

MID-HOLOCENE DENTICULATES IN THE RICHTERSVELD

J.D.J. ORTON & D.J. HALKETT

*Archaeology Contracts Office, Department of Archaeology,
University of Cape Town, Rondebosch, 7700*

*email: jayson@age.uct.ac.za
djh@age.uct.ac.za*

ABSTRACT

This paper introduces a category of formal tool type that was found recently on the mid-Holocene open site of Jakkalsberg N in the Richtersveld, Northern Cape Province, South Africa. All the tools are microlithic and have very finely crafted denticular edges made on a variety of straight and convex edges. There are sufficient similarities in the items to suggest that these are more than simple expedient tools. We are requesting information on similar tools observed by other researchers.

INTRODUCTION

Jakkalsberg N (JKB N) and 3 other sites were excavated recently as part of a contract with Trans Hex Mining Ltd. (Halkett 2001). The site lies on the hard, compact mudflats of the Orange River flood plain to the east of the Jakkalsberg, and not far to the south west of the settlement of Sendelingsdrift in the Richtersveld National Park (Fig. 1). The site is one of many documented in the area but one of only a handful that have so far been excavated (Robertshaw 1978, Webley 1992, 1997, Smith *et al.* 2001). The herder sites JKB A and B excavated by Lita Webley lie approximately 200 meters to the east (Webley 1997).

Although consisting primarily of a deflated scatter of stone, ostrich eggshell beads, engraved fragments and the occasional piece of water container mouth, small amounts of marine and freshwater shellfish, a few pot sherds and historical artefacts are also to be found. The presence of a number of formal stone microliths and a relatively high proportion of siliceous raw materials in relation to quartz, indicated that the site was likely to be older than the distinct pottery-rich pastoralist sites that occur in the vicinity. A corrected date of $4320 \pm 50\text{BP}$ (Pta-8496) was obtained from ostrich eggshell collected off the surface and seems to confirm the original assumption.

Over 1400 squares (0,5 x 0,5m) were excavated to a depth of about one to three centimetres over a fairly level, compacted and sun baked silt deposit that is more resistant to erosion than the sandier deposits above. Despite deflation, some spatial patterning has been maintained. So far, the artefacts from 515 squares have been analysed and have produced a total of 16 688 flaked artefacts. With close

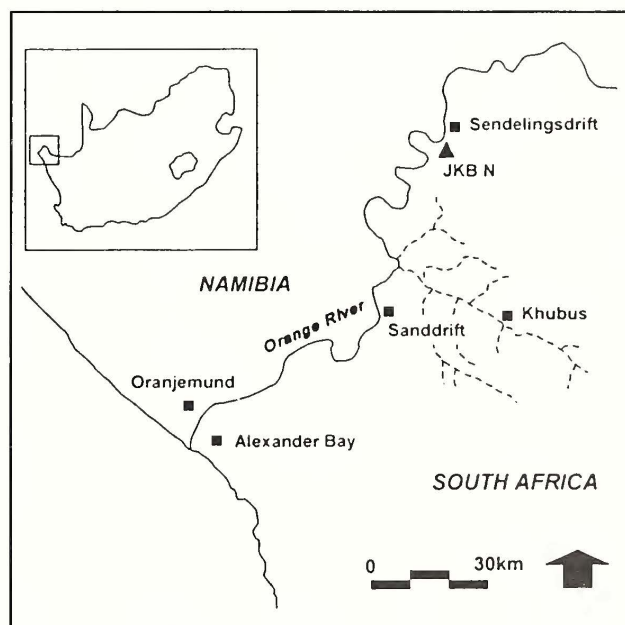


Fig. 1. Map showing the location of the Richtersveld.

to two thirds of the assemblage still awaiting analysis, we anticipate the total count to be in the vicinity of 46 000 artefacts.

