

THE 1983 SEASON AT 'AIN GHAZAL: PRELIMINARY REPORT

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Introduction

The second campaign of excavations at 'Ain Ghazal began on June 17 and lasted until 11 August, 1983. A two-week extension of the season ensued in one of the excavation trenches for the removal of a spectacular cache of human statues and busts (see below).

The primary goals of the 1983 season were twofold. The first was to link up the excavation areas of the first season in 1982, which entailed a 55.00 m. long trench extending from SQ 3073 (the stratigraphic Step Trench) in the south to SQ 3083, the northernmost probe of the 1982 effort.¹ In addition to providing the means of correlating stratigraphically the disparate 1982 trenches, this plan would also greatly increase horizontal exposure of the east central portion of the site to provide an enhanced appreciation of contemporary use of building and work space as well as to provide a basis for investigating spacial variation in several features of economic, technological, and social aspects of the residents of the village.

The second major goal was to investigate more closely the size of the settlement by digging test trenches along the uphill edge of the site to locate the westernmost structures built by the Neolithic community.

Preliminary Results

The 1983 season was successful beyond any expectations. The following sections provide a brief summary of the preliminary analyses of the recovered data.

1. Site Size.

At the end of the 1982 season, the size of 'Ain Ghazal was estimated to cover 12 hectares. This estimate was based firmly on visible walls and floors exposed in a 600.00 metre (N-S) composite of bulldozer cuts associated with highway construction and commercial development. The east-west axis was less securely based on the distribution of relatively dense scatters of Early Neolithic flint tools and debitage which ranged uphill for some 200.00 metres from the highway.

Nine test trenches of varying sizes probed two areas in the uphill section of the site in an effort to locate PPNB structures. These trenches were located along the transect investigated by Dr. B. Frohlich's resistivity survey in mid-1982, and the test probes were placed near one maximum and one minimum anomaly reading of his results.

The trenches at ca. 200.00 metres west of the highway encountered culturally sterile Pleistocene clay approximately one metre below groundlevel. Around 40.00 metres downslope to the east of these probes, a series of seven test pits revealed a series of potsherds (possibly Chalcolithic through Byzantine periods), flint artefacts (many of which were heavily abraded), and an undateable stone wall running downslope. Finally, at approximately two metres below surface level, PPNB flints and small pieces of burnished and red-painted plaster occurred in association with an ashy matrix. Although this material is evidently not *in situ*, the context clearly indicates that the flints and flooring material must have come from up the slope,

¹ G. Rollefson, The 1982 Season at 'Ain Ghazal: Preliminary Report, *ADAJ*, XXVII (1983) p. 1-16.

demonstrating that the settlement ranged beyond 160.00 metres west of the highway. This would result in an area of approximately 10 hectares (25 acres) for the village west of the Zarqa.

Although a systematic regional survey of the 'Ain Ghazal vicinity is planned for the 1984 season, casual walkabouts in 1983 revealed that the 'Ain Ghazal settlement also extended on the *eastern* bank of the Zarqa River. Numerous walls were detected, and one plastered floor with red painting (replastered once) was located near the northern end of a promintory. Flints and ashy soil cover about 1-1.5 hectares (2.5-3.7 acres) in this part of the village. The combined total for both areas of the site is 11-11.5 hectares (27-28 acres).

2. Artefacts

a) Chipped Stone Artefacts

The 1983 season was extremely productive in terms of flint artefacts, numbering an estimated quarter-million pieces (including microflakes and chipping debris). Analysis of this material is currently underway, although a preliminary sample of approximately 5% of the *in situ* material has been sorted and analyzed.

Table 1. Composition by major artefact class of the chipped stone artefacts in a random sample from the 1983 season at 'Ain Ghazal (Jordan).

<i>Class</i>	<i>n</i>	<i>%</i>
Blades	3782	24.8
Bladelets	939	6.2
Flakes	4524	29.7
C.T.E.	330	2.2
Burin spalls	61	0.4
Paleolithic	13	0.1
Microflakes	2484	16.3
Other	35	0.2
Debris	2970	19.5
Cores	94	0.6

Tools	(764)	(5.1)
Total	15,232	100.0
Blades	4721	48.3
Flakes	4950	50.7
Cores	94	1.0
Tools	(764)	(7.9)
Total	9765	100.0
Blades	4721	48.8
Flakes	4950	51.2
Total	9671	100.0

Table 1 provides a tabulation of the major artefact class in the analyzed sample. It is interesting to note that the relative frequencies of core trimming elements ("C.T.E."), cores, and debris are not significantly different from the intensively analyzed *in situ* samples from 1982.² The blade-flake ratio, however, is significantly different beyond the .001 level for the SQ 3079 vs. the 1983 sample and for the SQ 3067 vs. the 1983 sample, indicating some specialization in tool manufacture in the two 1982 areas. Two areas in the 1983 excavations also appear to have been specialized knapping areas: one locus in SQ 3073 produced only 139 blades vs. 453 flakes, and another locus from SQ 3075 produced 909 flakes and only 70 blades.

Table 2. Typological composition of a random sample of chipped stone tools from the 1983 season at 'Ain Ghazal.

<i>Tool Type</i>	<i>n</i>	<i>%</i>
Projectile points	63	11.2
Sickle blades	56	9.9
Bifaces	7	1.2
Knives	6	1.1
Burins	152	27.0
Perforators	35	6.2

G. Rollefson and K. Abu Ghuneima, Technological Analysis of Blades and Flakes from 'Ain Ghazal, *ADAJ*, XXVII (1983) p. 461-470, L.

Villiers and G. Rollefson, Excavations at the PPNB Village of 'Ain Ghazal (Jordan), 1982, *Mitteilungen der Deutschen Orient Gesellschaft*, in press.

