Field and Technical Report

THE DUNEFIELD MIDDEN CERAMICS: TECHNICAL ANALYSIS AND PLACEMENT IN THE WESTERN CAPE SEQUENCE

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INTRODUCTION

This report presents an analysis of the ceramics from the LSA site Dunefield Midden (DFM) and provides a discussion of where the assemblage fits within the ceramic sequence developed for the Western Cape by Sadr & Smith (1991). Most Later Stone Age southern African ceramic assemblages are either the products of unprovenanced surface collections (e.g. Rudner 1968) or come from well-excavated sites but consist of small and/or highly fragmented samples. The DFM ceramics are important because they are for the most part a completely recovered assemblage from a temporally discrete excavated context. This provides a rare opportunity to examine a single prehistoric group's ceramic repertoire – one which includes waste elements from the full range of vessel types and attributes. The implications that the assemblage holds for accurately interpreting LSA ceramic samples using models to accommodate ceramic use-life variability are of particular significance.

DFM is a large open-air late Holocene campsite situated at the base of a large northeast–southwest orientated dune cordon on the Elands Bay coastline, approximately 0.5 km east of the sea and 1.5 km north of Elands Bay Village (Fig. 1). Dated to between 700–600 BP, this pre-colonial site is exceptional because it consists of a single living floor with some limited peripheral overprinting (Parkington *et al.* 1992). The site's structure is composed of hearths, ashy dumps and roasting pits with associated distributions of animal bone and shellfish food waste as well as artefacts such as quartz tools, ostrich eggshell beads and fragments and ceramics (Parkington *et al.* 1992).

An earlier unpublished analysis of the DFM ceramics was undertaken by Nilssen (1989). Both the excavation and its ceramic assemblage have grown considerably in size since then, prompting this reassessment. For the general description and quantitative analysis of ceramic attributes I follow the nomenclature devised by Sadr & Sampson (1999). This is a modified version of the classificatory system proposed by Sadr & Smith (1991).

CERAMIC ANALYSIS

In total, 1011 sherds were recovered at DFM over the course of 11 years of excavations. Of these, 123 sherds (12%) are decorated. The assemblage comprises 66 rim sherds (representing 6.5% of the total), of which 30 (45.4%) are decorated. Sherds less than 4 mm in maximum dimension were excluded from the count.

After extensive conjoining, a minimum number of vessels (MNV) of 20 is now established (Table 1), although a slightly higher count of 24 or 25 is likely. The uncertainty is due to the fact that there are three 'body-less' bases as well as two individual lugs that do not conjoin or seem to correspond with any of the known vessels on the grounds of fabric and general appearance. These were consequently excluded from the MNV count.

VESSEL TYPE

Of the 20 identifiably individual vessels at DFM, 16 (80%) have characteristics typical of lugged, incised (LINC) ware or 'De Hangen' style pots. A further three (15%) vessels have less diagnostic features and thus it is unclear whether these are LINC or perhaps lugged, undecorated (LUND) wares (the latter are also termed 'Kasteelberg' style pots, more specifically, upper KBB style – see Sadr & Smith 1991). Determining the vessel form of the remaining one case (5%), represented solely by undiagnostic body sherds, was not possible. Vessel forms are exclusively amphora-shaped jars with restricted necks and pointed bases (or "necked pots" *cf.* Rudner 1968).

DECORATION

Of the 16 definite LINC ware vessels, 13 (81.2%) are decorated. There is considerable variability in decorative motifs; all involve incisions or some combination of incised and impressed motifs. 12 (92.3%) of the 13 decorated pots are incised. Of these, 10 (76.9%) have horizontal incisions circumscribing the vessel neck, making this the most common motif. Diagonally incised lines occur on four vessels. In two cases (V60 & V90) they are broad and short (e.g. Fig. 2d), forming a band which is situated beneath rows of horizontally incised lines (where punctate impressions are more commonly placed – see below); in one case (V15) they occur alone; while in the final case they are crosscut by vertical incisions (V1) (Fig. 3a). Aside from this latter example, vertically incised lines occur on another two vessels (V4 &V13). In both cases they crosscut horizontally incised lines. In no instance do all three incised line directions occur together on the same vessel.

Impressed motifs are found on seven (53.8%) of the 13 decorated vessels; all are of single stylus punctate type. The most common is a jab and drag pattern wherein a row of teardrop-shaped impressions straddles the neck-shoulder junction. All four (30.8%) vessels found with this pattern also have horizontally incised lines ringing the neck (e.g. Fig. 3b,e). Two further impressed motifs are present – oval jabs and short dashes. These occur on three vessels. One (V9), represented only by an anomalous single body sherd, is impressed with two rows of oval jabs (Fig. 3c). Another (V20) is decorated only with a single row of oval jabs along the neck-shoulder junction. The final vessel (V4) has both oval jabs and short dashes (as well as horizontal and vertical incisions). This is the most richly decorated vessel at the site (Fig. 2b).

RIM DIAMETER

The average rim diameter at DFM is 120 mm (range 60–160 mm; $n = 11$) (Fig. 4). The outliers demonstrate that there is a considerable amount of variability in vessel sizes. This is particularly striking considering the uniformity in vessel form.

