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DID THE SEACOW RIVER BUSHMEN MAKE BACKED MICROLITHS?*

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ABSTRACT

Backed microliths persist into the uppermost levels of most excavated rock shelters in the Seacow River valley, in association with European artifacts and livestock. They are absent or extremely scarce in equivalent levels of shelters in the middle Orange River, just 100 km to the northwest. If microliths were arrow barbs inserted into wooden shafts, this is not confirmed by historical sightings, which report only bone points on the tips of Bushman arrows. Bone point fragments are also common in historical levels of all shelters. The microliths are shown to lie close to, and above, European items which have been churned downwards through the deposits. We argue that these microliths were mixed into the historical levels from below.

INTRODUCTION

Although the persistence of backed microlith technology into very late Holocene times in the upper Karoo is well documented (Sampson 1972; Deacon 1976; Hart 1989; Bousman 1991; Pease 1993), its survival into historical times remains controversial. The technique is not recognizable in the ethnohistorical record of stone tool use by Karoo Bushmen (Dunn 1873, 1930; Kannemeyer 1890), but the documentary record of their lithic production is so scanty that the question can be better addressed by archaeological means.

The pioneer excavation of Hewitt (1931) at Tafelberg Hall in the upper Karoo (Fig. 1) seemed to support the view that microlithic technology had disappeared by historical times. This shelter yielded only a solitary backed bladelet among a mass of scrapers and other stone tools. Scraps of sheet iron on bedrock and at the surface indicated that the 0.6 m deep sequence post-dated European contact (ca AD 1770). Doubts that Hewitt may have lost other microliths through a too-wide sieve mesh were apparently dispelled when fine-mesh excavations at rock shelters on the Orange River some 120 km to the north (Fig. 1), produced sequences in which microliths dwindled to a mere trace in the Post-Contact levels (Sampson 1972). This microlith-free horizon was equated with the Smithfield B industry which Van Riet Lowe (1929) had described from north of the Orange River (Fig. 1), and had attributed to the historical Bushmen. In the Orange River shelters, the underlying, microlith-rich zone was dubbed the Interior Wilton Industry (Sampson 1974).

Fresh doubts arose, however, when Highland Rock Shelter, only 40 km from Tafelberg Hall (Fig. 1), produced a sequence in which backed microliths persisted in large numbers into the historical levels (Deacon 1976). Excavations at Haaskraal and Volstruisfontein shelters (Hart 1989) also produced a few microliths in Post-Contact levels, and this recurred at several other rock shelters in the upper Seacow River valley (Pease 1993). If the Bushmen of the Orange River and of Transorangia (the originally defined Smithfield B region) stopped making backed microliths before the arrival of the Dutch trekboers, it would seem that the upper Seacow River

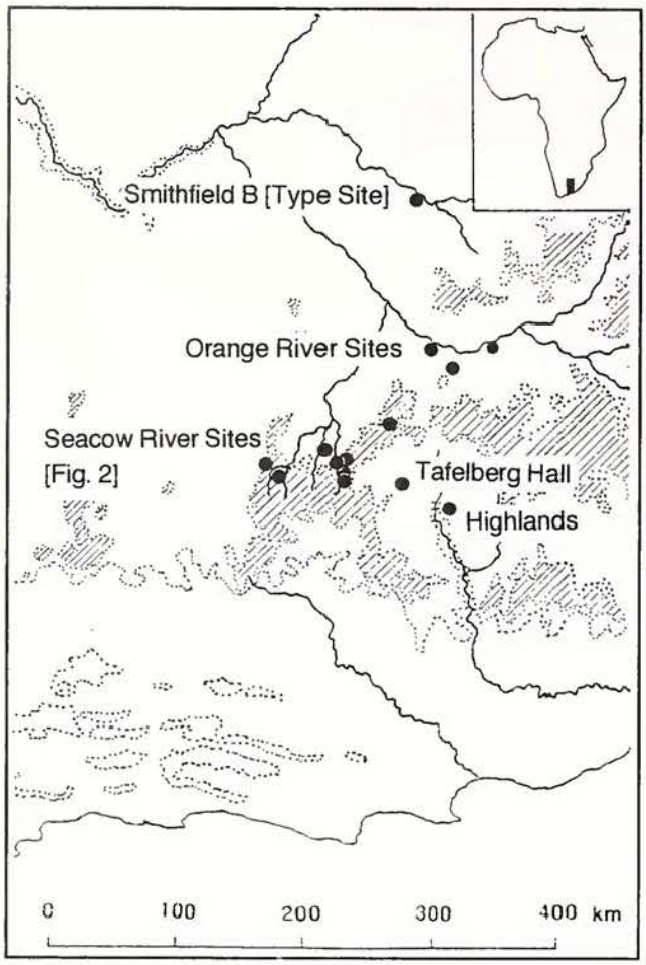

Fig. 1. Locations of rock shelters mentioned in the text; 1 000 m contour stippled and 2 000 m shaded.

Bushmen had no part in this, but continued for at least another century.

Here, we examine the contexts of backed microliths found in historical levels of eight rock shelters in the upper Seacow valley (Fig. 2), to determine whether they are actually associated with the European artifacts and livestock commonly found in those levels.

Spatial analysis of the abundant backed pieces from the underlying, Pre-Contact levels indicate clusters of production waste, including variable numbers of backed points and backed bladelets broken or discarded during manufacture (Close & Sampson in press). Although these allow detailed reconstruction of the rather unusual production methods (Close & Sampson 1998), none of them seems to have been used, except for a small sample of double-backed awls and a few arrowheads with double-backed tangs. The rest are essentially production waste.