Drills/reamers	28	1.2
Drills or point tangs	7	1.2
Scrapers	20	3.6
Raclettes	2	0.4
Endscrapers	7	1.2
Steep Scrapers	7	1.2
Denticulates	38	6.7
Notches	37	6.6
End-notched blades	6	1.1
Wedges	38	6.7
Chisles	1	0.2
Axe/adze/celt	3	0.5
Choppers	9	1.6
Tanged blades	9	1.6
Chamfered blades	4	0.7
Backed blades	10	1.8
Truncated blades	10	1.8
Truncated flakes	6	1.1
Lunates	1	0.2
"Other"	1	0.2
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Total, shaped artifacts	563	100.0
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Retouched blades	58	(7.6)
Utilized blades	80	(10.5)
Retouched flakes	15	(2.0)
Utilized flakes	32	(4.2)
Unclassifiable (too damaged)	16	(2.1)
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Total tools	764	

The number of tools in the analyzed sample from 1983 is relatively low (5.1%) compared to 1982, and Table 2 also reveals that there are considerable differences in the relative frequencies of specific tool types compared to the 1982 sample. Projectile points, for example, are much better represented in the more recent season, while burins have taken on a more modest importance. Of note in Table 2 is the lunate microlith with unidirectional backing retouch (Fig. 1: f), found in redeposited fill in SQ 3083. This is very tentative evidence that pre-Neolithic occupations may occur at 'Ain Ghazal, at present still covered by the main village cultural accumulation.

The sickle blades from 1983 continue to maintain the pattern witnessed in the first year's analysis: although many relatively short fragments were found in 1983, these are apparently broken pieces of originally long intact blades used singly, not truncated segments used in a composite tool. Two examples from the recently concluded season indicate two hafting methods. One sickle blade had a unifacially retouched tang (Fig. 1: j), while another still retained asphalt at the unretouched proximal end which in turn preserved small wood fragments from the handle. On the latter specimen, the angle of the grain of the wood and the pattern of sickle gloss indicate that the blade had been set at an angle to the long axis of the handle. As was noted in 1982, many of the sickle blades have sickle gloss on both lateral edges. (it might be mentioned here that one flint knife also retained asphalt on the proximal end of the blade).

Table 3. Projectile point types in a sample from the 1983 season at 'Ain Ghazal.

Type	n	%
Abu Ghosh	25	36.2
Simple tang	19	27.5
Bifacial tang "Jericho"	11	15.9
Leaf-shaped	6	8.7
Other	4	5.8
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Subtotal	69	99.9
Unidentifiable	3	(4.2)
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Subtotal	72	
Arrowheads	10	12.2
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Total	82	

Projectile point types are presented in Table 3.³ The point typology used here is tentative, based on the tang retouch for spear points, and does not strictly conform to other analytical typologies.

³ Note that the total in Table 3 includes 19 more projectile points than are tabulated in Table 2.

The augmented material comes from unanalyzed flint samples in order to increase the projectile point sample size.

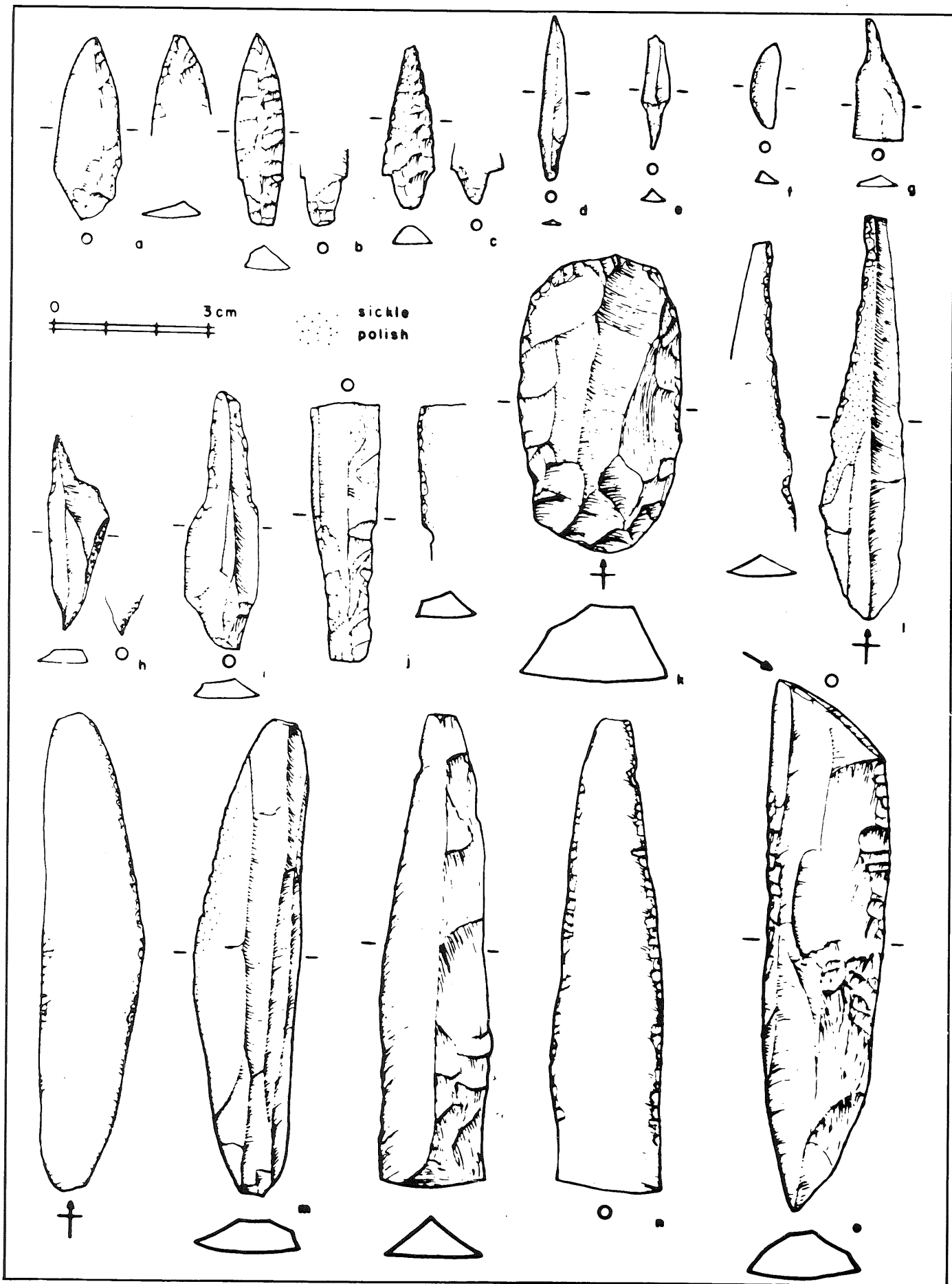


Fig. 1: Chipped stone tools from 'Ain Ghazal 1983. a-e: arrow-heads. f: lunate microlith. g-h: drills. i: borer, j, l-m: sickle blades, k: endscraper. n: knife, o: transverse burin on a retouched blade. (Drawing: Brian Byrd).

