ǂhing-ǂhais: An Early Holocene stoneworking site from the central Namib Desert

by

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Revised copy received: 6 July 1982
Accepted: 13 June 1983

ABSTRACT

The typological affinities and inherent interpretative problems of a stoneworking site situated at the edge of the central Namib Desert are discussed. Evidence for manufacturing techniques was obtained although the resultant artefact assemblage was biased because of the removal of finished pieces. It is hoped that this study will provide a contribution towards the establishment of a chronology for the Pleistocene and Early Holocene times of the central Namib.

CONTENTS

1 INTRODUCTION

This brief report summarises the main features of an unusual stoneworking site (dating to 8470 ± 90 BP) at the edge of the central Namib Desert, discussing its typological affinities and inherent interpretative problems. Ample evidence for manufacturing techniques was obtained although the resultant artefact assemblage (dominated by core-scrapers, chopper-cores and varied flakes) was biased as a result of the removal of finished pieces. It is hoped, however, that this site, which produced a non-microlithic Later Stone Age industry associated with imported pierced shell and ostrich eggshell beads, will provide one more contribution to the writer's goal of establishing, through a long-term program of field survey, some idea of the chronology and typological sequence of the central Namib in Pleistocene and Early Holocene times.

2 THE SITE

The ***ǂhing-ǂhais*** surface artefact scatter covers a small, flat col located at the junction of the central Namib linear dune system and the ephemeral Kuiseb River, 26 km upstream of Gobabeb 28° 37′, 15° 17′. The low col is bounded on the east by a steep scarp slope leading to the river-bed, and to the south-west by the dune face. The other two sides of the natural platform thus produced terminate in clumps of vegetation and the edge of an outcrop of the loosely-cemented fluvial "Oswater" conglomerate (Ward, pers. comm.) capping the Precambrian Damara mica schists (Fig. 1). Slightly to the north-west of the schist outcrop the conglomerates underlie the Homeb silt bed, provisionally dated to 23 000 BP (Vogel, unpublished date). These con-