THE SEACOW RIVER BUSHMEN

The historical levels were accumulated by local Bushmen (Neville 1996). Although they were unable to keep the trekboers out, the Bushmen were not exterminated, but found themselves various niches within 19th century frontier society. Many drifted in and out of service on the

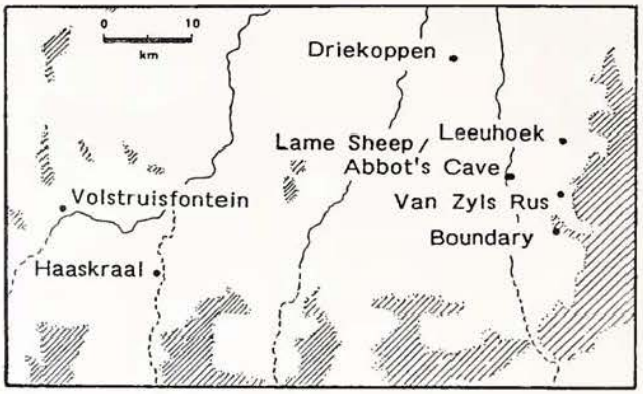

Fig. 2. Locations of rock shelters in the upper Seacow River valley; mountains are shaded.

proliferating Dutch stock farms. Some Bushman servants spent a few months of each year in their traditional hunting and gathering rounds. By AD 1810 many farmsteads had Bushman camps nearby, each filled with Bushman hangers-on, who received daily handouts of food and occasional gifts. Most of these dependents spent several months of each year in traditional hunting and gathering on the rapidly diminishing Crown Lands, not yet seized by Europeans because the spring eyes there were too weak to support a homestead. When farms failed, as they did frequently due to droughts, locusts or million-plus migrant springbok herds, the Bushmen servants and dependents simply took to the veld, supplementing their meagre diet with bouts of stock thieving.

Any small, accessible rock shelter not too far from water continued to be used intermittently by farm servants, dependents, vagrants and stock thieves, just as their ancestors had done in prehistoric times. It is these people who may have kept the backed microlithic technology alive for at least another a century after the European onslaught. Eventually, fencing was introduced and put an end to essential game movements. This and the repeater rifle combined to accelerate the extermination of the great wildebeest, zebra and springbok herds on which the Bushmen subsisted. Finally windpumps opened up the Crown Lands to permanent occupation by farmers. By 1890 the destruction was complete, and most rock shelters were abandoned. Surviving Bushmen lived on farms or in the slums of the towns, and unattached Bushmen no longer roamed the countryside.

Eyewitness accounts of arrows.

We are fortunate to have four separate descriptions of Bushman arrows seen by early travellers at various places in the lower Seacow valley. The localities of these sightings have been reconstructed by Neville (1996), and are shown in Figure 3. Their descriptions (Barrow 1806, I:229; Steedman 1835, 1:148; De Kock 1965:258; Raper & Boucher 1988, I:195) are so consistent across fifty years (AD 1777-1830) that there appears to have been little or no variation in arrow tip design. The head was

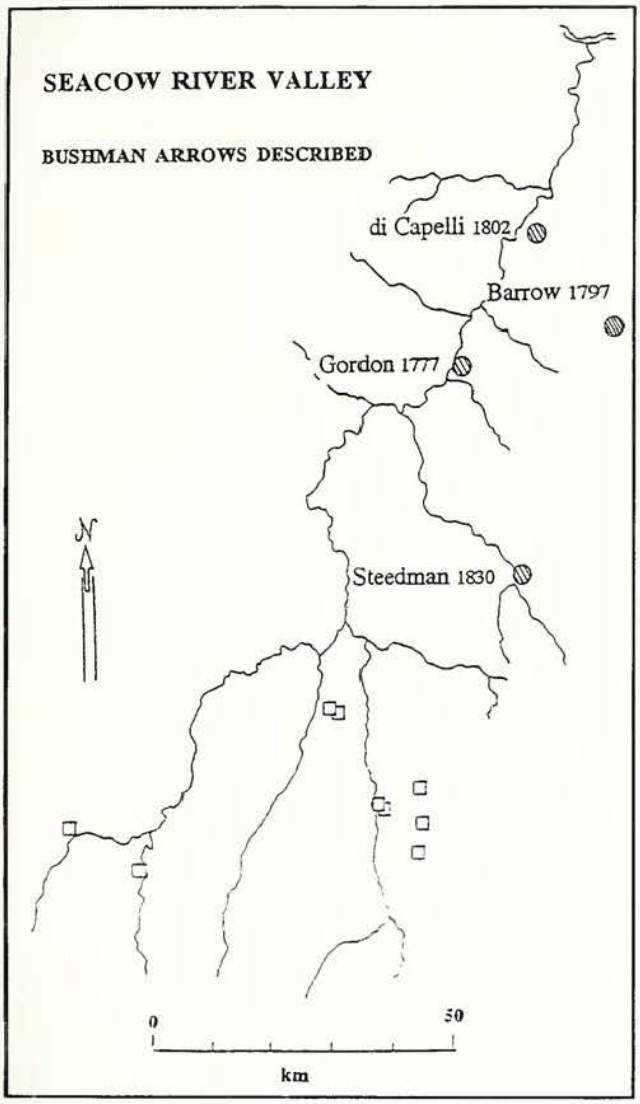

Fig. 3. Main channels of the Seacow River, showing locations of eyewitness accounts of Bushman arrowheads (after Neville 1996), and the excavated shelters (open squares) shown in Fig. 2.

invariably reported to be a detachable, smooth bone point armed only with one or two barbs made of porcupine quill, bound to the shaft. Nobody saw stone heads or barbs, although one traveller made the important observation that small triangular tips of European iron were starting to appear on Bushman arrows farther south (Barrow 1806, I:99). Consequently there is no support from documentary sources for the survival of microlithic barbs into historical times.