LIP FORM

Lip forms at DFM conform more or less to four of the eight

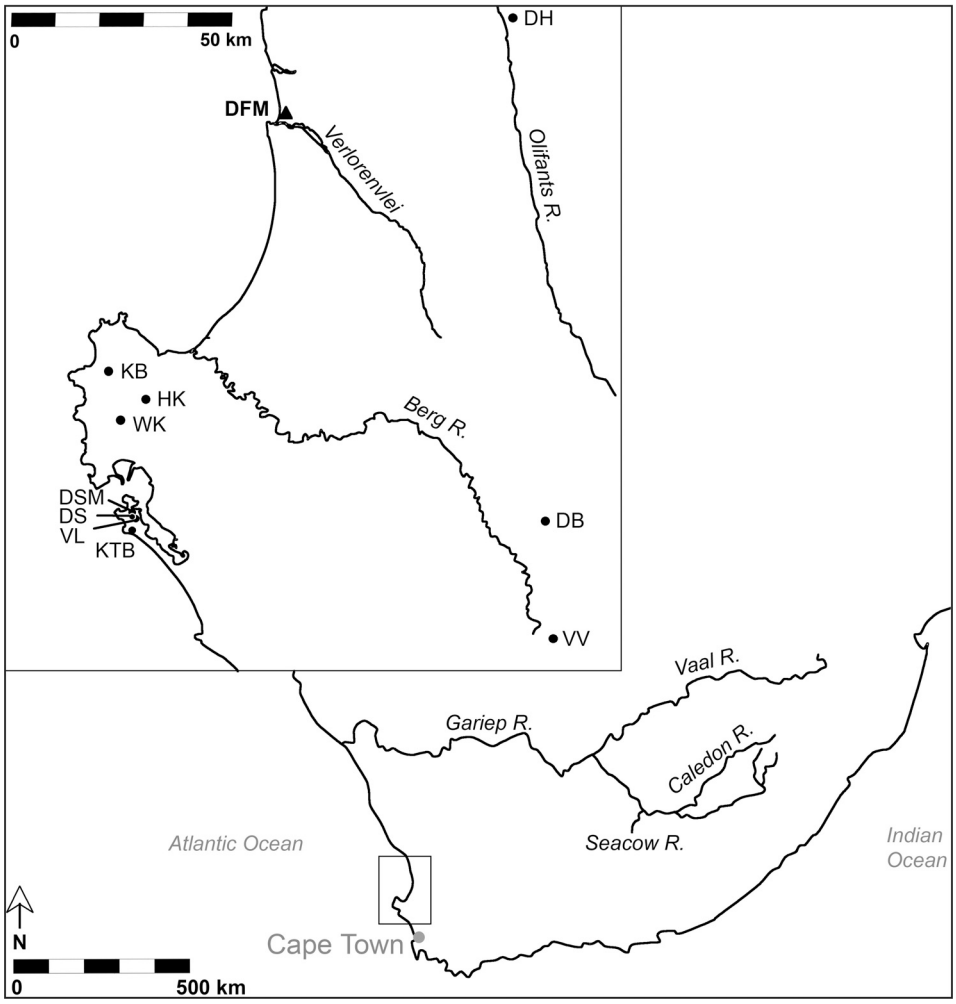

FIG. 1. *Map of the Vredenberg Peninsula and Elands Bay showing location of Dunefield Midden (DFM) and other sites mentioned in the text (KB, Kasteelberg; HK, Heuningklip; WK, Witklip; DSM, Drie Susters Main; DS, Drie Susters; VL, Vlaeberg; KTB, Kreeftebaai; DH, De Hangen; DB, Driebos; VV, Voëlvlei). Location of Seacow River Valley can be seen in the lower map of southern Africa.*

types proposed by Sadr & Sampson (1999), and could be identified on 12 (60%) of the 20 vessels at the site. The most common form is simple round (41.6%; $n = 5$), followed by everted (25%; $n = 3$), then finally half-round (16.7; $n = 2$); and thickened flat (16.7%; $n = 2$) (Fig. 5). It should be noted that in two cases (V10 & V17) where the lip form is designated as everted, the lips are also "thickened round" in Sadr & Sampson's (1999: 4) definition (or "overturned and rounded" *cf.* Rudner 1968: 617).

NECK ORIENTATION

Neck orientations are either of two types, vertical or convergent, and could be determined on 16 (80%) of the 20 vessels at the site. Twelve (75%) vessels have vertical necks; the remaining four (25%) tend towards convergent.

LUGS AND BOSSES

Eight lugs and two bosses are present in the assemblage. The two most complete vessels at the site (V17 & V18) each have both of their lugs, while another two vessels that could only be more partially reconstructed retain only one lug each. Two additional lugs occur independently. All eight lugs have conical bridges and are internally reinforced; six are pierced horizontally and two vertically.

The two bosses, both pressed-out ridged forms, occur on the same vessel (V3). Bosses in Cape coastal pottery occur in place of, or occasionally in between, the much more common lugs (Rudner 1968: 448).

BASES

Seven vessel bases are present at DFM, four of which have been able to be included in vessel reconstructions. Four (57%) of the seven bases are ovoid, three of which are thickened (<10 mm, according to Rudner 1968: 458). One is reinforced (>10 mm) and nippled. The other three bases (43%) are conoid forms; two are thickened, one is reinforced.

MANUFACTURING TECHNIQUE

Little evidence exists of the actual manufacturing technique(s) employed in the production of the DFM assemblage. The coil method was probably the primary technique used, but in only two cases (V6 and a 'body-less' base) is evidence for its application certain (i.e. sherds have fractured along an ammonite spiral caused by coiling). However, "[a]bsence of visible joints may only show that the potter was skilful" (Rudner 1968: 448). It should be noted that one base seems to have been worked up from a lump.

Rudner (1968: 443) noted that Khoekhoe vessels were likely produced in two, three or even four or more stages. At DFM this is likewise suggested by breakage patterns. That three of the four most complete vessels (V4, V17 & V19) and another two partially reconstructed vessels (V7 & V8) exhibit a clear line of cleavage along the neck-shoulder junction indicates that vessel necks were commonly added separately. Another five vessels (V2, V5, V13, V14 & V20) are represented solely by neck fragments and as such also show this pattern. The waist joint as

TABLE 1. *DFM vessel attributes. Vessel heights and widths in cm, rim diameters in mm.*