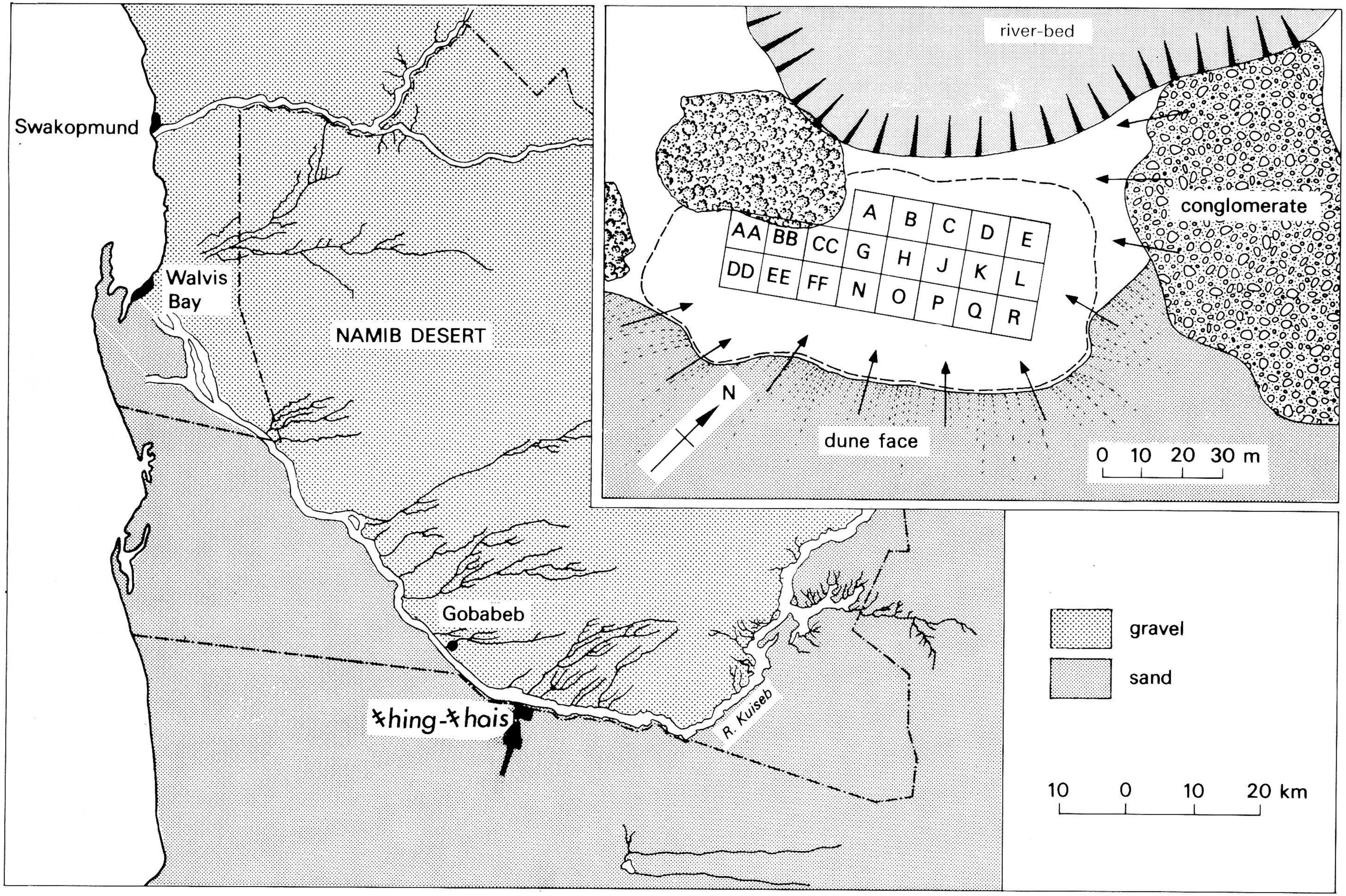

FIGURE 1: Location and plan of the artefact scatter.

glomerates, which accumulated during a late mid-Pleistocene humid aggradation phase, acted as a source of raw material for tool manufacture, and form the reason for the existence of a working site at this location.

The site consists of an extensive (4 000) m²) surface artefact scatter (Fig. 1) with no vertical stratigraphy. Little wind disturbance of the material would appear to be taking place today, even quite forceful sandblasting under storm conditions only clearing away sand from around the objects. It is suggested that the artefact scatter was exposed quite recently as a result of sand movements within the development framework of the dune systems. There is, however, minor abrasion of all implements, suggesting some *in situ* weathering together with short distance transport. Objects should be considered as being in transposed primary context. The principal raw materials used were quartz (86%), quartzites (12%) and various fine-grained rocks (2%) including jasper and amphibolite, some of which do not occur locally. Non-lithic artefacts included imported marine shells, some pierced for suspension, and a little finely comminuted bone. The site was especially remarkable for high concentration of working debris (anvils, hammerstones, blocks with conjoining flakes and débitage) and the paucity of finished objects. This was particularly the case with those made from quartzite or fine-grained rocks (presumably more highly valued than the ubiquitous quartz) which had apparently been removed leaving only broken or unfinished examples (Fig. 2). Extensive evidence concerning manufacturing technology could therefore be obtained, complemented by experimental replication of stone and shell working techniques.

A 10 m² string grid aligned NE/SW was laid out, covering 2 900 m² of the artefact scatter (Fig. 1). Object density varied from 17/10 m² to 256/10 m² (finished objects), the greatest densities being found in grid squares G, CC and BB. The random sampling plan adopted resulted in the detailed examination of grid squares AA, BB, CC, EE, E, G, J, and P (800 m²), precisely locating, planning and measuring all material, supplemented by eleven randomly-located spot samples each comprising 1 m² which were sieved to obtain comparative information about the size, weight and distribution of flakes and débitage.

3 STONE ARTEFACTS

3.1 Typology

The composition of the assemblages is shown in Table 1, omitting débitage and the large objects colloquially known as "bashed lumps", large nodules of raw material from which one or two flakes had been crudely struck. Cores, choppers and chopper-cores produced the bulk of the material, a continuum of form and function existing between all three ill-defined categories.

3.1.1 Cores, choppers and chopper-cores

Three basic types of core were identified (flake, spherical and Levallois), the last being very rare (2% of total cores). Most cores were made from segments of quartz

TABLE 1: Composition of the *ǂhing-ǂhais* assemblage.