THE HISTORICAL LEVELS OF THE ROCK SHELTERS

This raises doubts about the stratigraphic integrity of the microliths found in historical levels of local rock shelters. Although fragments of the described bone arrow tips are common in the upper levels in all shelters (Hart 1989; Sampson in prep.), microlith numbers vary widely, and are entirely absent from some (Pease 1993). The underlying, prehistoric levels of the rock shelters are densely packed with stone artefact debris, pottery (Bollong 1996) bone arrow points, and ostrich eggshell beads, all mixed with the bones and teeth of a hugely varied local fauna (Plug & Sampson 1996). The European Contact horizon is usually visible as a thin band of glass trade beads within the mass of indigenous material. These are followed shortly in the sequence by proliferating (but low) numbers of European metal, glass and earthenware items. With time, wire fragments, gun cartridges, and corrugated iron fragments all point to the agents which finished off the Bushmen's natural habitat and food base. Traditional artifacts dwindle, while European livestock remains proliferate and become more varied (Voigt *et al.* 1995). Backed microliths are found with many of these items.

Dating ranges for the production of all the associated European items have been the focus of intensive study (Saitowitz & Sampson 1992; Crass & Sampson 1993a, 1993b; Moir & Sampson 1993; Sampson 1993; Westbury & Sampson 1993; Maggs 1994) so that the age of the uppermost backed microlith in each shelter can be inferred by these associations. There follows a brief summary of the dating evidence from each shelter.

Volstruisfontein Shelter (Fig. 4) yielded three microliths from near glass beads made between 1850-1895 and earthen wares of post-1850 and post-1860 date. There is also a style of lead grapeshot commonly made between 1840-1885. There are no microliths in the superficial dust layer, which contained a clear bottle fragment post-dating 1893, and a ribbed copper percussion cap dating to 1890-1910, all from the front of the shelter.

Haaskraal Shelter also has a post-Contact deposit with rare microliths (Fig. 5). There is a backed stub with glass beads dating to the first half of the 19th century, followed by beads of mid-19th century date. The youngest is a backed point from just below spits containing a lead bullet which post-dates the 1850's and lead grapeshot of the 1840-1885 style.

Driekoppen Shelter yielded 18 backed microliths in historical levels, all but two of which came from the loose, stony surface dust (spit 1). Although this topmost level also produced nine European artifacts (Fig. 6), another 17 European items actually come from deeper in the deposit. Its post-Contact levels start with glass beads of 1810-1840 dating range, followed by levels with a four-hole button, a cotter pin and whiteware porcelain all of which post-date 1850.

Abbot's Cave has the deepest of all post-Contact layers, almost a meter in places. The upper half of its depth is sheep-dung. The oldest European item is a French gunflint of 1810-1840 range. There is also a Brandon gunflint of late 19th century vintage, and a carriage-bolt post-dating 1865. The surface of the dung produced rubber tire parings (probably waste from boot sole replacements) that cannot be older than about 1910 when tax records show that the nearest farmer bought the first car in the district (D. Neville, pers. comm.). Eleven microliths are in apparent association with this material (Fig. 7), while three others are in the loose surface dust

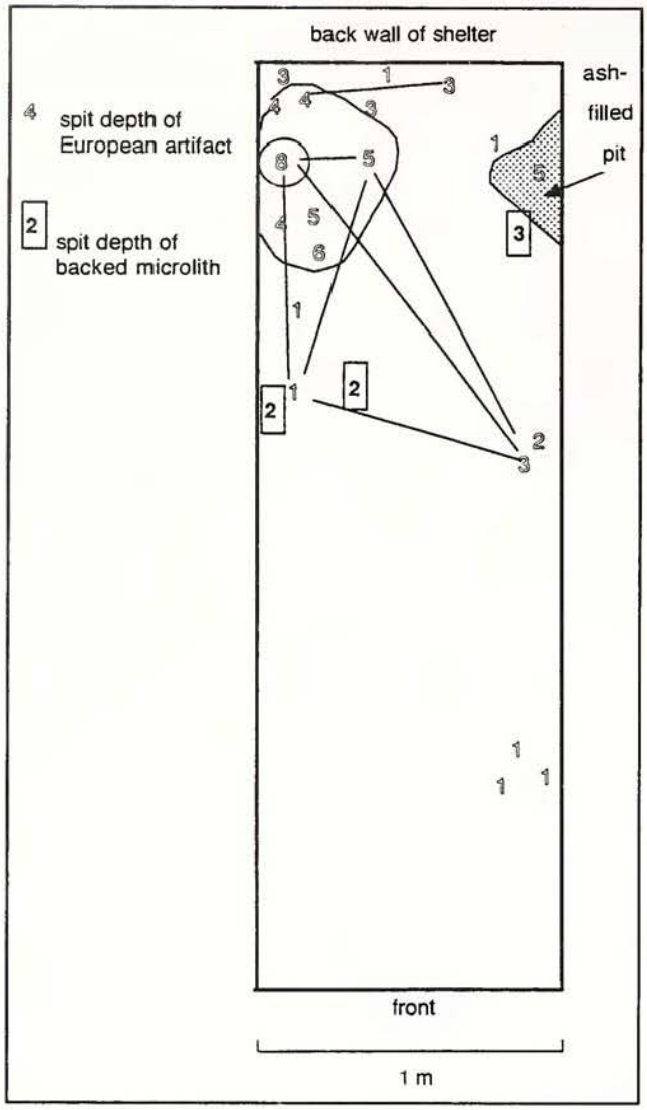

Fig. 4. Plan of the excavation at Volstruisfontein shelter, showing positions and spit depths of European artifacts (including cross mends), and uppermost backed microliths.