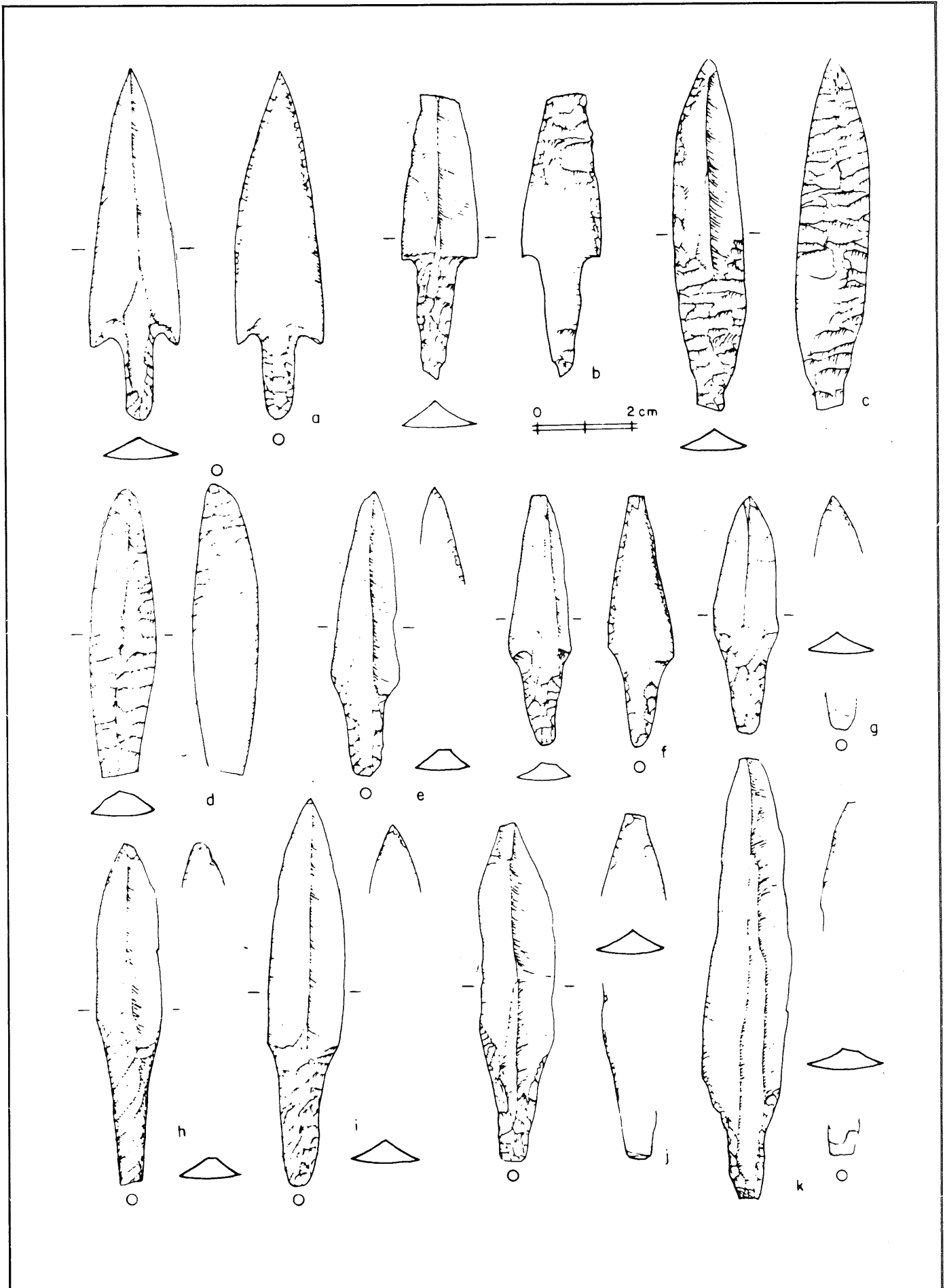


Fig. 2: Spear points from 'Ain Ghazal 1983. a-b: Jericho points. c-d: leaf-shaped points. e, k: simple tanged points. f: bifacial tanged point. g-j: Abu Ghosh points. (Drawing: Brian Byrd).

Arrowheads (Fig. 1: a-e) were more frequent in 1983 than in the first season (only 4% in 1982), and the shapes range from extremely delicate, barely retouched forms (Fig. 1: d-e) to more elaborate pieces (Fig. 1: b-c). Spear points were dominated by Abu Ghosh types, characterized by the oblique retouch scars on the tang (Fig. 2: g-i), although unifacial and bifacial tanged pieces were also relatively numerous. The Jericho points (Fig. 2: a-b) maintain the close similarities of point styles with Abu Ghosh, as well as with Munhata and Beisamoun, although the relative frequencies are quite different for all point types at these sites.^{3A}

b) Bone Tools

Bone tools continued to be relatively poorly represented (Table 4), especially in comparison with the number of burins in the analyzed chipped stone tool sample. This is compounded by recalling that the figures in Table 2 represent only 5% of the total chipped stone sample (although it is quite possible that considerably more bone tools will be found among the as yet unanalyzed faunal material as well).

The general character of the bone tools continues to evoke a "sewing kit" interpretation. Awls evidently were used for leather working while most of the spatulas and needles appear to have served weaving and sewing functions. The "weav-

ing tool" in Table 4 is a slender, slightly curved bone "wand" about 12 cm. long and 1 cm. thick, tapering to rounded points at both extremities. Two of the spatulas which do not seem to be related to weaving are splayed at one-end and resemble the small wooden "spoons" often associated with small containers of ice cream in recent times.

c) Ground Stone

The tabulation of ground stone objects is presented in Table 5. The large limestone mortar, a small limestone mortar, one basalt pestle, a sandstone quern, a basalt stone bowl fragment, a quartzite bowl segment, and a limestone sphere came from surface finds; the limestone "cube" is from the surface of the eastern ward of the village across the Zarqa River.