Grid square	Point			Scraper			Chopper			Chopper/core			Core			Hammerstone			Anvil			Retouched flake			Unretouched flake			Waste/wkg. flakes			Total artefacts*	Total waste
	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other	Quartz	O'ite	Other		
BB	3	–	–	39	–	–	7	1	1	19	1	–	16	3	1	4	3	–	1	–	–	11	–	–	–	2	–	598	341	–	104	939
CC	4	1	–	43	–	1	1	4	1	97	2	–	14	15	4	–	6	1	–	–	1	51	1	–	4	8	1	1382	721	–	252	2103
G	1	–	–	8	–	–	13	–	–	7	1	–	1	2	–	6	–	–	–	–	–	5	3	1	6	8	–	965	389	–	56	1354
J	–	–	–	4	–	–	1	–	–	18	1	–	13	1	–	–	–	–	–	–	–	–	1	–	–	–	1	128	78	–	40	206
E	–	–	–	–	–	–	–	–	–	12	–	–	1	–	–	–	–	–	–	–	–	3	1	–	–	–	–	32	75	–	17	10
EE	1	–	–	15	–	–	2	1	–	13	–	–	–	1	1	6	1	–	–	–	–	4	–	–	–	–	–	207	67	–	38	274
AA	5	–	–	7	–	–	–	2	–	19	–	–	4	6	1	–	–	–	–	–	–	6	–	–	–	–	–	267	124	–	50	391
P	–	–	–	2	–	–	–	–	–	22	–	–	1	2	–	–	–	–	–	–	–	2	–	–	–	–	–	117	62	–	29	259
**Total no. each type	15			119			34			212			87			27			2			89			30							
*** % of total assemblage	2.56			20.06			5.78			36.04			14.79			–			–			15.13			5.1							

* Minus hammerstones, anvils & waste.
** All rock types.
*** As *

pebbles, usually ½ or ¼ pebbles with much cortex remaining. Quartzite cores tended to be larger than quartz (mean length 8.3 cm compared with 5.8 cm for quartz) but this merely reflects a difference in the size of the original nodule. Quartz chopper-cores were also common (35% of finished tool assemblage), made by striking a pebble with a hammerstone until it fractured along a cleavage plane; such objects being frequently retouched but seldom with signs of use. Choppers were also important, generally rather small and frequently segmental in shape. An alternative shape, the falsely-named pebble-chopper, was more elongated and consisted of a nodule from which only a few flakes had been struck from one end, making an irregular cutting edge; not, apparently, with the original object of producing a chopper but in the course of producing flakes. The edge is often heavily battered in this process and gives a (false) appearance of having been used. This distinction between a raw nodule, a core, a chopper and a chopper-core is frequently found in the literature but never seems to have been properly defined. At this site the classification was subjective and intuitive, but diligent literature searches have produced no satisfactory definitions of these terms from archaeologists working with quartz industries.

3.1.2 Scrapers

Scrapers (with deliberately positioned organised retouch) of various types were also a common feature of the assemblages, their density varying from 6.3% of the total (J) to 39% (EE) (Fig. 2.1-3). By far the commonest shape was the subcircular quartz core-scraper, 66% of all scrapers belonging to this class, which usually had a flat base, cortex on the dorsal surface, and were made by splitting a pebble (Fig. 2.3). Retouch occurred either on part or all the periphery of the tool with 65% of these scrapers having retouch on less than half the surface. Other common shapes were subtriangular scrapers made on flakes (44%), either retouched at one end only (6%) (Fig. 2.6), one side plus the end (28%) or more than one side (10%) (Fig. 2.3). All but one were made of quartz, only 7% were side struck and none showed signs of use.

3.1.3 Points

Points were rare (2.5% of total artefacts) and mostly made of quartz. They tended to be rather small (mean length 5.26 cm) and lacked the distinctive "Mossel Bay" form which has been identified by the writer at several Namibian middle stone age assemblages. They tended to be unretouched but symmetrical (Fig. 2.4).

3.2 Technology

Most grid squares had at least one area where an anvil, cores and conjoining flakes could be seen in juxtaposition, but it is often difficult to envisage the desired end product. The flaking techniques used were haphazard and not very successful; on one block, for example, the marks of nine clear blows could be seen, but the workman had not succeeded in detaching a single flake. It seems that most of the objects were produced by "blind hitting" until flakes of the desired shape and size appeared. This is supported by the paucity of evidence for core preparation and the very low incidence of faceted platforms on cores.