THE ASSEMBLAGE

The lithic assemblage is composed mainly of quartz (67,79%) with crypto-crystalline silica (CCS) (20,77%) and quartzite (10,65%) being the other main raw material

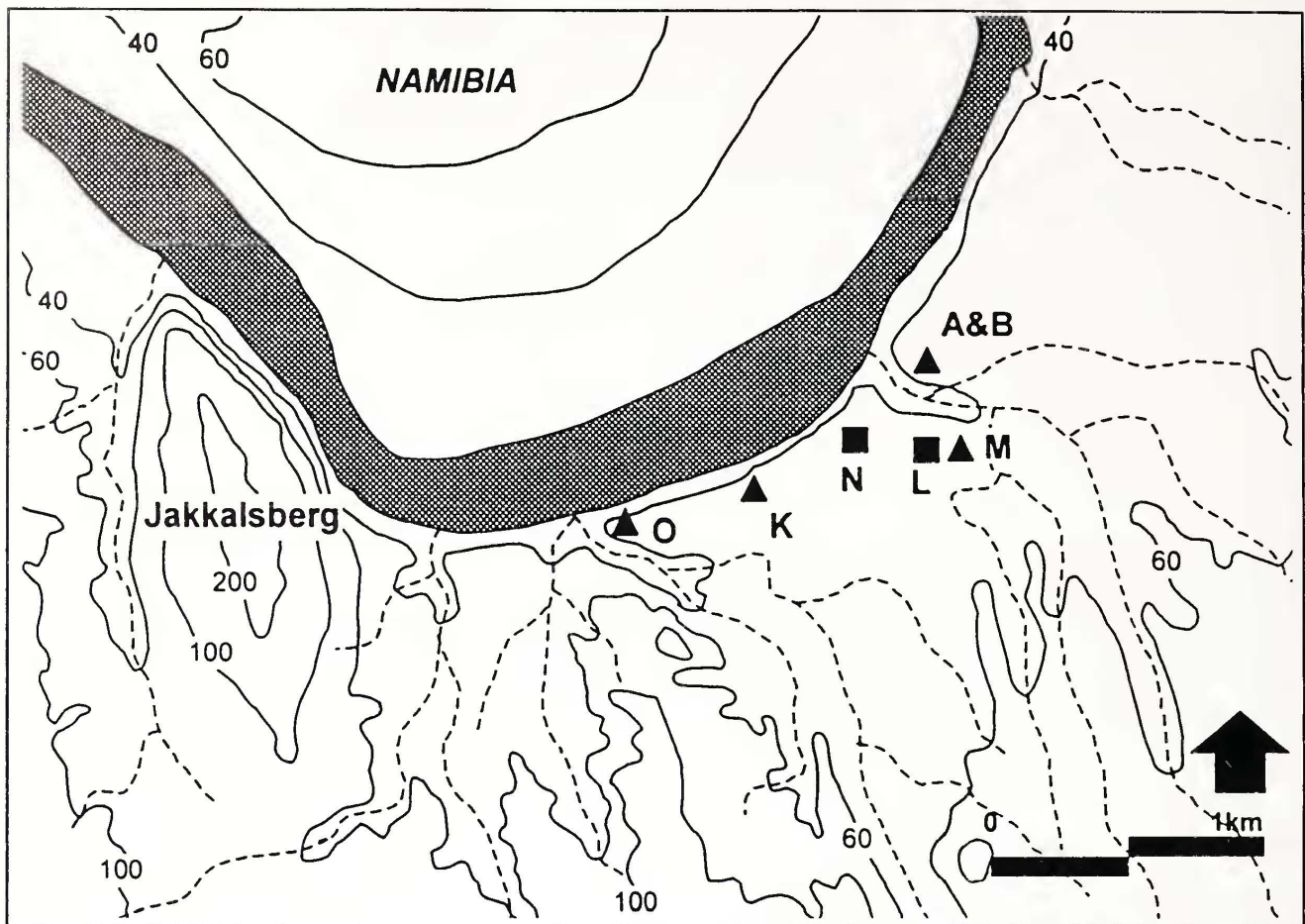


Fig. 2: Map showing the location of JKBN 1 and other sites in the immediate vicinity. Known and presumed herder sites with abundant pottery are indicated by triangles and those with very little or no pottery are indicated by squares.

contributors. The total proportion of formal tools is 1,33% with 71,62% of these being on CCS and the balance on quartz. Utilised flakes are relatively scarce contributing only 0,8% of the flaked assemblage. A little more than half of these are made on CCS, with all but one of the remainder with 71,62% of these being on CCS and the balance on quartz. Utilised flakes are relatively scarce contributing only 0,8% of the flaked assemblage. A little more than half of these are made on CCS, with all but one of the remainder being made on quartz.