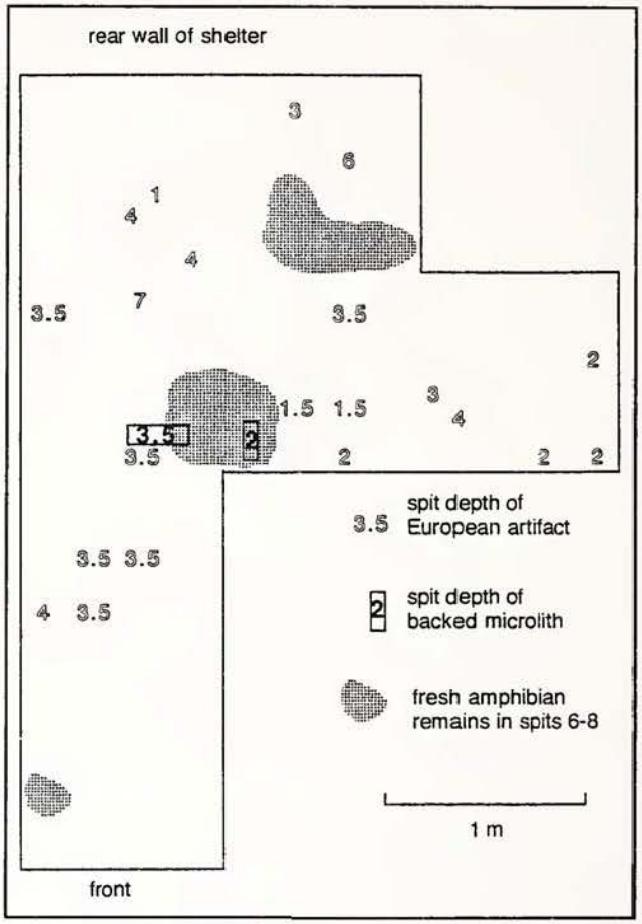

Fig. 5. Plan of the excavation at Haaskraal shelter, showing positions and spit depths of European artifacts and uppermost backed microliths.

on top of the dung,and are certainly out of context.

Lame Sheep Shelter is all Pre-Contact deposit except for its loose surface dust which contains only a peach pit and a peg of bent fencing wire. There are three microliths, two from the surface dust and one from just below the top of the sequence (Fig. 8).

Leeuhoek Shelter yielded the most European items. There is a lower unit with glass trade beads, metal items, gun flints and earthenwares (transfer printed,annular and hand-painted) tied firmly to the 1840-1860 range. Items from the overlying surficial unit include metalwork and ammunition attributable to an 1880-1910 range, although an escutcheon plate at the base of this unit may be slightly older. No microliths are directly associated with any of this material (Fig. 9).

Van Zyl's Rus has a thin, probably discontinuous covering of historical deposits with only a few items of mainly undatable metalwork, but there is an iron wire underwear clip datable to ca 1895. One microlith was found in the surface dust (Fig. 10).

Boundary Shelter contains several microliths embedded in the post-Contact levels. The base has a brass button or stud of late 18th/early 19th century vintage and a glass bead of early 19th century date. The uppermost level has metal objects attributable to the late 19th century (Fig. 11).

Overall, this evidence appears to support a case for sustained microlith production after 1850, and possibly as late as 1890 when most shelters were abandoned.

CONTEXTUAL ANALYSIS

In this section we evaluate the horizontal and vertical relationships between the apparently historical backed microliths and the indisputably historical artifacts of European manufacture. We also take note of various highly localized disturbances in the vicinity of each microlith. This is not easily done, because the dark, stony deposits appear to be unstratified and disturbances such as pits and burrows cannot be seen during excavation, which was carried out in arbitrary spits. To partly compensate for this, the positions of individual specimens were plotted to the nearest 25 cm x 25 cm block and the nearest ~2.5 cm thick spit, using procedures detailed in Sampson *et al.* (1989).