The large quartzite nodules were struck by aiming a hammerstone at any point on the exterior of the block, producing thick flakes with cortex on their butts. The direction of the blow cleaves back into the block at a steep angle, not like the technique of "alternate flaking" more commonly used for stone tool manufacture but a far more primitive method. Such a technique is very wasteful of raw material, and it seems likely that the workmen were searching for flakes of a particular size and shape. A similar method is used by the stoneworking Ova Tjimba groups in the northern Kaokoveld (MacCalman & Grobbelaar, 1965).

3.3 Retouch

It is extremely difficult in many cases to detect retouch on quartz objects, and nearly impossible to distinguish unretouched microliths from assorted quartz débitage. It seems possible that a few of the tiny quartz fragments could indeed have been deliberately formed and thus constitute microliths, but the writer remains unconvinced. As might be expected, very few of the quartzite flakes were retouched and only one flake from fine-grained rock had retouch. The cores of quartzite or fine rocks had received no secondary working, and it must be presumed that they represent only the residue which was abandoned after whatever finished objects being produced had been removed. Several of such broken or unfinished objects were found, sometimes with conjoining flakes (Fig. 3).

3.4 Size variation

Comparison of flake sizes and débitage quantities between randomly-sampled 1 m squares showed, as might be expected, a progressive reduction in maximum flake size with a decrease in the total number of flakes measured. Waste flakes 65 mm long, for example, only occur in the heavy debris concentrations of square CC. It proved possible to identify "working areas" both from stone artefact distribution and ostrich eggshell bead manufacture. A collection of scrapers and other tools from EE, for example, were larger than the mean values obtained for other objects from that square, found in a localised area, sharing a common raw material (a particularly clear variety of vein quartz), and with similarities in manufacturing technique.