Limestone continues to be the preferred resource for querns, mortars, and stone bowls. Basalt, not native to the 'Ain Ghazal vicinity and most likely obtained from the Mafraq region, constitutes the most popular raw material for hand-held mullers, discoidal grinding stones, and pestles. The shaped and unshaped fragments of basalt are probably shattered pieces of mullers or discs. The limestone "loomweight" is sub-tetrahedral in form, with a broken perforation near the apex.

d) Figurines

The human and animal figurines are

Table 4. Bone tools from the 1983 season at 'Ain Ghazal

	<i>Surface</i>	<i>In situ</i>	<i>Comments</i>
Awl	2	65	
Needle	—	4	
Spatula	—	31	Five perforated
"Thimble"	—	1	
"Weaving tool"	—	1	Long, narrow, curved, pointed
Subtotal	2	102	
Polished fragments	—	12	Use unknown
Total	2	114	

^{3A} Compare Lechevallier, M. *Abou Ghosh et Beisamoun*, Paris, (1978), p. 46-57; 157-161.

Table 5. Groundstone objects from the 1983 season at 'Ain Ghazal

<i>Item</i>	<i>LS</i>	<i>BS</i>	<i>SS</i>	<i>QTS</i>	<i>CNG</i>	<i>FLN</i>	<i>Total</i>
Mortars, large	1	—	—	—	—	—	1
Mortars, small	5	2	—	—	1	—	8
Pestles	6	12	1	—	—	—	19
Micropestle	—	—	—	1	—	—	1
Querns	21	2	2	4	—	—	29
Mullers	9	16	6	8	—	—	39
Discs	3	28	4	—	—	—	35
Stone bowl, thick	17	1	—	—	—	—	18
Stone bowl, thin	3	—	—	2	—	—	5
Pounders	9	—	—	2	1	—	12
Hammerstones	—	—	—	—	—	3	3
Palettes	—	—	1	—	—	—	1
Rubbing stones	3	—	—	2	—	—	5
Polishing stones	—	—	—	—	—	2	2
Loomweight (?)	1	—	—	—	—	—	1
Cylinder	1	—	—	—	—	—	1
Smooth pebbles	—	—	—	—	—	10	10
Sphere	3	—	—	2	—	—	5
Cube	—	—	—	1	—	—	1
Shaped fragments	5	19	1	—	—	—	25
Unshaped fragments	—	7	—	—	—	—	7
Ochre-stained	1	—	1	2	—	—	4
Bitumen-stained	1	—	—	—	1	1	3
Total	89	82	16	23	3	16	229

LS = Limestone
 BS = Basalt
 SS = Sandstone
 QTZ = Quartzite
 CNG = Conglomerate
 FLN = Flint

Table 6. Human and animal figurines from the 1983 season at 'Ain Ghazal.

	<i>Clay</i>	<i>Plaster/ Chalk</i>	<i>Comments</i>
Human fertility	5	—	Four "Venus"
Other human	12	3	Busts, heads
Bovine	43	—	
Equid(?)	1	—	
"Fox" (?)	1	—	Canid?
Unidentified animals	55	—	Mostly bovines?
Subtotal	117	3	
Appendages (arms, legs)	4	—	Three human
Animal horns	12	1	Seven bovine, one goat
Human bust torsos	—	2	
Total	133	9	

listed in Table 6. The human figurines which can be described as fertility statuettes are all made of clay. Two of them are “tattooed” by means of stippling. One of these, called the “Venus of ‘Ain Ghazal”, bears many close similarities with Upper Paleolithic “mother-goddesses” from Central Europe (Fig. 3). The other is a squatting figure and evokes stylistic antecedence to specimens from Hacilar and Anatolia (Fig. 4)^{3B}. A third fertility figurine is represented only by a distended abdomen with the right hand of the woman resting along its side; the left hand is indicated by traces of rough clay where it broke off (Pl. II: 1). (It might be mentioned at this point that the enigmatic rocker-stamped “Walnut shell” found in 1982 is probably the abdomen of another fertility figurine.⁴ Another figurine, this one of unfired clay in contrast to all the others, does not emphasize pregnancy, but that it depicts a nude female suggests that it is still probably related to fertility. It is possible that in view of the unfired state of the clay, and in view of the occurrence of distended abdomens found in isolation, that this statuette may have lost this distinguishing characteristic in antiquity.

Fifteen other human figurines were found in 1983, although the fragmentary state of most of them lends little aid in the interpretation of their meanings. The three plaster examples are rather globular, resembling “snowmen” whose heads have been broken off. It is conceivable that these are highly stylized fertility figurines in view of the rotundity of the forms, although it must be admitted that this is speculative. Among the rest, several are simply the heads whose bodies remain elsewhere at the site. In fact, one small bust is the only complete human figurine found in 1983; all the rest were damaged in one or more parts of the body. It is tempting to note that the absence of heads on most of the recovered figurines parallels the removal of the skulls from most of the human burials at ‘Ain Ghazal.

The style of plastic expression is quite variable, ranging from spatulate and almost featureless faces (Pl. III: 1) to a small bald head with nubble-applique eyes to a charming “button-faced” bust with only subtle suggestions of facial features. Striking parallels to the last two figurines come from the aceramic levels of Munhata.⁵