Vessel No.	Vessel type	Vessel height	Vessel width	Rim diameter	Lip form	Neck orientation	Lug type	No. of lugs	Boss type	No. of bosses	Base type	Fabric	Incised (hor.)	Incised (diag.)	Incised (vert.)	Impressed
1	LINC	–	–	110	Everted	Vertical	–	–	–	–	–	Fine w. qtz	–	Medium	Fine	–
2	LINC/LUND?	–	–	130	Half-Round	Vertical	–	–	–	–	–	V. fine w. sand	–	–	–	–
3	LINC/LUND?	–	–	120	–	Vertical	–	–	Ridged, Pressed out	2	–	Med. w. med. qtz	–	–	–	–
4	LINC	30	28	120	–	Convergent	Hor. pierced int. reinf.	1	–	–	Ovoid thickened / nippled	Coarse w. lg. qtz	Fine, medium	–	Fine	Oval jab, short dash
5	LINC	–	–	160	Simple round	Vertical	–	–	–	–	–	Fine w. sand or Fine qtz	Medium	–	–	Jab and drag
6	?	–	–	–	–	–	–	–	–	–	–	Med. w. med. qtz	–	–	–	–
7	LINC	–	–	130	Half-round	Vertical	–	–	–	–	–	V. fine w. sand	Broad	–	–	Jab and drag
8	LINC	–	–	–	–	Convergent	–	–	–	–	–	Fine w. sand or fine qtz	Broad	–	–	Jab and drag
9	LINC	–	–	–	–	–	–	–	–	–	–	Fine w. fine qtz	–	–	–	Oval jab
10	LINC	–	–	90	Everted	Vertical	Hor. pierced int. reinf.	1	–	–	–	Coarse w. lg. qtz	Medium	Broad	–	–
11	LINC	–	–	120	Simple round	Vertical	–	–	–	–	–	V. fine w. sand	Broad	–	–	–
12	LINC	–	–	–	Simple round	Convergent	–	–	–	–	–	V. fine w. sand	Medium	–	–	–
13	LINC	–	–	–	–	–	–	–	–	–	–	V. fine w. sand	Medium	–	Medium	–
14	LINC/LUND?	–	–	130	Thickened flat	Vertical	–	–	–	–	–	V. fine w. sand	–	–	–	–
15	LINC	–	–	–	–	–	–	–	–	–	–	V. fine w. sand	–	Fine	–	–
16	LINC/LUND?	–	–	–	Simple round	Vertical	–	–	–	–	–	Fine w. sand or fine qtz	–	–	–	–
17	LINC/LUND?	45	32	150	Everted	Vertical	Hor. pierced int. reinf.	2	–	–	Ovoid thickened	Coarse w. lg. qtz	–	–	–	–
18	LINC	12.8	12.2	60	Simple round	Vertical	Vert. pierced int. reinf.	2	–	–	Conoid thickened	V. fine w. sand	Broad	Broad	–	–
19	LINC	18.8	17?	–	–	Convergent	–	–	–	–	Conoid thickened	Med. w. med. qtz	Broad	–	–	Jab and drag
20	LINC	–	–	–	Thickened flat	Vertical	–	–	–	–	–	V. fine w. sand	–	–	–	Oval jab