Most of the cores are of the irregular type (46,83%) with single platform cores (28,57%) and bipolar cores (24,60%) accounting for the rest. Almost all of the bipolar, and a little over half the irregular cores are made on quartz. Single platform types are evenly divided between quartz and CCS. Included amongst the CCS ones are 4 conical single platform bladelet cores. It is clear from the above data that the better quality and scarcer CCS pebbles were targeted for higher artefact yields, while quartz, which is readily available in abundance in both pebble and vein form, was frequently struck opportunistically by means of the bipolar technique in the hope of producing usable flakes and bladelets. It is likely that most of the bipolar cores are made

on river pebbles while the irregulars and single platforms are made on vein quartz.

The total of 222 formal tools so far analysed includes 22 backed blades and bladelets (9,91%), 9 segments (4,05%) and 17 backed scrapers (7,66%). Although it is recognised that there may be some subsequent overprinting by later material, it seems clear that the majority of artefacts were deposited during mid-Holocene occupation.

The radiocarbon date is consistent with the pre-pastoralist nature of the overall assemblage. The presence on the site of small amounts of highly fragmented Khoekhoe ceramics is we believe unrelated to the lithics, but rather derived from the general herder presence in the immediate vicinity for the last 2000 years (Fig. 2).

THE DENTICULATES

Thus far, 12 denticulates representing 5,41% of the formal assemblage, have been recognised (Fig. 2). There is significant variety in form among these artefacts, but all possess similar, minute notches forming fine denticular edges. The cross-sections of the notched edges vary. Two

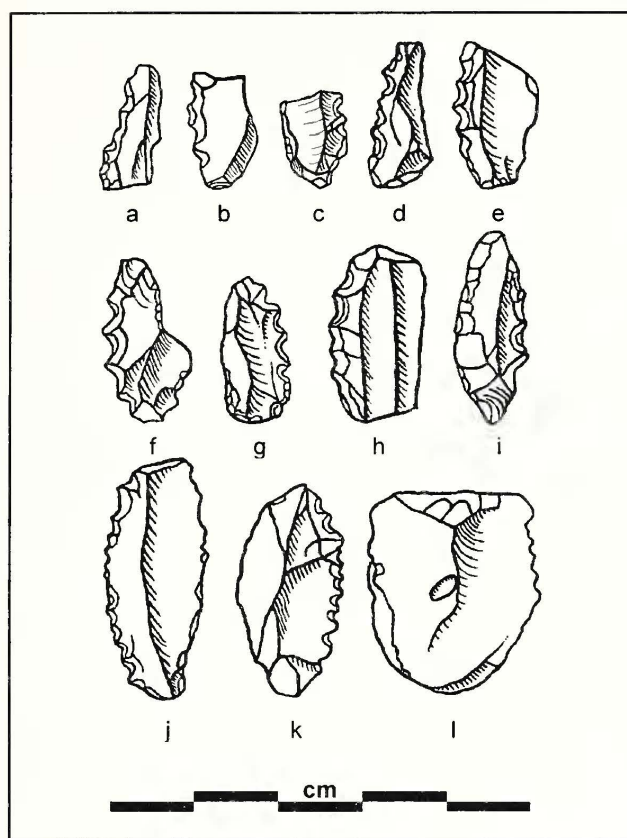


Fig. 3: The twelve denticulate pieces so far analysed. All artefacts are lying on their ventral surfaces and have their butts down.