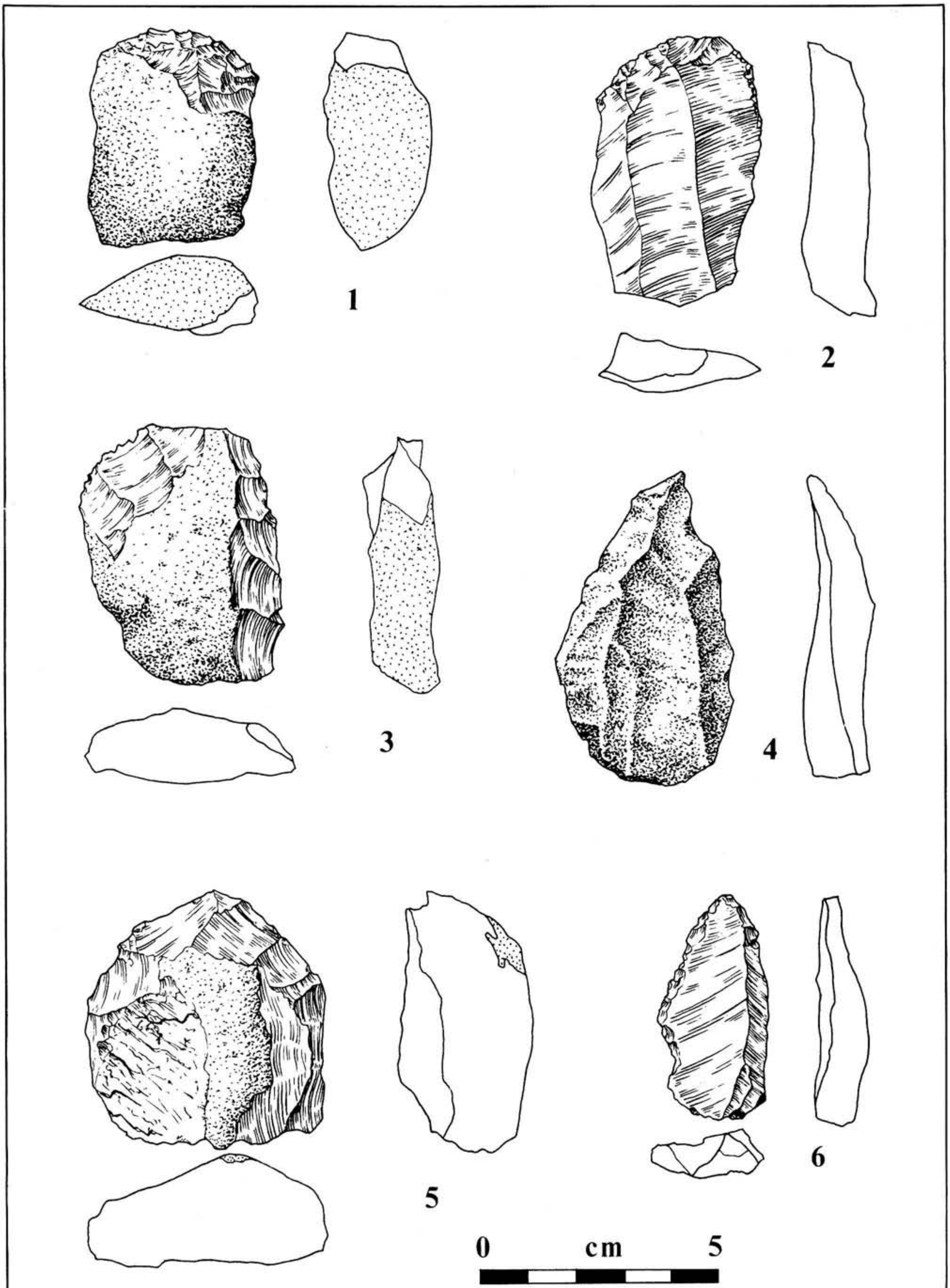

FIGURE 2: (1) Scraper made by retouching small quartz pebble. (2) Retouched quartz flake. (3) Single-straight scraper on retouched quartz pebble, with some flakes removed from opposite edge. (4) Point, quartzite. (5) Chopper-core on small quartz pebble. (6) Quartz scraper/backed knife, retouched one convex side and end.