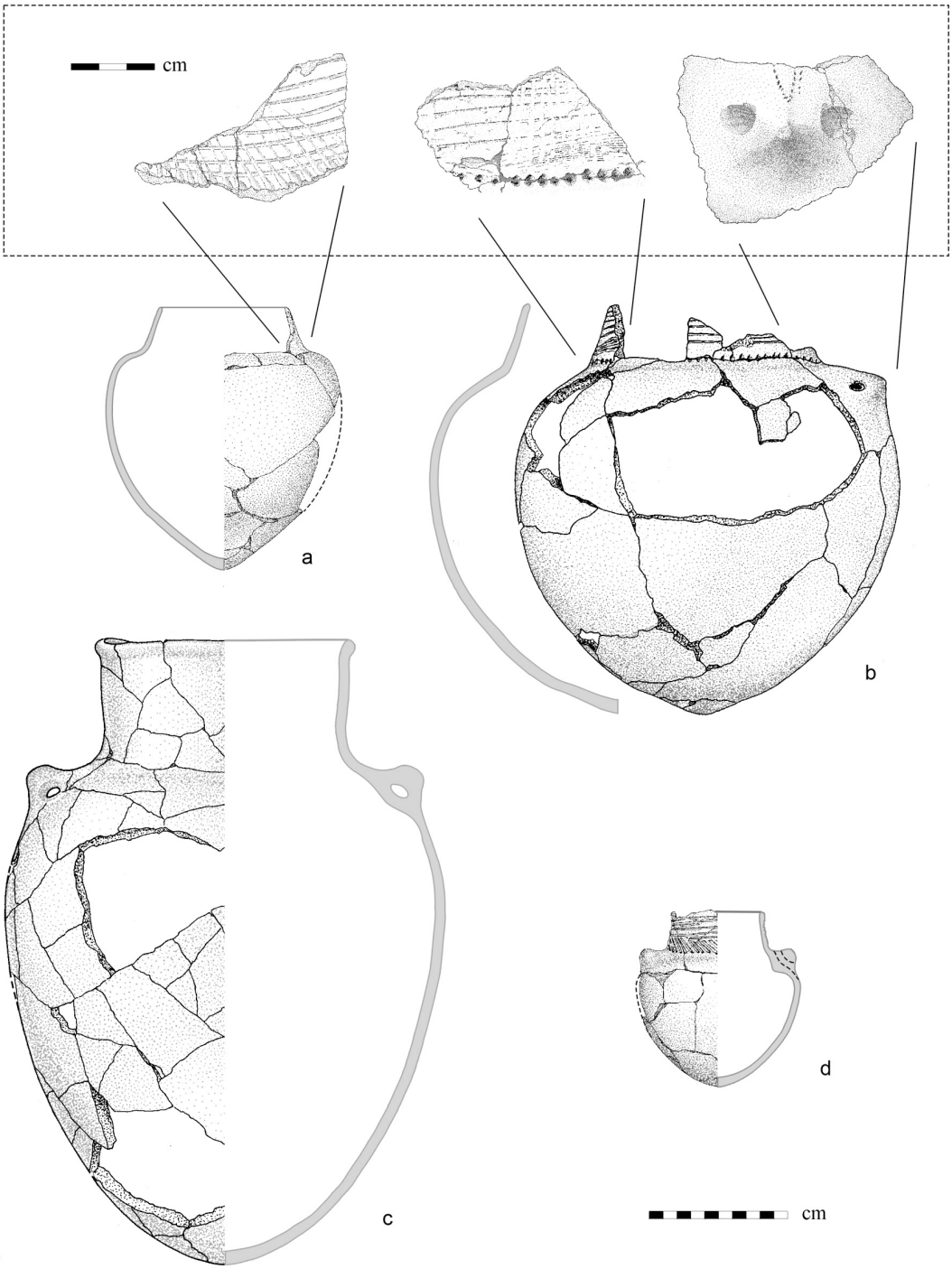

FIG. 2. *The four most completely reconstructed vessels at DFM;* (**a**) *vessel 19;* (**b**) *vessel 4;* (**c**) *vessel 17;* (**d**) *vessel 18. Note abrasion adjacent to lug aperture of vessel* (b).

a line of cleavage is apparent in three vessels (V7, V10 & V17). Two vessels (V10 & V18) exhibit a fracture line around the shoulder itself.

TEMPER

Khoekhoe pottery is usually tempered with sand or crushed quartz. Alternatively, the clay may contain a sufficient natural quantity of non-plastics to make any admixture unnecessary. Here I follow Rudner's (1968: 449) admixture classifications.

The ceramics at DFM generally have a fine fabric (grains <1 mm). Fine, rounded sand grains occur in roughly the same proportion as fine to coarse angular quartz grains. It is often difficult to differentiate between sand and well-pounded quartz, however, and one must often look microscopically to determine the extent of granular angularity. Nine (45%) of the 20 vessels are classified here as having a very fine sand temper; this may be natural. In a further three vessels (15%) it is difficult to determine whether the temper is sand or very finely pounded quartz, or perhaps both. Two vessels (10%) are more certainly tempered with fine quartz. Medium quartz (grains 1–2 mm) was used to temper another three (15%) vessels, while a further three (15%) were tempered with coarse quartz (grains >2 mm).

Two sherds at DFM are tempered with sand and coarse, angular fragments of crushed pottery, or 'grog'. This is evidently a very rare admixture in Khoekhoe pottery; Rudner (1968: 459) notes only two cases of this in his entire sample.

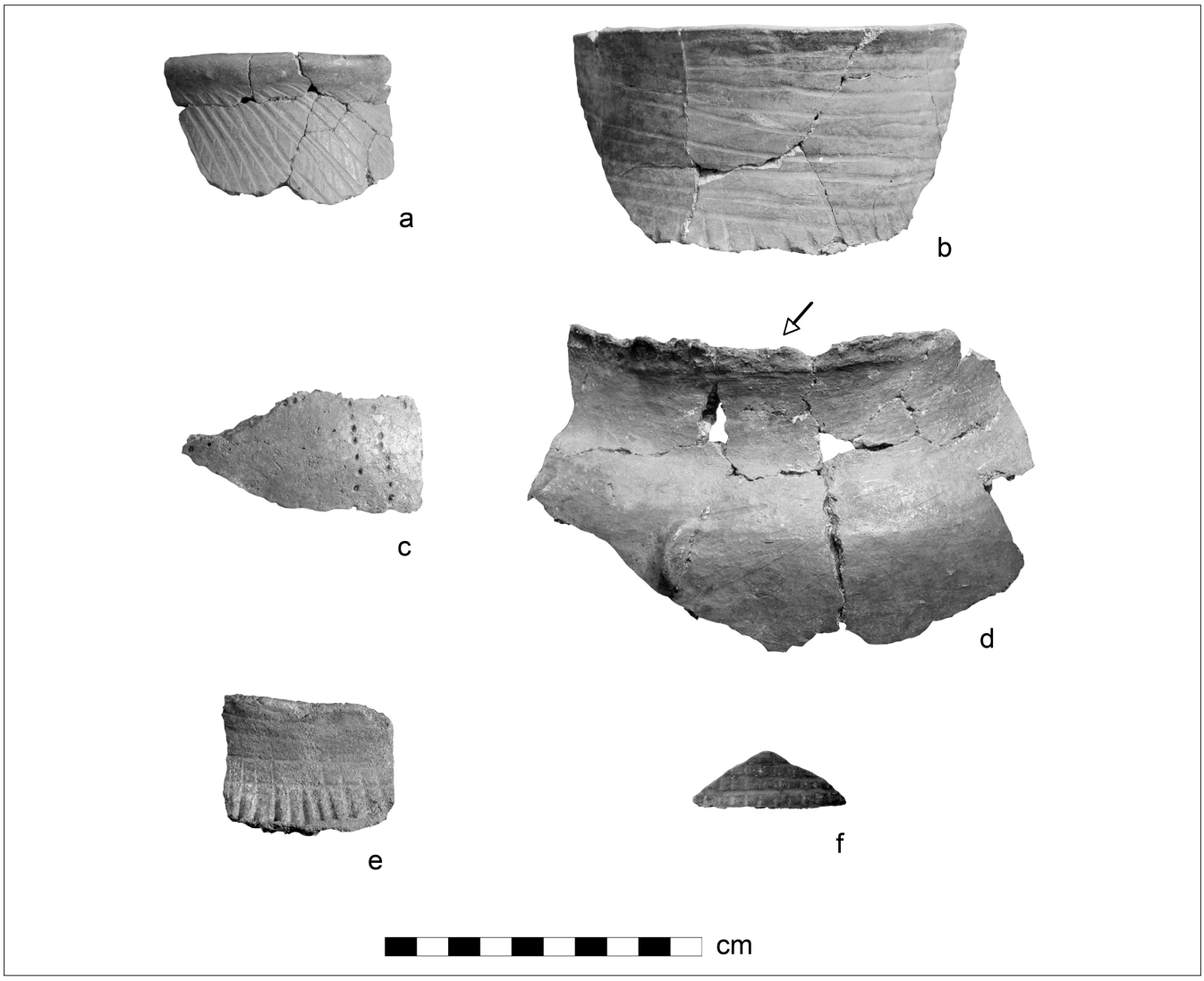

FIG. 3. (**a–c**) *Examples of different decorations at DFM;* (**d**) *vessel 3 with pressed-out ridged bosses (arrow points to use-damage on rim);* (**e–f**) *examples of possible 'orphan sherds'.*