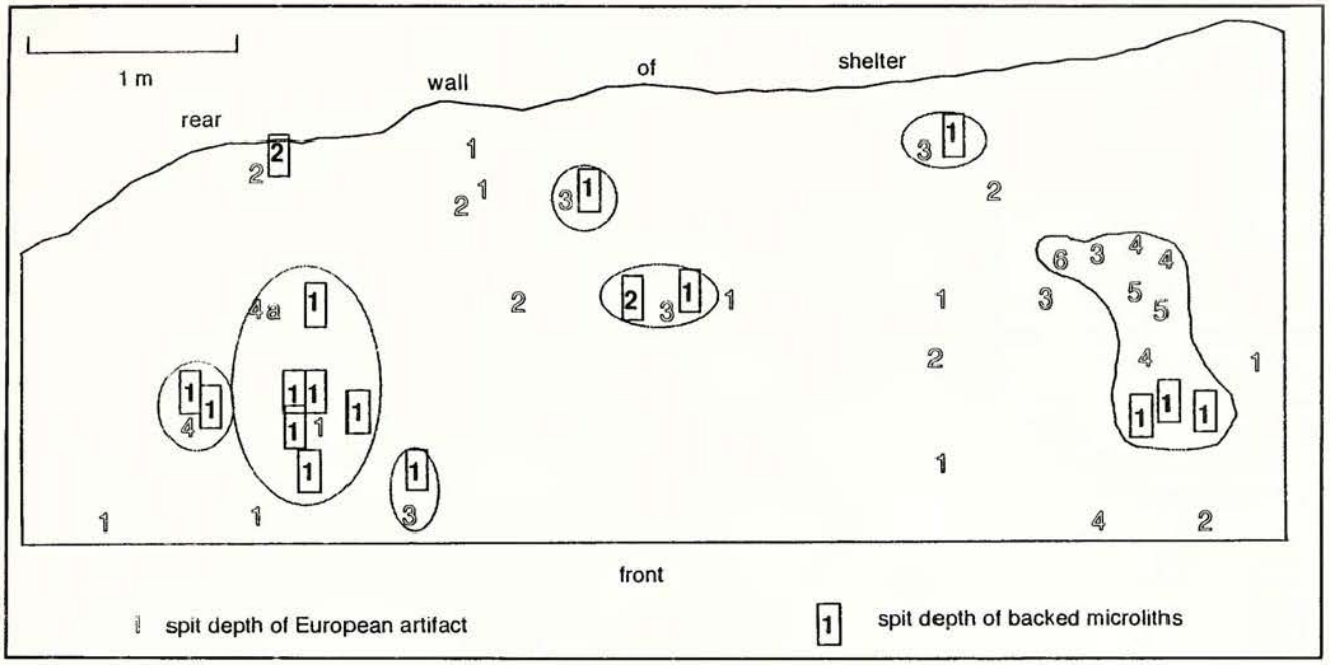

Fig. 6. Plan of the excavation at Driekoppen shelter, showing positions and spit depths of European artifacts and uppermost backed microliths.

At Volstruisfontein (Fig. 4) the three microliths came from spits 2 & 3, above and surrounding the main lens of European artifacts in spits 4-6, which contained no associated microliths. This lens has been disturbed (burrowed?) so that a single piece of teapot lid has penetrated down to spit 8, circled in Figure 4. Fortunately the patterns on this lid match with three other pieces - one in the main lens and two others which must have been kicked up by the burrowing into spits 3 and 1. Note that one of the microliths (a backed stub) from spit 2 is in the same block as the spit 1 teapot fragment, and the second spit 2 microlith is from the block next to it. It is thus very likely that they were also kicked up from below. Finally, the backed bladelet in spit 3 is from a block on the edge of a small, ash-filled pit, dug into the lower levels. This,too, must have been churned up from below. It follows that all three specimens are in highly suspect contexts.

At Haaskraal (Fig. 5) the backed stub in spit 3.5 comes from the same block as a metal boot grommet. Although the backed point in spit 2 comes from a block slightly below a glass trade bead in a contiguous block (spit 1.5) and a lead bullet (also spit 1.5), it is at the same level as a small fragment of rusted iron sheet in spit 2. The two microliths are vertically isolated: there are no microliths from anywhere in spit 4, yet they proliferate lower down in spit 5. Further doubts are raised by the two topmost microliths since they occur immediately above one of three patches of fresh amphibian bones in spits 6-8 (Fig. 5). The latter reflect recent deaths of aestivating frogs which have burrowed into the shelter deposit and failed to survive (Sampson in press). Another such patch towards the rear of the shelter is certainly related to the downward migration of three pieces of a refitted Bushman bowl, the rest of which was recovered at various depths in the historical levels (Bollong & Sampson 1996: fig. 6.). If the burrowing actions of frogs can move potsherds up and down the profile, there are good grounds for accepting that the two microliths were displaced upwards by the same process.

At Driekoppen the situation is complicated by patches with no historical cover, so that prehistoric material may be close to the surface. However, within the historical layer there are loose clusters of microliths in spit 1 at the left end of the excavation (Fig. 6). Although these are very close to a piece of window glass, they are also adjacent to two beads which are too deep (spit 4). If the beads were thrust down by some disturbance such as burrowing, it is very likely that the adjacent microliths have been kicked up from below by the same agent. The same argument can be applied to microliths in the centre/rear of the shelter and especially to the group of three at the right/front, adjacent to the large group of European items from very deep in the deposit (spits 4-6). One microlith in spit 2 near the left/rear wall is in the same block as a burnt and broken glass trade bead, in an apparently untroubled context.