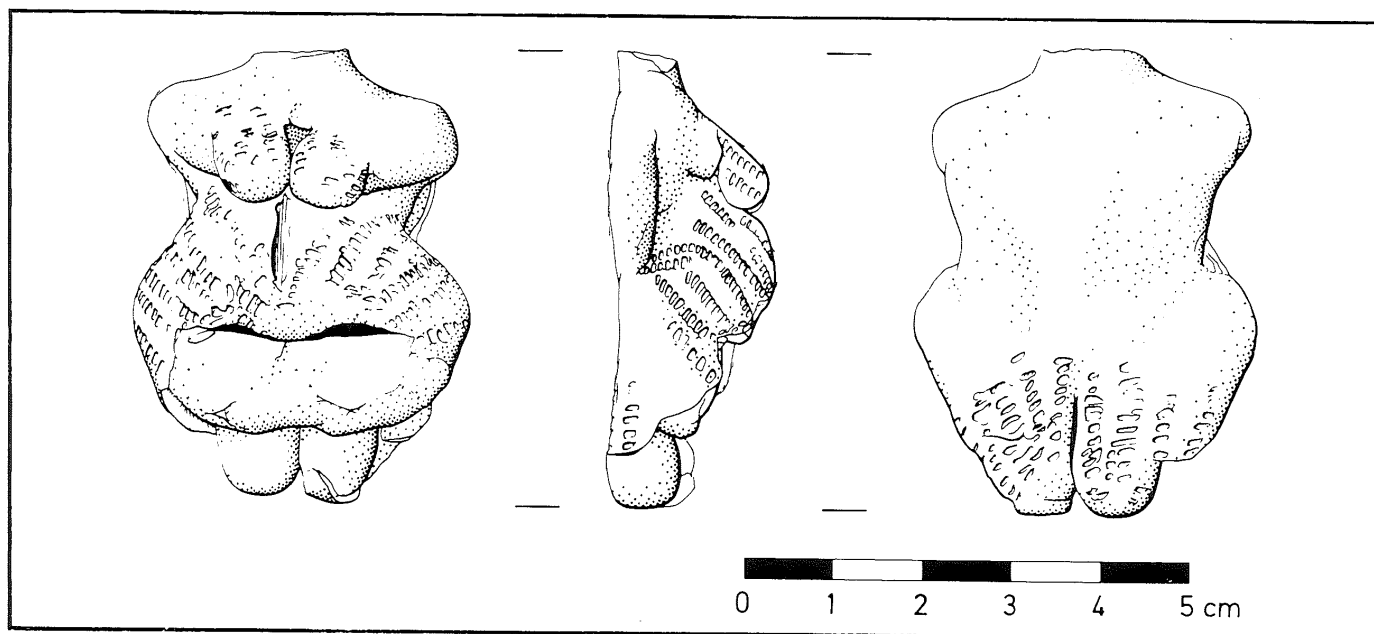


Fig. 3: The “Venus of ‘Ain Ghazal” fertility figurine. (Drawing: J. Loynd Cowherd).

^{3B} Compare Mellaart, J. *Excavations at Hacilar*, Edinburgh, (1970), Pl. 148, Fig. 222.

⁴ G. Rollefson, ‘Ain Ghazal: An Early Neolithic Community in Highland Jordan, Near Amman,

BASOR, in press, Fig. 3h.

⁵ J. Perrot, *La troisième campagne de fouilles à Munhata, Syria*, 43, Plate VI 2 6.

Among the nearly one hundred animal figurines recovered this season, the great majority are probably cattle. While only forty-three were sufficiently complete to confirm this identification, most of the remaining fragmented specimens share a number of similar details. In a restricted area of one locus of SQ 3077, twenty-three unbaked clay animal figurines were found, and all were probably cattle. Another animal torso (the head, rump, and legs are missing) bore incisions emanating diagonally from the spine to represent a mane of hair; this probably represents an equid, although it is not impossible that it is a wild pig. One delightful example is a seated animal with long ears and a prominent tapering snout. Most likely this is a fox or canid, although definite identification is not possible (Pl. III: 2). Most of the isolated horn fragments were broken off cattle figurines, although one piece has the characteristic anterior spine of a goat.

e) Small Finds and Objects

A large number of geometric objects came from *in situ* deposits in 1983, although a third of the clay specimens were so poorly preserved that the original shapes could not be accurately determined (Table 7). Among the small clay balls, a majority came from trash deposits in SQ 3078. These geometrics add some substantiation to suggestions that they may be counting tokens, perhaps for administrative purposes, to deal with increasingly complex problems faced by growing Neolithic populations in the Near East.⁶

White-ware fragments continued to appear at 'Ain Ghazal, although the absolute number is small. One bowl fragment is elaborately decorated on the exterior with regularly spaced cross-hatching, deeply incised to create a high relief (Pl. IV: 1). Another sherd was heavily stained on its scored interior surface with red ochre. A



Fig. 4: The "Squatting Venus" fertility figurine from 'Ain Ghazal. (Drawing: J. Loynd Cowherd).

⁶ D. Schmandt-Besserat, *The Beginnings of the Use*

of Clay in Turkey, *Anatolian Studies*, 27, p. 133-150.

Table 7. Clay and white-ware geometric objects and utilitarian pieces.

<i>Geometric Objects</i>	<i>Clay</i>	<i>White</i>	<i>Comments</i>
Cylinder	2	1	Both clay unbaked
Ball	59	4	Seven clay unbaked
Cone	11	—	Six unbaked, one incised
Hemisphere	4	—	All baked
Disc	3	—	All baked, one perforated
“Marshmallow”	3	1	One baked
“Loaf”	1	—	Baked, ca. 6x4x2 cm.
Flat Ovoid	4	1	All unbaked
“Bracelet”	1	—	Baked, fragment
Shaped fragment	20	—	
Amorphous lump	22	—	Possible figurines
Total	130	7	
<i>White-ware Vessels</i>			
Bowl base (?)		1	
Bowl/platter sherds		12	
Box		1	Surface, eastern area
“Saucer”		1	ca. 8 cm. diameter
Total		14	
<i>Pottery</i>			
Potsherds, surface		28	
Potsherds, test-pits		18	
Potsherds, excavation		24	Fired. 18 from good context
Bowl-base		1	Sun-dried
Platter		3	Sherds, red ochre coated
Loomweight		3	One late (EB?) from test pit.
Subtotal		77	
Reed-impressed		4	Roofing material?
Total		81	

small thick-sided box came from the surface of the village extension across the Zarqa River.

The 1983 season also produced a small amount of pottery, although two-thirds of the sherds were either found on the surface or disturbed contexts, or they came from the test trenches upslope. Nevertheless, eighteen sherds came from definite PPNB contexts. These examples are of crude workmanship and very ephemeral firing, but they are important indicators of an initial experimentation with ceramic manu-

facture. The sun-dried bowl base has a flat bottom and slightly flaring thick walls, and the three platter sherds, also sun-dried, are coated with red ochre.

Beads from 'Ain Ghazal were relatively numerous in 1983, with a high relative frequency of bone beads compared to the first season of excavations. The carnelian and animal tooth “butterfly” beads have close parallels at Tell Abu Hureyra.⁷ The limestone pendants mentioned in Table 8 are all fragmentary remains of probably circular pendants, not bracelets as they

A Moore, A Pre-Neolithic Farmer's Village on the Euphrates, *Scientific American*, 242: 2, p. 62-70.

were identified in 1982⁸

Other small finds are tabulated in Table 9, although it must be admitted that many of the pieces present formidable problems in interpretation. The 7 cm-long subtriangular limestone "token", for example, appears to be stained with asphalt at the apex, and one surface has a red area, but whether the latter is a natural coloration or is the result of staining with red ochre remains to be determined. The scored and incised limestone and sandstone palettes all bear parallel or slightly subparallel grooves; whether these were utilitarian pieces or served some other function is not known. Seventeen pieces of

bone, mostly of birds, served as the resource for the manufacture of bone beads. The bone "toy" is a unique combination of two bird bones: one slender fragment was found inserted into another shorter piece of larger diameter so that the latter could slide freely back and forth along the former.