SURFACE TREATMENT

Like many southern African LSA ceramic assemblages, recognizing and identifying surface treatments at DFM presents difficulties. The primary obscurity is the considerable carbon staining that most of the vessels have sustained due to use in cooking. Other impediments include inadequate firing, use wear and post-depositional wind abrasion. Nevertheless, surface treatments are apparent.

Although most of the vessels at DFM are heavily smoothed and were thus likely burnished (95.9% of Rudner's sample is burnished), only three (15%) still retain the glossy surface that this treatment usually produces; two (V2 & V4) are ochre red and one (V6) hazelnut brown. Seven (35%) of the 20 vessels at the site show definite evidence of having been stained with red ochre (if only partially so, particularly around the neck and shoulders). A further four vessels (20%) are a more ambiguous salmon/orange colour that may reflect ochre staining or simply high firing temperatures. The surfaces of the remaining nine vessels (45%) are mostly motelled combinations of grey, brown, dark brown and black (much of this is carbon staining from cooking fires, as suggested by an abundance of charred residues adhering to these areas).

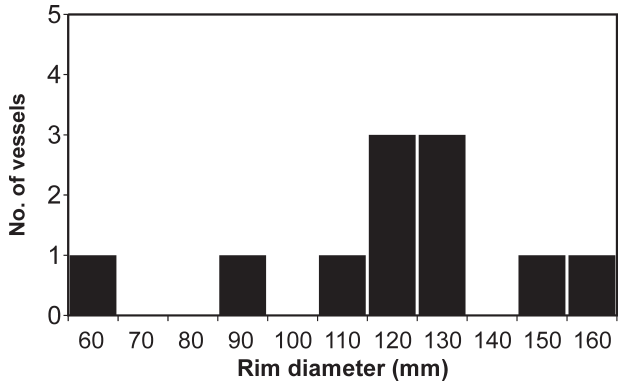

FIG. 4. *DFM rim diameters.*

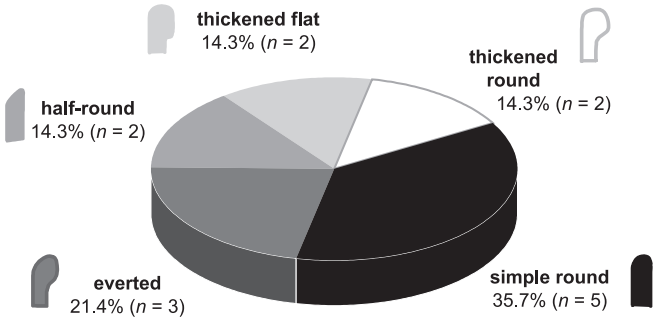

FIG. 5. *DFM lip forms.*

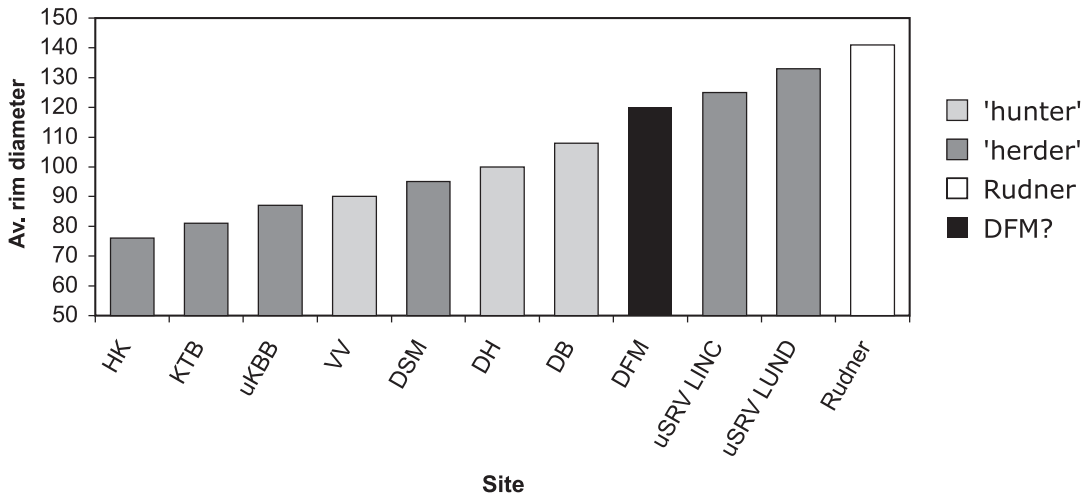

FIG. 6. *Comparison of rim diameters from excavated sites in the Western Cape, the upper Seacow River Valley, collections made by Rudner (1968) and DFM.*

DISCUSSION

The DFM ceramic assemblage shares many morphological and decorative attributes with assemblages from post-600 BP levels of nearby sites. The scarcity of ceramics at these sites, combined with the small ostrich eggshell bead sizes, high volume of formal tools and wild fauna, and low numbers of domesticates has given rise to their being labelled as 'hunter-gatherer' (as opposed to herder) deposits. As noted above, these assemblages are typified most substantially by that recovered from De Hangen (Parkington & Poggenpoel 1971; Sadr & Smith 1991). However, certain features of the DFM assemblage are more anomalous and cannot be so neatly tucked into the established range of LINC ware, or De Hangen style, variation. Rather, the DFM data suggest that it may be more useful to think of ceramic assemblages as palimpsests of fluid technological systems that likely crossed cultural and temporal boundaries. Accordingly, models should be developed with which to detect variability in ceramic use-life in the southern African LSA.