At Abbot's Cave the same configuration occurs. Most of the relatively abundant European items (besides artifacts, there are also crop seeds, melon seeds, and peach pits) lie beneath the dung in a narrow band covering spits 7-9. In three places there are items which appear to have been thrust downwards into the prehistoric levels (ringed in Fig. 7), and immediately adjacent to those three places there are microliths in the European levels. One specimen appears to have been displaced upwards to the very top of the overlying dung (spit 2). Although a group of three microliths at the rear of the

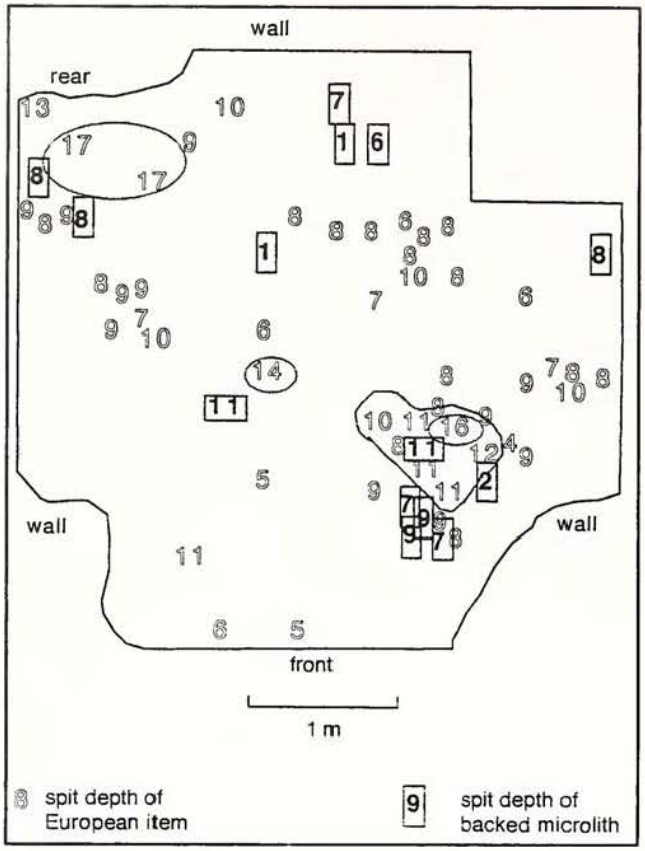

Fig. 7. Plan of the excavation at Abbot's cave, showing positions and spit depths of European items and uppermost backed microliths.

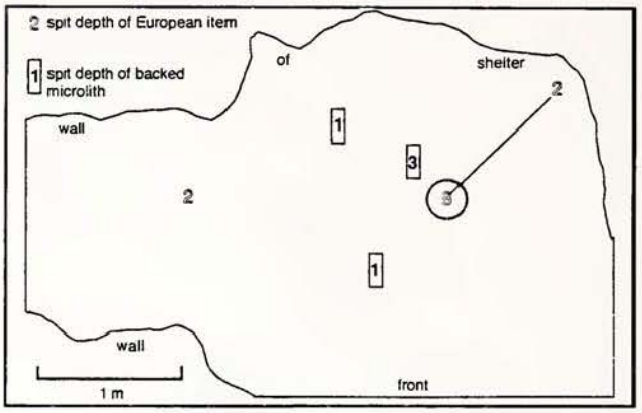

Fig. 8. Plan of the excavation at Lame Sheep shelter, showing positions and spit depths of European artifacts and uppermost backed microliths.

shelter has no immediate European associations, one of them is in the surface dust and thus is certainly out of context. The solitary specimen in spit 8 at the right margin of the excavation cannot be evaluated because there are no surrounding data.

Alongside this is Lame Sheep which, by contrast, has only a thin veneer of historical deposits with no datable items. There is also a large wire peg in spit 8 which is of similar design to the one in spit 2 (Fig.8), and has clearly migrated down the profile through burrowing. A solitary microlith in spit 3 is adjacent to this peg, and two others in the surface dust are in its vicinity and were probably also kicked out of the same burrow.

No microliths were found with any of the abundant European material at Leeuhoek (Fig. 9) although they are present in the underlying deposit. Spit 5 marks the first general appearance of European items (some refitted), but there are no superficially positioned microliths around any of the four places where European items may have been churned downwards by disturbances (ringed in Fig.9). Leeuhoek is too shallow to have attracted serious burrowing. The minor disturbances which did take place all failed to intersect any of the scarce prehistoric microliths lying close to the shallow bedrock.

At Van Zyl's Rus there are no suspicious circumstances around the solitary backed point fragment in spit 1 (Fig. 10), except that it is a lone specimen in the surface dust, and not properly sealed in the deposit. It is also vertically isolated: there is one microlith in spit 3 and another in spit 5 (below the historic levels), with several more in spit 7 and deeper.

The lens of sparse historical material in Boundary is restricted to the right rear of the shelter, so that prehistoric materials lie near the surface at the left front, where microliths were recovered up to spit 3, followed by mainly sterile hillwash (Fig. 11). Within the historical lens, the three backed microliths in spit 1 surround a group of unusually deep European artifacts in spits 5-6, ringed in Figure 11, suggesting they were dug up from below. No obvious disturbances occur near the other microliths, but we suspect there is one obscured by the baulk between the excavations, which underlay a jackal fence and could not be excavated.

SUMMARY AND CONCLUSIONS

Backed microliths are found at all depths in rock shelter deposits of the upper Seacow River valley of the upper Karoo. This includes the uppermost levels where they were recovered with European artifacts and livestock. Since these can be equated with historical Bushman occupations, it is tempting to suppose that backed microlithic technology persisted into historical times. The function of these backed points and bladelets remains uncertain, but they are widely believed to be arrow barbs inserted into wooden shafts.