3. Faunal Remains⁹

Animal bones at 'Ain Ghazal are quite well preserved, and consequently it is not surprising that approximately a half-million fragments were recovered in 1983. A relatively large sample has been sorted

Table 8. Jewelry from the 1983 season at 'Ain Ghazal

<i>Beads</i>	<i>n</i>	<i>Comments</i>
Turquoise, disc	1	Surface find
Greenstone, disc	7	One surface; some turquoise?
"Alabaster", tubular	1	Material uncertain
Carnelian, tubular	1	Broken
Carnelian, butterfly	1	Broken
Amber (?), tubular	1	Material uncertain
Redstone, disc	2	Material uncertain; coral?
Tooth, butterfly	1	
Bone, disc and tubular	17	
Clay, disc	1	
Clay, tubular	2	
Limestone, disc	1	
Marine shell	1	
Snail shell	3	
Total	40	
<i>Pendants</i>		
Greenstone	2	
Cockle shell	3	
Other marine shell	3	
Mother-of-pearl	3	
Fossil sea urchin	1	
Bone	2	
Limestone, polished	25	Six from the surface
Chalk/plaster	1	
Total	40	

⁸ Rollefson *op. cit.*, The 1982 Season... Table 4.

⁹ The macrofaunal remains are currently being

analyzed by Dr. Ilse Köhler-Rollefson. The microfaunal assemblage is being studied by Mr. William Gillespie.

Table 9. Other small finds from the 1983 season at 'Ain Ghazal.

<i>Item</i>	<i>n</i>	<i>Comments</i>
"Token", polished blackstone	1	Material unknown
"Token", limestone	1	Subtriangular
Incised celt, limestone	1	Broken
Scored palette, limestone	2	Parallel grooves
Incised fragments, limestone	5	Some quern fragments?
Pecked "bun", limestone	1	Intention unknown
Pecked torus, limestone	3	Pendant manufacture?
Incised fragment, sandstone	2	
Scored fragment, sandstone	1	
Incised fragment, basalt	1	Pestle fragment?
Drilled stone sphere, quartzite	2	"Mace heads"
Perforated fragment, chalk	1	
Scored fragment, plaster/chalk	4	
Mica disc, incised	1	ca. 2 cm. diameter
Mica fragment	1	
Bitumen hafting	2	One sickle, one knife
Green Pigment	2	One from surface
Greenstone fragments	4	One surface; copper ore?
Obsidian blade fragments	4	Anatolian
Tooth, polished	1	Broken, pendant?
Mollusc fragments	2	
Eggshell fragments	1	Kind unknown
Bone bead sources	17	Mostly bird bones
Bone "toy"	1	Smaller inside larger

already, and the range of species represented among the remains is quite broad. Goats continue to dominate the taxa, although gazelle, cattle, wild pig, small carnivores (especially fox), hare, and turtles are also well represented. Equids are scarce. Birds, rodents, and other small animals are also relatively numerous, and remains of fish were recovered this year. In general the wide variation of the faunal inventory is remarkable, attesting to a quite varied animal protein diet enjoyed by a population nominally relying on domesticated animals.¹⁰

Although several goat horn cores exhibit minimal twisting, for the most part there are few firm morphological indica-

tions of a domesticated status for this species. But the persistent occurrence of severe phalangeal pathologies among the goat bones argues strongly for a domesticated state, a conclusion supported by the culling pattern based on the age of death as established by epiphyseal fusion rates.¹¹ At the current stage of analysis, hard data are not yet available to substantiate the possible domestication of cattle, although Köhler-Rollefson notes a relatively high degree of phalangeal pathologies within this species as well.

4. Paleoethnobotanical Remains¹²

The relatively abundant remains of charred seeds and other plant parts con-

¹⁰ I. Köhler-Rollefson, Personal communication.

Annual Meetings of the ASOR, 20 December 1983.

¹¹ I. Köhler-Rollefson, Jordanian Goat Husbandry in the PPNB and Today, Paper presented to the

¹² The paleoethnobotanical material is currently under analysis by Ms. Marci Donaldson.

tinued to characterize the sediments excavated in 1983. Preliminary analysis of the samples reflects a different pattern than noticed for the 1982 season. Cereal grains (especially barley) dominate, with peas, lentils, and chickpea in lesser amounts. Several "weeds" have also been identified, although some of these may have had some sort of economic role for the village residents.¹³

5. Human Remains¹⁴

More than fifteen human skeletons were exhumed in 1983, although to date it has not been possible to examine the remains closely. Combined with the fifteen burials from the 1982 season, it appears that several burial "styles" occurred at 'Ain Ghazal: a) subfloor, flexed, skull removed; b) exterior or courtyard, flexed, skull removed; c) exterior, extended, skull intact; and d) sacrificial. The last style was suggested by two newborn infants in a single interment that lay directly above and associated with a "nest" of adult human skulls buried in a pit in SQ 3074.

The four adult skulls (pl. IV: 2) were carefully arranged and are undoubtedly related to the ritual associated with the decapitation of individuals from burials styles a) and b) mentioned above. Two of these skulls still retained plaster in the eye sockets as well as fragmentary remains of plaster still adhering to the cheeks and upper jaw areas. On one of the specimens a thin line of asphalt crossed more or less horizontally across the plaster filling of the eye socket, probably to represent the junction of the upper and lower eyelids (Pl. IV: 3). No other details are available at this time, since the two skulls with the adhering plaster were removed *en bloc* in the sediments in which they were found; they have not yet been "excavated" from this matrix.

While these two plastered skulls are representatives of the "plastered skull

cult" known from Jericho, Beisamoun, and Ramad in Syria,¹⁵ the accompanying two skulls may also at one time have been similarly treated. Surely, the simple association of all four crania in the same carefully arranged disposition suggests that the ritual afforded to any one was afforded to all. Furthermore, the pit in which they were found was evidently not the first resting place for the treated skulls, since the plaster that could have adorned the temples and brows of the two specimens with plaster remaining in the orbits had fallen off somewhere else (no plaster fragments were found in the pit). Very likely, while transporting all four skulls from their original installations, or dating to some other time before their final disposition, the plaster modelling of the other two skulls had become disengaged.