Using comparative data provided by Rudner (1968), Sadr & Smith (1991) and Sadr & Sampson (1999), I now discuss DFM's potential position within the ceramic scheme proposed by Sadr & Smith (1991). I will deal with each feature in the order followed in the above descriptive section, beginning with rim diameter.

The average rim diameter at DFM of 120 mm is slightly larger than those of lugged vessels from excavated inland 'forager' sites in the Western Cape (e.g. Volvlei, 90 mm; De Hangen, 100 mm; and Driebos, 108 mm), and considerably larger than 'pastoralist' rim diameters (e.g. Heuningklip, 76 mm; Kreeftebaai, 81 mm; KBB, 87 mm; Die Susters Main, 95 mm). By contrast, an average calculated by the author for rim diameters of unequivocally lugged (both LUND and LINC) vessels sampled by Rudner (1968) from coastal shell middens from Port Nolloth to the southern Cape is ~132 mm. This is more in keeping with the DFM assemblage vessel sizes. Likewise, rim diameters at DFM fit very comfortably within the ranges of those from both LUND (range ~100–170 mm) and LINC (range ~110–140 mm) samples in the upper Seacow River Valley (Sadr & Sampson 1999) (Fig. 6). It is unclear whether the discrepancy in rim diameters between DFM and the other nearby LSA sites with ceramics documented by Sadr & Smith (1991) is indeed cultural or simply the product of differences in sample size and/or completeness. Conceivably, the fragmentary nature of most LSA ceramic assemblages in the Western Cape masks much variability, including the full range of vessel sizes.

As regards lip form, again we see contrasts with the lugged vessel components of neighbouring 'pastoralist' sites. Although simple round lips are found in similar abundance as at DFM, for example, externally thickened and everted forms occur more frequently at DFM. Moreover, in the upper levels of KBB as well as at Drie Susters Main and Kreeftebaai, flat-topped lips are very common, whilst at Heuningklip both flat-topped and bevelled lips are prevalent (Sadr & Smith 1991). At DFM both forms are entirely absent. By contrast, inland 'forager' sites broadly contemporaneous with DFM have assemblages with lip forms more in tune with the site. At De Hangen, for instance, flat-topped lips are similarly rare (4.8%, compared to 0% at DFM), while thickened lips are comparatively common (14.3%, compared to 20% at DFM). The latter have thus been designated as "highly characteristic of the De Hangen style" (Smith *et al.* 1991: 83). Thickened lips also occur at the LINC ware sites of Driebos and Voëlvlei (Sadr & Smith 1991). DFM lip forms, therefore, seem to be in line with those of typical LINC ware assemblages (Fig. 7).

Since "the predominance of the [convergent neck] form is characteristic of the De Hangen style ceramics" (Smith *et al.* 1991: 83), the high proportion of vertical necks at DFM is somewhat atypical of LINC assemblages both in the Western Cape and in the upper Seacow River Valley (Fig. 8). Unfortunately, corresponding data on typical LUND ware neck orientations in the Western Cape are unavailable. In the upper Seacow River Valley sample, however, LUND ware "rim orientations seem to vary randomly. Five are flared, six vertical and seven are convergent" (Sadr & Sampson 1999: 8). Here then, LINC wares seem inclined towards convergent necks, as in the Western Cape, whereas LUND can be more variable. Rudner's (1968) data also show this pattern.

It is interesting then that DFM shows a clear preponderance towards vertical necks (which seem more common to the older LUND wares), but exhibits lip forms highly characteristic of more recent LINC vessels (i.e. everted and/or thickened). Indeed, in four cases these two features – a vertical neck and an everted, thickened lip – are present on the same vessel. This mixture of attributes may suggest that the DFM ceramic assemblage represents a technology in transition; the site's primary dates (*c.* 700–600 BP), which fall on the LUND/LINC ware boundary, may substantiate this. On the other hand, it may imply a considerable amount of typological and chronological overlap exists between these two most recent stages in the sequence and should perhaps then serve as a cautionary case.

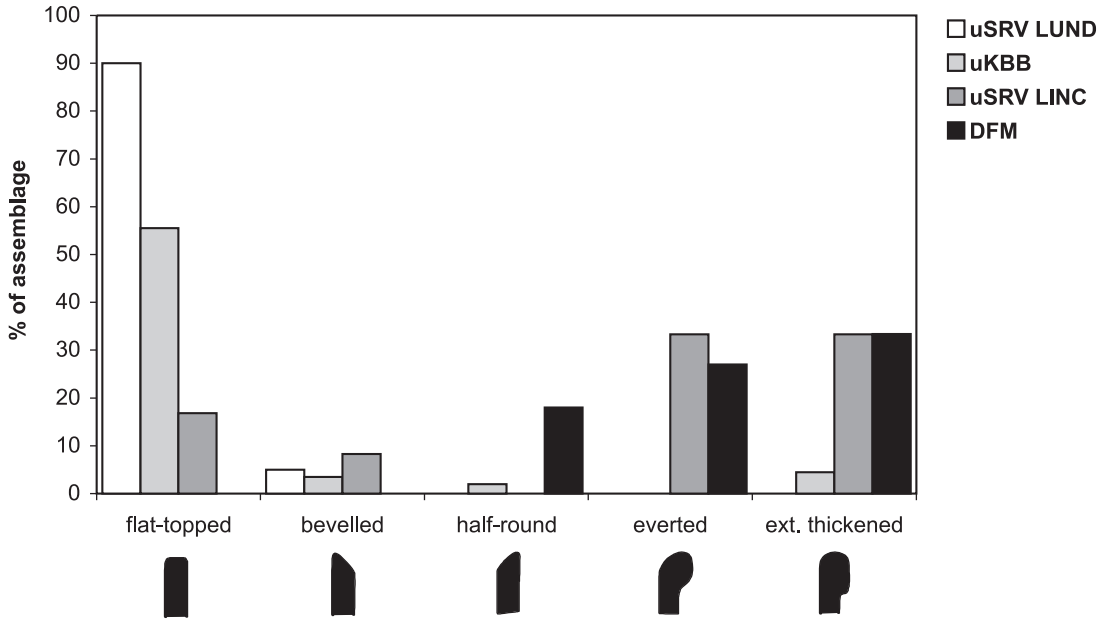

FIG. 7. *Comparison of lip form frequencies from the upper Seacow River Valley, upper Kasteelberg B and DFM.*

Knowing one way or the other will entail more concretely correlating individual sherds with dated features.