However, no such shafts have been found, only bone points without slots or grooves to accommodate stone barbs. Eyewitness accounts agree that local Bushmen tipped their arrows with bone and barbed them with porcupine quills which were lashed, not inserted, on the side of the bone point. This nice fit between the documentary and archaeological records means that either microliths were used for some other purpose, or the specimens recovered during excavation are not *in situ*. Because most of the specimens lie close to, and above European items which have been thrust downwards by burrowing and other disturbances, it is reasonable to assume that the uppermost microliths are not *in situ*, but

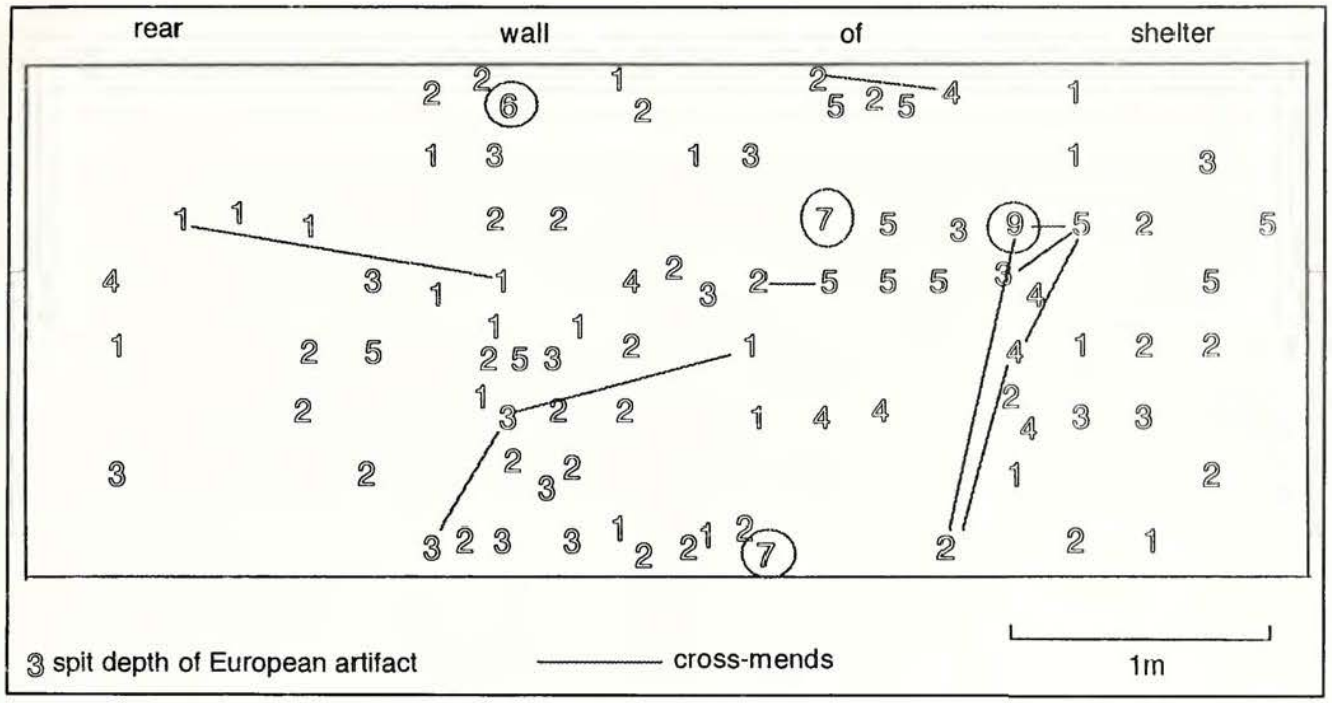

Fig. 9. Plan of the excavation at Leeuhoek shelter, showing positions and spit depths of European artifacts (including cross-mends).