A final point to be made about the treatment of human skulls from decapitated burials concerns several large fragments on a house floor in SQ 3078. Unlike the skulls in the "nest" in SQ 3074, these fragments (probably representing most of the cranium of one individual) bore no evidence of plaster modelling. Instead, the skull appears to have undergone a unique treatment compared to reports from other PPNB sites in the region. The cranial fragments are heavily scored, as if the scalp had been scraped off with a sharp flint tool, after which the skull was painted with red ochre. Although Kenyon reported red paint on one of the plastered skulls from Jericho, the pigmentation was applied in bands across the unplastered crown of the skull.¹⁶ Red ochre covered the entire cranium of the 'Ain Ghazal specimen.

6. Shells¹⁷

The shells recovered in 1983 were much more numerous and varied than in the first season. Marine shells from the Mediterranean included thirteen examples

¹³ M. Donaldson, personal communication.

¹⁴ Mr. Scott Rolston is presently studying the human remains from the 1983 season.

¹⁵ H. de Contenson, *Sondage a Tell Ramad, 1963, Annales Archaeologiques Arabes Syriennes*, 14, p. 109-124.

¹⁶ K. Kenyon, *Archaeology of the Holy Land*, London, (1979), p. 34 and Plate 21.

¹⁷ Dr. David Reese has undertaken the analysis of marine shells; while snail shells are being analyzed by Ms. Holly Huset.

of cockle shell (*Cerastoderma* and *Acanthocardia*), seven specimens of dog-cockle (*Glycymeris*), two pieces of helmet shell (*Cassis/Phalium*), and one example each of dove shell (*Columbella*), basket shell (*Arcularia gibbosula*), triton (*Charonia*), and cone shell (*Conus*). The Red Sea was the original provenience of three cowrie shells, four nerites, and three ornaments made of mother-of-pearl (*Pinctada*). Freshwater shells included twenty-two representatives of smooth and costate *Melanopsis praemorsa*, a freshwater gastropod, as well as several freshwater bivalves (*Unio*). Fossil shells included a sea urchin ornament, a number of belemnites and detaliium fragments, a couple of oysters, and a small bivalve.

7. Architecture.

The 1983 season revealed the wide complexity of architectural design at 'Ain Ghazal, and at this preliminary stage of analysis and stratigraphic correlation, it is difficult to unravel the variety of expressions of housing needs among the ancient inhabitants.

Perhaps one of the most striking features to emerge in the recently concluded season was the manifestation of so much renovation in interior design during the lifetime of a specific dwelling. The building from SQ 3082, for instance, shows three replasterings of the floor that are associated with the construction of a new interior cross-wall, the later opening of a doorway in that cross-wall, and the subsequent placement of a high semi-circular "screen" in the doorway that partially blocked the passage from one room to the other. Similarly, at least three renovations of wall, doorway, and floor plastering occurred in the building that spanned SQs 3076 and 3077, and two or three phases of reconstruction took place in the house in SQ 3083, including the addition of a room to the original one-roomed dwelling. The Phase IV house in the Step Trench (SQ 3073) reveals an interesting accomodation

of the natural terrain: the floor of the eastern room is 0.25-0.30 m. lower than the floor of the western room. In the doorway connecting these two rooms is a sinusoidal ridge of plaster that appears to have acted as a drainage feature possibly connected with the washing of the floors. This would confirm a meticulous cleanliness for the inhabitants, for as was the case in most houses, the floors are scrupulously clean of artefacts and living debris.

Finally, it should be mentioned that the first evidence of wall decoration appeared during the 1983 season. While it appears that red ochre was used increasingly to cover floors in the later occupation phases at 'Ain Ghazal, dribbled spots and splotches on floors in the earlier phases suggested that the walls of the older periods were the primary recipients of decoration. Unfortunately, little plaster was preserved on any of the standing walls in 1982 and 1983 (walls rarely stood higher than a half-metre). But near a blocked doorway of a building excavated in 1983, one large panel of wall plaster remained *in situ*, and this panel bore an inverted triangular section of red ochre decoration. The panel continued around the doorway itself, and while it could be seen that the decoration also continued around the corner, the blocking stones prevented any observations that might have detected additional patterning. The plaster panel had been severely cracked by the passage of bulldozers above it in 1974, so instead of cleaning the face *in situ* with possible dire consequences, the panel was removed by the conservator in one piece for subsequent treatment in the laboratory.¹⁸

The Statues and the Busts

The most exciting results of the 1983 season concern the discovery of the stunning cache of plaster human statues and busts. Fragments of similar human representation had been found in PPNB contexts in Garstang's excavations at Jericho

¹⁸ The conservator is Mrs. K. Tubb of the Institute of Archaeology, London.

in the 1930's and others from Dame Kathleen Kenyon's campaigns at the same site in the 1950's.¹⁹ The cache from SQ 3076 at 'Ain Ghazal, while obviously very closely related to the Jericho material, is unparalleled in terms of the quantity and preservation of this rare art form in the Near East.

The construction of the Amman-Zarqa highway in 1974 brought the existence of Neolithic 'Ain Ghazal to light, but it also resulted in severe consequences, not the least of which was the outright destruction of a hectare or more of the original settlement. It was a very fortunate turn of events that the topography of the site was so compatible with the needs of the highway program, for if the restraining terrace to limit erosion onto the highway had cut 0.60-0.75 m. deeper, it is probable that the statues and busts would have forever been removed from the archaeological record.

As it was, the considerable bulldozer traffic less than a metre above the cache created considerable damage as a result of the repeated compaction by heavy machinery in 1974. The exposure of the wet plaster statues to the harsh summer climate in 1983 also took its toll, and it was evident within a few days that the drying process was resulting in cracks across the surface of each piece. It was clear that the statues and busts could not be removed individually under normal archaeological field procedures.

After careful assessment of the situation, the conservator²⁰ determined that the most appropriate means to remove the sculptures would be to take them out in the block of sediments in which they had been protected so well for so long. The arrange-

ment of the cache was such that several of the smaller busts could be removed prior to this process, and these pieces provide the only definite information we have at the present time. During the preparation of the cache for removal, several other aspects of this remarkable collection came to light,²¹ and preliminary assessments can be derived from these circumstances. It must be emphasized, however, that the subsequent laboratory work under way will greatly amplify, rectify, and improve the following summary of information.