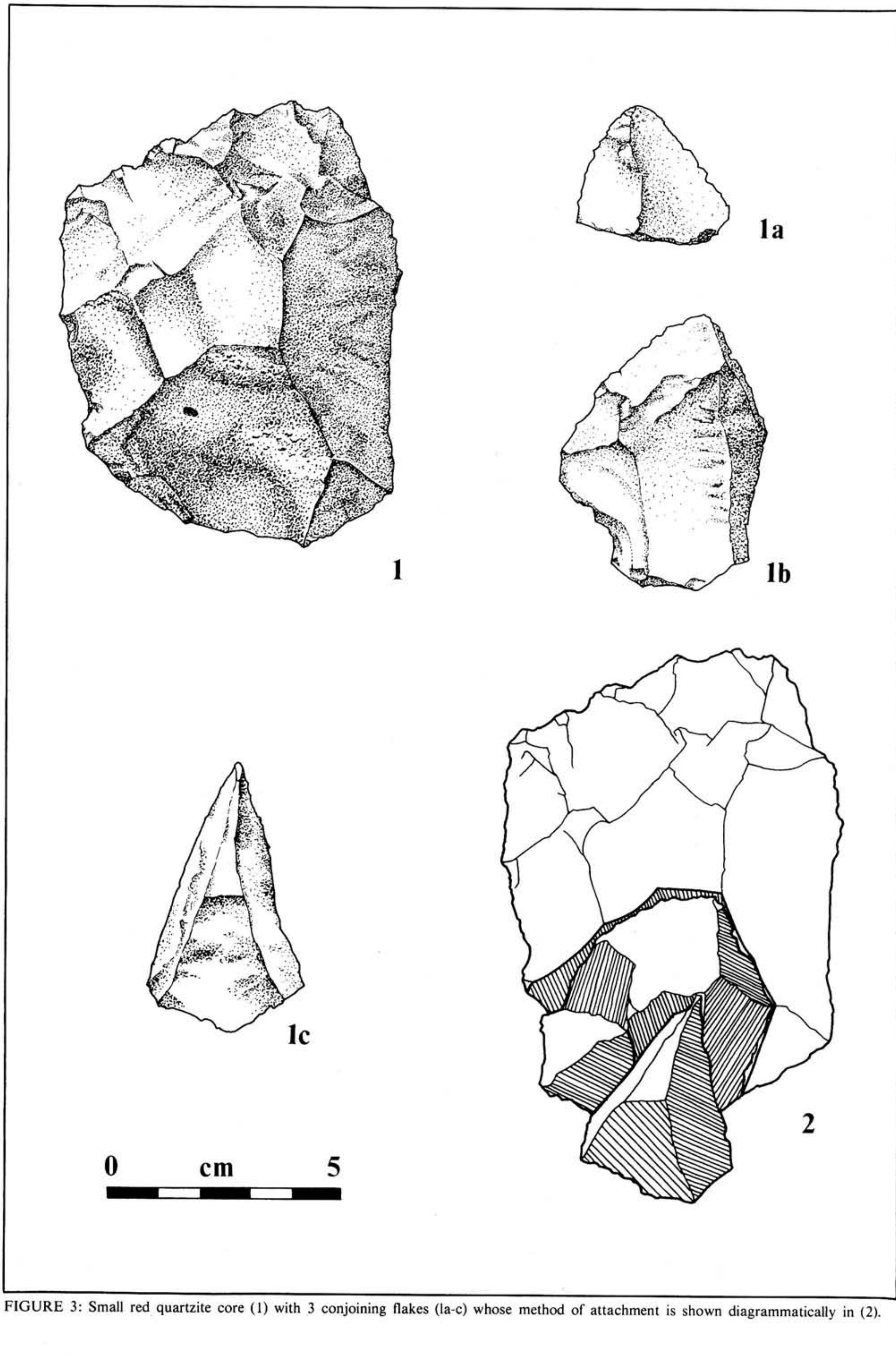

FIGURE 3: Small red quartzite core (1) with 3 conjoining flakes (la-c) whose method of attachment is shown diagrammatically in (2).