As noted above, six of the eight lugs at DFM are horizontally pierced. This form comprises 76.5% of the lugs recorded by Rudner (1968), making it by far the most common in Cape Khoekhoe wares. By contrast, vertically pierced lugs, of which there are two at DFM, are extremely rare in the Western Cape and only occur in abundance in Namibia and northern Botswana (Sadr 1998). In Rudner's entire sample only four are recorded; of these, only two (0.4%) are internally reinforced (the other two are externally applied – see Rudner 1968: 458). These come from Walvis Bay, Namibia, and Arniston, southern Cape. Besides these, according to Rudner (1968: 522), only two other incidences of vessels with vertically pierced lugs are known: a vessel from Namaqualand collected by Schofield (1948) and "a small pot from Camdeboo (Dunn 1931)". Each of these occurrences is in excess of 200 km from Eland's Bay. This fact, together with the rarity of vertically pierced lugs in the Cape, suggests that the vessel with vertically pierced lugs at DFM (V18) perhaps came from a considerable distance. The vessel's tiny size (rim diam. = 60 mm; max. diam. = 120 mm) perhaps makes this possibility more plausible. Indeed, this is the smallest (yet most complete) vessel at DFM (Fig. 2d).

Like vertically pierced lugs, pressed-out ridged bosses are also very unique in Cape coastal pottery, comprising only 2.2% of Rudner's (1968: 458) lug/boss sample. (Interestingly, one of the only places where pressed-out ridged bosses occur in any abundance is again Arniston, perhaps suggesting a tantalizing, if only tentative, connection exists between this area and DFM). Unlike the nearly complete V18, however, the bossed V3 is represented only by a portion of the neck and adjacent shoulder. Visual inspection of the assemblage has ruled out any chance that more sherds will conjoin, suggesting that this vessel was probably brought into DFM in fragmentary form. Further, the rim of V3 exhibits clear use wear in the form of edge-damage overlain with polish, likely the result of scraping

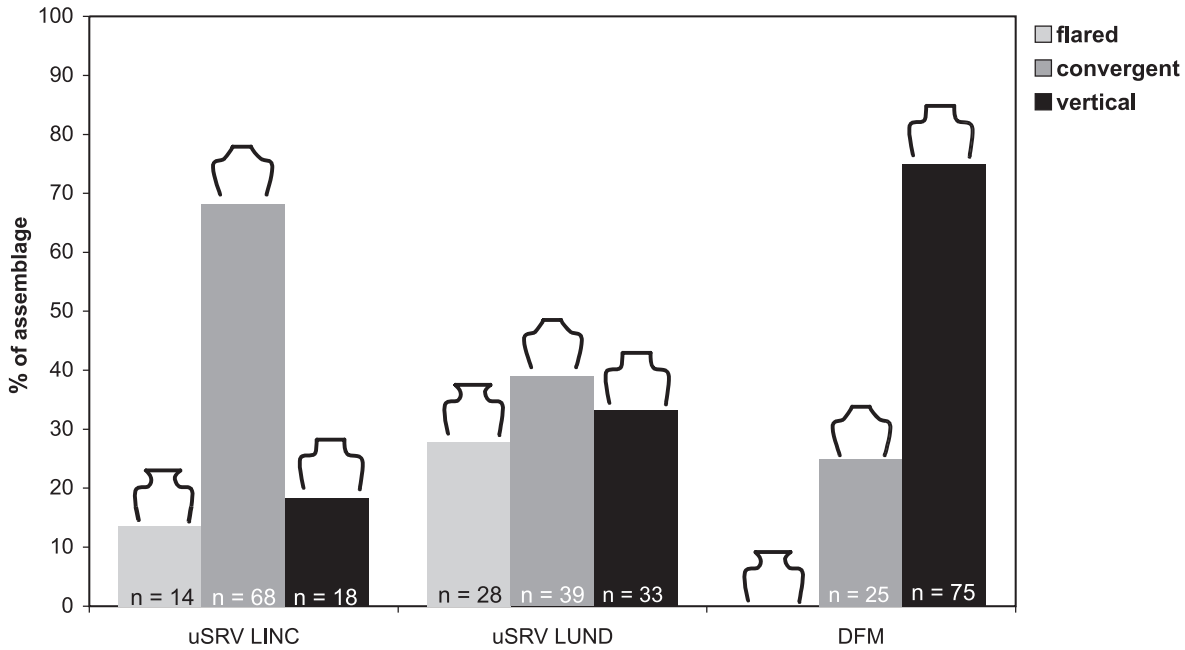

FIG. 8. *Comparison of neck orientations from the upper Seacow River Valley and DFM.*

(Fig. 3d). Taken together, these three strands of evidence – the rarity of pressed out ridged bosses, the incompleteness of the vessel at the site, and the definite presence of use wear on the vessel rim – make a strong case for V3 having been acquired from some distance and subsequently curated. Its position on the site directly adjacent to a domestic hearth further reinforces this interpretation.