It appears that the cache originally consisted of at least ten statues approximately 0.80-0.90 m. high as well as a complement of twelve smaller busts ranging from ca. 0.30-0.45 m. in height. All of the pieces were carefully arranged in a single deposit, with the statues lying in a general east-west orientation in two tiers and the busts aligned stacked in an arc at the feet of the statues (Pl. V). An ancient pit had cut across the northern portion of the cache, badly damaging one or more of the statues, and several of the busts also appear to have suffered post-depositional damage. The pit in which the cache was buried does not appear to be associated with any of the buildings in the excavated area, since the pit cut through the floors that were in the vicinity. Unfortunately, the bulldozer activity removed all evidence which could have provided definite correlation with the stratigraphic sequence of occupations of the site. Nevertheless, several C-14 samples from the cache fill are being processed, and absolute dates should be available by the end of 1983.

The construction of the sculptures appears to conform closely to the technique described by Amiran²² for the Jericho

¹⁹ Kenyon, *op. cit.*, p. 36.

²⁰ The conservator was flown to Jordan through the generosity of the Department of Antiquities of Jordan. We would like to express our sincere gratitude to Mr. Ma'an Abu Nuwwar, Minister of Tourism and Antiquities; Dr. Adnan Hadidi, Director-General of the Department of Antiquities; and Dr. Crystal Bennett, Director of the

British Institute in Amman for making this arrangement possible.

²¹ We would like to thank Dr. Svend Helms for making it possible to remove the block of statues and busts through a system engineered by him.

²² R. Amiran, *Myths of the Creation of Man and the Jericho Statues*, *BASOR*, 167, (1962) p. 23-25.

examples. For the statues, an inner "skeleton" of twigs and reeds was wrapped tightly with coarse twine to form a "stick-man" around which the plaster was molded. The statue bodies are relatively stylized, with short stumpy legs and feet, generally featureless torsos, elongated necks, and out-sized heads that are flat in profile. The eyes stand out as much whiter than the rest of the plaster, and it is probable that carved chalk was inset to emphasize these features. Adding to the accentuation of this part of the face, each eye was surrounded by a thin filament of a bluish green pigment. A small circle of asphalt attached to the centre represented the iris.

Although in terms of the general characteristics one can consider the depictions as being stylized, in terms of combinations of specific facial features there appears to have been an attempt at individual renditions to distinguish each statue. One face, for example, is relatively long with prominent cheekbones, while another has a distinctive, assertive chin. The third visible face has pudgy cheeks that add a pronounced dimension to an already round, almost adolescent countenance. This last face also bears additional cosmetic treat: three vertical stripes of red ochre occur at the centre of the brow, and three diagonal red stripes adorn each cheek (Pl. VII: 1).

Although the circumstances of the exposure and removal of the statues has prevented the observation of many details, it would appear that one of the statues, at least, is a male on the basis of the featureless chest. Another statue, on the other hand, has breasts which confirm that it is a female. This particular statue is oriented at about 180° to the rest of the statues, with the woman's head lying at the feet of the rest of the group. The position

of the right hand under the pectoral area suggests that attention is being drawn to the breasts, much in the manner of later Astarte figures. Presumably this statue is associated with a fertility rite (Pl. VI).

The busts share several features of basic construction and rendering, although the smaller size and the absence of bodily details imply a lesser role in the ceremonial/ritual calendar. The heads of the busts consist of plaster formed around an inner structure of cord-wrapped twigs and reeds, as is the case for the statues. The neck, also exaggerated in length, consists of a long bundle that penetrates far into the otherwise solid plaster torso base. The facial features follow the general pattern of the statues. The face of one bust that was removed from the cache bears a striking resemblance to the head of a bust recovered by Garstang from Jericho.²³ Garstang noted that the Jericho busts appeared to represent men, women, and children,²⁴ and the size variation among the 'Ain Ghazal busts tends to substantiate the presence of different generations among the collection. (Pl. A VII).

While the close parallels with Jericho are undeniable, one particular feature brings the closeness of the sculptures from the two sites to a very fine point. A fragment of a foot from one of the 'Ain Ghazal statues bears six toes, a genetic anomaly that is relatively rare among most populations. A photograph of a foot from the Jericho collection²⁵ indicates that this trait is also present there. The inferences which might be drawn from this congruence in terms of social, religious, and political associations between 'Ain Ghazal and Jericho (and other sites in the region) are quite tantalizing at this preliminary stage of assessment.

²³ Compare with J. Garstang, Jericho: City and Necropolis, Fifth Report, *Annals of Archaeology and Anthropology* (Liverpool), 23: 3-4 (1935) p. 143-184.

²⁴ Garstang, *ibid.*, p. 166.

²⁵ Palestine Museum, Negative No. 11267. We would like to thank Mrs. Diana Kirkbride-Helbaek for bringing this to our attention.

Summary

The 1983 season at 'Ain Ghazal could hardly have been more productive in terms of producing information on nearly the entire scope of the culture of the residents at that large community. The sheer volume of data will take some time to sort out and assess, but combined with the information from the 1982 season, a strikingly clear picture of the lifeways of the Early Neolithic should emerge. Details of the effects of increasing cultural control over herds of animal species promise to provide great theoretical insight into the process of animal domestication, and the variability of Neolithic diets in terms of plant foods also will be better documented. Several aspects of technology indicate a close affiliation of 'Ain Ghazal with the northern area of the PPNB Levant, yet others bear witness of a close association with communities in the Jordan Valley and the Jerusalem area as well.

Although details are still hazy and information still incomplete, it would appear likely that social differences existed among the 'Ain Ghazal community, based partially on the burial styles that have been recognized. Other aspects of the 'Ain Ghazal material culture repertoire suggest that there may have been some division of religious activity into private (individual and family) and public (community wide and possibly inter-site) spheres, although this is an interpretation that requires more space to develop than is available here. The reverence shown in the disposition of the statues and busts would undoubtedly seem to be related to religion, but the connotations of some form of theocratic social control cannot be overlooked.

Excavations will continue in 1984 at 'Ain Ghazal in an effort to broaden our sample of information. The first two seasons have sampled only 1% of the total village area, and consequently next season

will witness investigations of other areas of the village to increase our understanding of the variations to be expected in such a large population centre. Nevertheless, it is already clear that the people of 'Ain Ghazal enjoyed a considerable degree of sophistication in terms of cultural complexity, aspects of human development that only a short time ago were usually ascribed only to later "high civilizations" of the Near East.

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