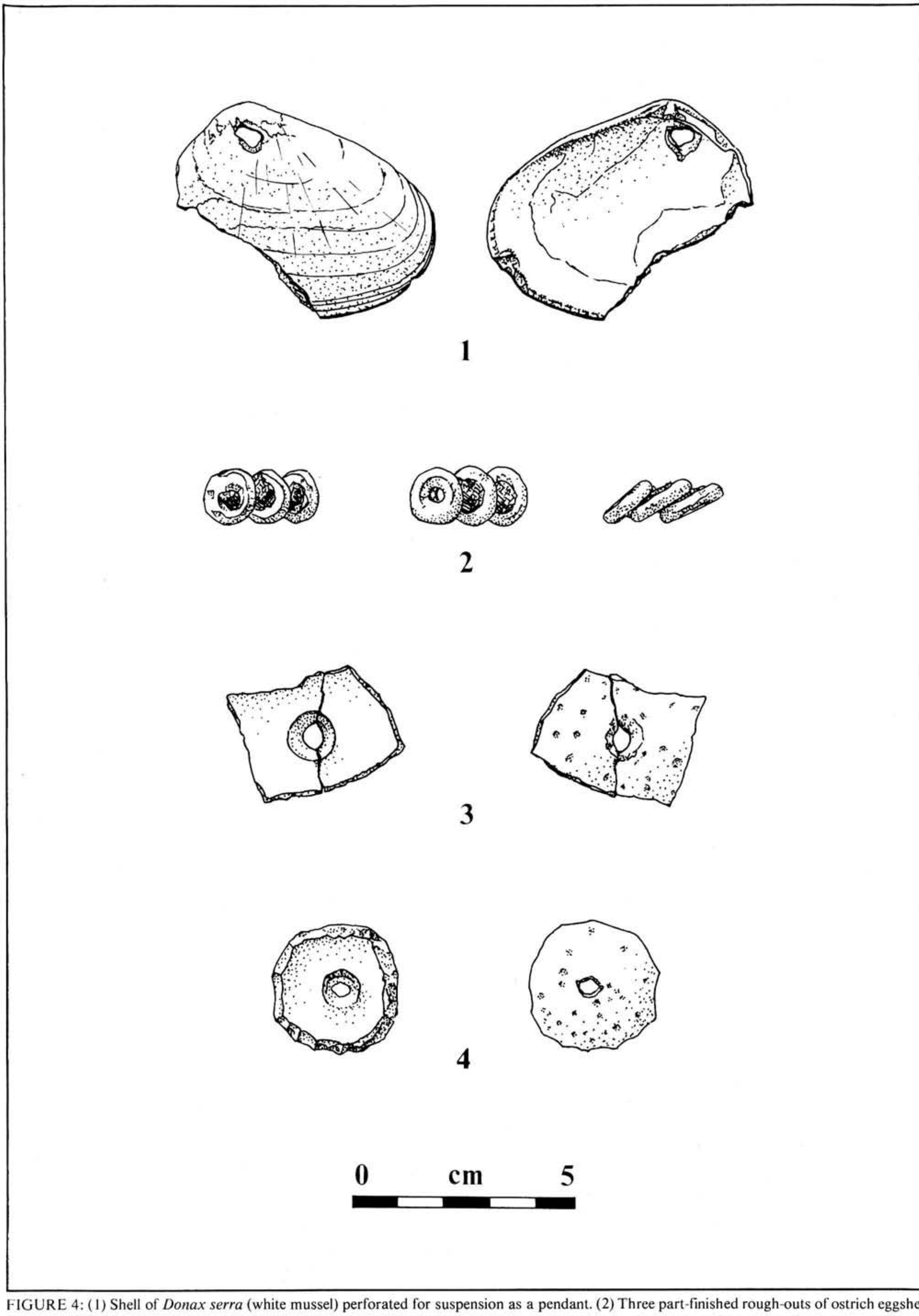

FIGURE 4: (1) Shell of *Donax serra* (white mussel) perforated for suspension as a pendant. (2) Three part-finished rough-outs of ostrich eggshell beads, cemented together by calcrete. (3) Ostrich eggshell bead blank with centre hole drilled, broken in manufacture. (4) Ostrich eggshell bead rough-out, initial stage completed but bead unfinished (objects 2 — 4 drawn at twice the scale shown).

4 SHELL

4.1 Marine molluscs

The molluscan remains from the site from a minimum of 15 individuals included various specimens perforated for suspension as pendants (Fig. 4.1). Four species were present: *Donax serra* (white mussel), *Choromytilus meridionalis* (black mussel), *Patella argenvillei* and *Patella granularis* (limpets), and one damaged specimen of *Bullia laevissima*.

Living specimens of all these species may be found today near Lüderitz, Sandwich Harbour and further north, and their presence so far inland must either indicate movement of early man at this time over considerable distances, or contact with groups living at the coast. Bearing in mind that the site is located exactly on the course of the Kuiseb River, surely a much frequented route into the interior, the former hypothesis seems the more likely.

4.2 Ostrich eggshell beads

Evidence for the manufacture of ostrich eggshell beads was found on the site, particularly in the adjoining areas BB, CC and G. This consisted of twelve unperforated blanks (most of which had been deliberately rounded and were therefore recognisable), 98 perforated rough-outs or fragments thereof (Fig. 4.2, 3), 120 completed beads (average diameter 6.0166 mm, average weight 0.0694 g) and numerous pieces of unworked shell. No beads or evidence of working were found in areas EE, E, J or P, and there were few pieces of unworked shell.

The majority of the evidence for manufacture was found in areas BB and CC; here were found 75% of the blanks and 84.69% of the rough-outs, including three partly smoothed rough-outs stuck together by calcrete in a stepped formation, apparently where they were dropped or left (Fig. 4.2). In contrast, area C (the only other area of the site to yield substantial evidence for bead manufacture, though isolated finds were recorded from AA, FF and N) contained only 16.66% of the blanks and 10.2% of the rough-outs. With the finished beads, however, the situation was reversed, with area G yielding 80%, and only 18.33% coming from BB/CC. Most of the beads from G were found along the south side of the square and all are more regular in size and weight and generally better made than those from BB and CC, many of which appear to have been discarded because of problems of size, unevenness or thickness.

It seems likely, therefore, that much of the preliminary shaping and drilling of the eggshell was done in areas BB and CC while most of the final smoothing of the beads was done in G.

5 DATE

A date of 8 470 ± 90 BP (Pta – 3136) was obtained from ostrich eggshell.

6 CONCLUSIONS

A central difficulty in establishing the typological affinities of this site is clearly the lack of finished tools. That the quartzites and fine-grained rocks obtained from clasts in the conglomerate should be represented by so few tools is not perhaps surprising, since these rocks are much harder to work than quartz and were presumably more highly prized. Quartz is far more common in the area and the workmen could thus afford to leave the quartz objects behind. This produces bias in the assemblages and removes diagnostic objects. It is unwise to assume (although often done) that people make the same tools on different raw materials, and one would not be justified in assuming that large quantities of quartzite or amphibolite core-scrapers were removed from the site merely because many quartz core-scrapers were found there. In such assemblages the size and nature of the finished object is largely conditioned by the size and nature of the original nodule and by the flaking technique, a point already noted for Early Stone Age Namibian material (Shackley, 1980, 1981). At ***ǂhing-ǂhais*** the nodules of fine-grained rocks and quartz were rather small, producing small objects. How then does one compare such an assemblage with material of a similar date but made on different raw materials? Typological minutiae are useless in such a case, and it seems clear that such assemblages can only be linked to others in the most general way.

