3	18,6	7,7		2,6
18 (a)	62,9	2,6	4,6	21,8	6,8	0,7	2,9
18 (b)	76,6	1,8	3,6	11,3	6,2	0,6	2,9
46	61,9	1,1	1,4	27,3	8,4		6,25
26	42,7	3,7	2,5	41,5	9,7		7,6
60	52,6	1,5	3,7	29,9	12,3		7,7

TABLE 4:1X

PERCENTAGE RAW MATERIALS PER SITE AND DISTANCE
FROM THE MOUTH OF THE PUTSLAAGTE IN A STRAIGHT
LINE

H		S		QZ		Q		CCS		TOTAL	
F	%	F	%	F	%	F	%	F	%	F	%
1775	61,1	60	2,1	256	8,8	608	20,9	207	7,1	2906	100

TABLE 4:X PERCENTAGE RAW MATERIAL OF THE TOTAL SAMPLE FOR ALL ARTEFACT CLASSES (EXCLUDING PHILLITE)

CLOTHING																									
KAROSS		FOOT LENGTH	KNEE LENGTH	THIGH LENGTH			NOTICED	NOTICED	BUTTOCK LENGTH	WAIST LENGTH	COLOUR														
	KA	1	2	3	4	5	6	7	8	9															
CLOAK		1	2	3	4	5	6	7	8	9	10	11													
	CL	BACK	FRONT	BUTTOCK LENGTH	THIGH LENGTH	CALF LENGTH	ANKLE LENGTH	WAIST LENGTH		BELOW BELLY	KNEE LENGTH	FOOT LENGTH	COLOUR												
OTHER CLOTHING		SLEEPING BAG	NAKED	LOIN CLOTH	BACK	FRONT	COLOUR																		
	OC	1	2	3	4	5																			
DECORATION																									
BEADS		NECK	WAIST	KNEE	ANKLE	COLOUR	NUMBER																		
	DB	1	2	3	4																				
BANDS		NECK	WAIST	ELBOW	WRIST	ANKLE	HEAD	KNEE	COLOUR	NUMBER															
	DBA	1	2	3	4	5	6	7																	
TASSLES		HEAD	WAIST	WRIST	ELBOW	KNEE	ANKLE	SHOULDER	LEFT	RIGHT	BACK	FRONT	COLOUR	NUMBER											
	DT	1	2	3	4	5	6	7	8	9	10	11													
EQUIPMENT.		BOW	WISRING		WISRING	BACK	FRONT	ARROWS	ARROWS IN FLIGHT	STICK	STICKS	WHISK	STICK W/WEIGHT	IN BAG	CLEFT STICK	CLUB	IN HAND	IN QUIVER	LEFT HAND	RIGHT HAND	CURVED STICK	HORIZONTAL	OVER SHOULDER		NUMBER
	E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
BAGS ON BACK		SINGLE	DOUBLE	TASSLES	QUINER	TASSLE	WITH STRAP						COLOUR	NUMBER											
	BOB	1	2	3	4	5	6	7	8	9	10	11													
BAGS ON FRONT		SINGLE	DOUBLE	TASSLES	QUINER	TASSLES	WITH STRAP						COLOUR	NUMBER											
	BOF	1	2	3	4	5	6	7	8	9	10	11	12												
BAGS ON SIDE		SINGLE	DOUBLE	TASSLE	QUINER	TASSLE	WITH STRAP	SMALL	LARGE	LEFT SIDE	RIGHT SIDE			COLOUR	NUMBER										
	BOS	1	2	3	4	5	6	7	8	9	10	11	12												

CODING: CLOTHING, DECORATION, EQUIPMENT.

CODING PROCEDURE: HANDPRINTS

SIDE		LEFT	RIGHT	INDET				
	HS	1	2	3				
ANGLE		VERTIC	HORIZ	FINGERS +45° -45°	FINGERS +45° -45°			
				LEFT	RIGHT			
FINGERS	HA	1 OPEN	2 CLOSED	3 THUMB MISSING	4			
	HF	1	2	3				
DECORATION								NONE
	HD	1	2	3	4	5	6	

*NOTE SP : OVER HUMAN: ANIMAL: HANDPRINT: FINGERDOTS: SHAPE:

23 AUG 1982