(k, l) are made on sharp cutting edges, 7 are on scraper-like edges (b, c, d, f, g, h, j), and the remaining 2 on steep edges (a, i) (angle in degrees?). One is on an edge between that of a scraper and a backed piece (e). Some range in the size of the notches is evident, with some being very small (j, k, l) and others quite large (d, f, g, i). The smaller notches are very closely spaced, with for example, no fewer than 12 having been applied to 20 mm of edge (j) or 10 to a 16mm edge (k).

It is unclear whether the notches were applied to already retouched margins. Experimentation suggests however that the notches may have been made first, and that a sharp, strong edge, possibly that of another flake, would have to have been used to make them.

There is considerable variety in the edges opposing the denticulation. They include 3 that are backed (f, g, j), 2 that are clean and sharp (h, k), 1 has a perfect scraper edge opposing (i), another has a scraper-like edge which has only been very lightly retouched (c), and 2 show edges that are partly utilised (a, e) of which one also has a small section of retouch on the utilised edge. The balance of the tools have edges that do not adhere to any particular shape nor show any signs of use (b, d, l).

Although similar denticulates have been found at Oakhurst, near George in the southern Cape Shelter, the notches on these pieces have been made on sharp, straight

edges and were interpreted as saws (Schrire 1962). They were recovered from the base of a layer dating to between 3450 and 7910 BP (Deacon 1979). The JKB N notched edges are almost all gently convex and, with their variety of edge angles, could not be interpreted in the same way. Two tiny segments with denticulate retouch along their chords were recovered from the levels dating to between 6100 and 7750 BP at Byneskranskop 1, near Gansbaai (Schweitzer & Wilson 1982). These two artefacts are only 7 and 8 mm long respectively and, although they are described as 'saw-edged' (*ibid*:62), no further suggestion as to their function is offered.

CONCLUSION

The above discussion introduces a category of formal artefacts, the likes of which, as far as we know, are not common during the Later Stone Age in South Africa. They show considerable variety in their morphology when compared to each other but have consistently similar notching. All the artefacts from JKB N, although possessing similar notches to the other examples of LSA denticulate artefacts mentioned, are clearly different in terms of overall shape. In addition, this class makes up a much greater proportion of the formal assemblage than ever observed previously. As our analysis of this and other excavated sites is ongoing we are unable to say how widespread these tools will be, but we would welcome information from other researchers who may have noticed similar tools.

ACKNOWLEDGEMENTS

Transhex Mining Ltd. are acknowledged for their financial and logistical assistance.

REFERENCES

- Deacon, J. 1979. Guide to archaeological sites in the southern Cape. Occasional publication, Department of Archaeology, University of Stellenbosch.
- Halkett, D.J. 2001. A report on archaeological excavations on the orange river floodplain between Jakkalsberg and Sendelingsdrift: Richtersveld. Unpublished report prepared for Trans Hex Mining Ltd. Archaeology Contracts Office, University of Cape Town.
- Robertshaw, P. T. 1978. Khoi and San: Aspect of the later prehistory of the western Cape, South Africa. Unpublished Ph.D thesis: University of Cambridge.
- Schrire, C. 1962. Oakhurst: a re-examination and vindication. *South African Archaeological Bulletin* 17:181-195

- Schweitzer, F.R. & Wilson, M.L. 1982. Byneskranskop 1: a late Quaternary living site in the southern Cape Province, South Africa. *Annals of the South African Museum* 88:1-203
- Smith, A.B., Halkett, D., Hart, T. & Mütti. 2001. Spatial patterning, cultural identity and site integrity on open sites: evidence from Bloeddrift 23, a pre-colonial herder camp in the Richtersveld, northern Cape Province, South Africa. *South African Archaeological Bulletin* 56(173&174):23-33.
- Webley, L. 1992. The history and archaeology of pastoralist and hunter-gatherer settlement in the north-western Cape, South Africa. Unpublished D. Phil thesis: University of Cape Town.
- Webley, L. 1997. Jakkalsberg A and B: the cultural material from two pastoralist sites in the Richtersveld, northern Cape. *Southern African Field Archaeology* 6(1):3-19.