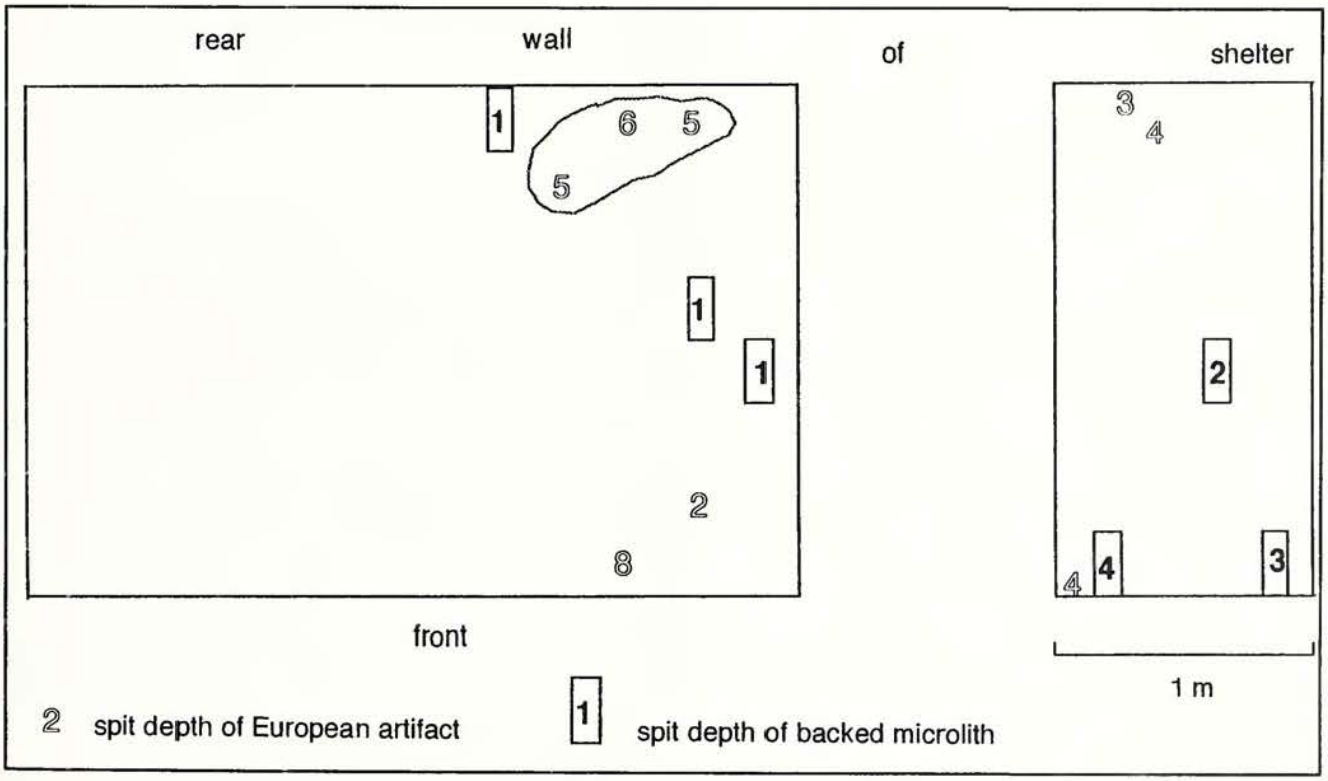

Fig. 10. Plan of the excavation at Van Zyl's Rus shelter, showing positions and spit depths of European artifacts and uppermost backed microliths.

have been displaced upwards from the prehistoric level underneath the Contact horizon.

It has long been supposed, on general principles, that cultural remains maybe vertically displaced within archaeological sites, and particularly within intensely re-occupied sites, such as caves or rock shelters (for example, Matthews 1965). In practice, however, such displacement has historically not often been considered in

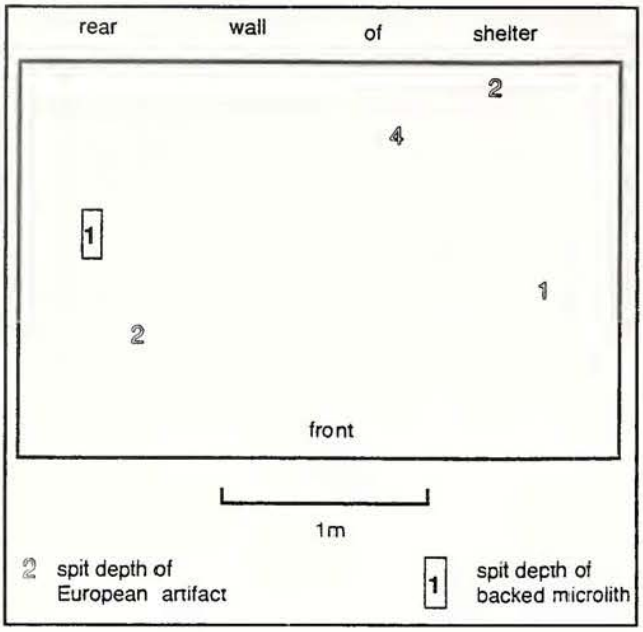

Fig. 11. Plan of the excavation at Boundary shelter, showing positions and spit depths of European artifacts and uppermost backed microliths.

even the most meticulous of excavations (for example, McBurney 1967:11-13). This is understandable, since it is only the combination of three-dimensional provenience data with refitting studies that has revealed just how far remains may be displaced. Thus, Villa's reanalysis of Terra Amata found refitting pairs vertically separated by as much as 40-45 cm of apparently intact dunal stratification (1983:69-72); Petraglia (1992:166) found "up to 76 cms of vertical displacement" in the Abri Dufaure; and Hofman's (1992) working the Duck River Basin (Tennessee) showed that similar vertical displacements can occur within less than 10 000 years. Unfortunately, refitting of the material excavated from the Seacow River valley rock shelters has not been attempted. Nonetheless, the occurrence, at Volstruisfontein, of what are probably parts of the same teapot-lid in spits 1, 3, 5 and 8 (Figure 4) is a strong indication that the shelters are not immune to processes of displacement. This is not unexpected.

Our conclusion thus confirms the absence (or extreme paucity) of backed pieces in the upper levels of shelter sequences in the adjacent middle Orange River valley, only 100 km away. There bone point fragments also continued into the uppermost levels.

If microliths were barbs in wooden arrow points, then they were perhaps rapidly replaced in early historic times by the triangular iron tips reported by travellers. The iron scrap would have been obtained from the first wave of Dutch trekboers. The change took place in the period AD 1770-1800. Unfortunately the small iron sheet fragments mentioned in spit 2 at Haaskraal is so rusted that it cannot be identified as a triangular arrowhead. This applies also to another fragment in spit 7 (Fig. 5), and to tiny rust scales recovered from the front of Boundary in spit 8 (Fig. 11) Whether these apparently very early traces of iron are of European or native origin (*e.g.* Sampson 1972: fig. 78) has not been determined.

The evidence remains good that backed microliths were being made until AD 1770-1800. The South African interior must, therefore, be one of the last places on earth where backed microlith technology was routinely practised by a native population. Several archaeological sites have yielded backed microliths from apparently nineteenth century strata. However, contextual analysis and consideration of post-depositional factors strongly indicate that, even if occasional backed microliths were made during the historic period, this was no longer routine.

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