The assemblages produced clear evidence that this was primarily a working site, whose location was governed by the availability of a unique source of raw material. Two models for resource utilisation might be postulated: that it had been used by one culture group on a single or very limited number of occasions closely spaced in time, or that it had been visited by several different groups over a more prolonged period. This second suggestion seems the more likely, since the artefacts which have remained do not form a logical and relatively homogeneous assemblage. One cannot, however, allow for the material that was removed from the site. The lack of vertical stratigraphy suggests that a single visit or group of visits seems more probable, the remains of such visits being buried by sand until relatively recent exhumation. However, since there is no way of establishing past dune stability the length of time that the material was on the surface cannot be estimated, although from the large quantities of *in situ* ostrich eggshell it does not seem to have been very long.

Essentially, the ***ǂhing-ǂhais*** industry is based on core-scrapers, chopper-cores and a few points, with a marked and significant absence of blades, little retouch, and many heavy-duty tools. Some points of similarity exist between ***ǂhing-ǂhais*** and the industries of the Neuhof-Kowas area (Viereck 1957, MacCalman 1962) and particularly with another stoneworking site from Gungams (85 km south of Windhoek) where the assemblage is based on quartzite and most of the finished tools have also been removed (MacCalman 1962).

In many ways the best parallel for the *ǂhing-ǂhais* site is to be found in a so-called "Late Middle Stone Age" layer from Apollo II cave in the Huns Mountains near the confluence of the Orange and Fish Rivers (Wendt 1972). This layer (terminology after Wendt, 1972) was included by Sampson (1974) into his "Oakhurst Complex" of industries based on crude scrapers which precede the first microlithic industries. However, this "Oakhurst Complex" is now considered to be an integral part of the Later Stone Age, not the Middle Stone Age, and is preceded in the southern Cape, Lesotho and the eastern Transvaal by the Robberg industries which have a significant component of micro-bladelets and date to 18-12 000 BP. At Apollo II cave the "Late Middle Stone Age" layer dated to 19-12 500 BP, and interfaced with a microlithic industry at some time in the tenth millennium. It did, however, also include ostrich eggshell beads and perforated marine shell. The importance of the *ǂhing-ǂhais* site lies in the fact that the assemblage is non-microlithic and Later Stone Age; apparently more recent than the anomalously-early microlithic Wilton-like assemblage from Apollo II.

Ostrich eggshell beads are not common in Middle Stone Age sites but do become increasingly frequent in the later levels. It is possible that the large numbers of beads and the presence of perforated shell here mean that the site is associated with the Coastal Wilton industries (Deacon and Brooker, 1976; Sampson, 1974), but the lack of any really convincing microliths and of a blade component in the industry argue against this.

The rather mixed nature of the assemblages, crude macrolithic quartz scrapers associated with ostrich eggshell beads, may suggest that the site was visited several times around the beginning of the 9th Millennium BP, perhaps by different culture groups. The indigenous raw materials are mixed with a small imported component whose sources may be as far to the north as the Erongo (Ward, pers. comm.), suggesting considerable coast-highland movement of population at this time, assisted by utilisation of river courses as "through routes".

At "Apollo II" cave Layer D, the macrolithic assemblage is nonetheless considered by Wendt (1972) to be late stone age. The *ǂhing-ǂhais* ostrich eggshell is certainly later than this, but it seems possible that the site was first visited by the manufacturers of the bulk of the stonework some time earlier. *ǂhing-ǂhais* is the first manufacturing site to be discovered in the central Namib Desert, and it is suggested that its location was governed not only by the availability of suitable raw material but also because it was sited on the bank of the Kuiseb, which at that time functioned as a communications artery skirting the linear dune sea.

7 ACKNOWLEDGEMENTS

The site was discovered by John Ward (Namib Research Institute) to whom the writer is much indebted. Fieldwork was financed by grants from the Boise Fund (University of Oxford) and the British Academy. Dr. J. Day (University of Cape Town) identified the marine molluscs. Ann Woods (University of Leicester) provided invaluable assistance in the field, undertook stone and shell experimental replication, and wrote the ostrich eggshell bead report. Help and support were also provided by Dr. M.K. Seely and the staff of the Desert Research Unit (Gobabeb) and the Directorate of Nature Conservation (South West Africa). Dr. J. Vogel (C.S.I.R. Pretoria) undertook the radiocarbon dating.

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