Both of the horizontally pierced lugs belonging to V17 and the one remaining lug of V4 exhibit wear along the upper part of the apertures (Fig. 2b,c), most certainly from cordage abrasion when the vessel was being transported. Rudner (1968: 476) likewise observed this on the same part of a "large, horizontally pierced, externally applied conical lug" from a midden at Port Nolloth, "indicating that a sling was pulled through it and used for carrying." Interestingly, the vessel with the vertically pierced lugs (V18 – Fig. 2d) also exhibits wear from carrying, but in the form of narrow (3 × 5 mm) grooves situated directly atop the conical bridges of the lugs (parallel to the long axis of the vessel) rather than above the apertures on the vessel body itself. The abrasion is different from that on the horizontal lugs likely because different parts of each lug type take the stress. On the horizontal lugs the areas just above the apertures on the vessel body (rather than the lug bridge) are worn because this is where the cordage rubs as gravity pulls the pot down during transport. By contrast, the vertical lug sustains damage on the outside tip of the lug where the cord, wrapped through and around the lug vertically, digs in.

The frequency of ovoid *vs* conoid base forms at DFM is consistent with base shapes recorded by Rudner (1968: 458) who noted that, "The base of the Strandloper pot is generally pointed (81.6%), either conical (28.5%), conoid (30.0%) or ovoid (33.1%). Globular bases are uncommon (8.4%)." The occurrence of a nippled base at DFM is also unsurprising; these are most abundant along the west coast from Namibia to the Cape peninsula (Rudner 1968: 458).

As we have seen, some indication of the manufacturing process can be gleaned from the patterns of cleavage exhibited by both the more completely as well as partially reconstructed vessels. In addition to (limited) evidence that the coil and/or ring method was employed, it is obvious that the neck–shoulder junction is the most vulnerable joint. This suggests that necks were usually added separately to vessel bodies and were consequently likely the first parts of the vessel to break off. Indeed, as observed ethnographically, "Vessel bases may have longer use lives than rim sherds, which may thus be discarded earlier and be found in deeper stratigraphic contexts" (Kramer 1985: 91). The common presence of 'body-less' reconstructed vessel necks at DFM confirms this. The likely implication is that vessels which had suffered damage to their necks, or perhaps even lost their necks completely, were still considered useful and consequently taken with the site's occupants upon leaving DFM.

The patterns of charring on the DFM ceramics have been discussed elsewhere (Stewart 2005) and will not be elaborated upon here. It should be noted, though, that Rudner (1968) documented a similar pattern of blackened lower vessel body areas for the vast majority of his sample, yet explains it as black burnishing. However, it is obvious from visual inspection of the ceramic collection at the South Africa Museum (including Rudner's specimens) that, while some vessel bodies are clearly stained and/or burnished, the large majority of this blackening results from exposure to open flame either during the firing process and/or subsequent use in cooking. As at DFM, the common presence of charred residues on the museum vessel interiors points to cooking as the primary blackening agent.

CONCLUSION

DFM can be described primarily as a LINC ware or De Hangen style ceramic assemblage, but the possibility that any of the many undiagnostic (and usually unconjoinable) sherds at DFM indeed came from older LUND ware vessels should not be discounted. The same goes for the undecorated vessels at the site. While this seems unlikely based on the lip forms, the predominance of vertical necks may suggest otherwise. Unfortunately, the rim of the only vessel that provides firm evidence of likely being an older form – V3, with its two vertically ridged, pressed-out bosses – was secondarily used as a scraper, making a determination of the lip form impossible. The presence of the V3 use-wear itself, however, together with the bosses and the absence of more sherds from this pot, suggests that V3 represents a vessel fragment that was curated and brought to the site as a tool for scraping. Further, it may be no coincidence that the vessel portion that was chosen to curate possesses two bosses, and was perhaps collected from the surface of an archaeological midden in prehistory by a future occupant of DFM due to its significance as a recognizably older form. Its presence at DFM perhaps thus hints at the possibility that some of the other undecorated vessels, despite their unusual lip forms, are actually LUND.

From Rudner's (1968) data, we can see that both pressed-out ridged bosses as well as vertically pierced lugs are relatively uncommon features of Cape coastal pottery. It may be, then, that the vessels on which these occur at DFM (V3 & V18) were considered special, either purpose-wise or perhaps even ritually. Additionally, there are several decorated sherds that do not have any refits and exhibit decorations clearly distinct from those of any other vessel or sherd at the site. These individual pieces are each geometrically symmetrical, heavily weathered and seem to exhibit edge-wear (e.g. Fig. 3e,f). As such, they may be the equivalent of 'orphan sherds' (Schiffer 1972). While this is admittedly conjectural at this stage, individually curated ceramic sherds are not unknown in the southern African LSA. Kinahan (1991) noted that single sherds possessing a wide range of decorative attributes dominate the Pottery phase ceramic assemblages at Snake Rock and Falls Rock Shelter in Namibia. He noted further that two sherds, one recovered at each site, very probably originate from the same vessel, suggesting that individual sherds may have been shared among different (hunter-gatherer?) groups in the Hungorob Ravine. Similarly, at the pastoralist site of Jakkalsberg A ceramic trade and/or curation may be implied by, "Several sherds [that] had been artificially rounded as if they were being prepared for pendants" (Webley 1997: 10). Exploring the issue of curated or orphan sherds further at DFM will again require a fuller understanding of the spatial distributions of ceramic artefacts against those of different features and materials.

Ceramic re-use is well attested to in the ethnographic record since,

> "The procurement and manufacture activities embodied in ceramics represent a considerable investment in time and energy, and ceramic vessels are ordinarily kept in use or 'curated' until damaged beyond repair" (DeBoer & Lathrap 1979: 127).

At DFM the conspicuous occurrence of necks and bases without accompanying body fragments, and perhaps also the presence of edge-modified sherds, suggest that extending a pot's use-life beyond its function(s) as a whole vessel was a common occurrence. Indeed, as DeBoer & Lathrap (1979) have shown among the Shipibo-Conibo, it is conceivable that one of the reasons motivating the inhabitants to occupy the site was

the existence of an archaeological midden already extant with pottery clearly evident on the surface. On the other hand, if the DFM ceramics are indeed a largely contemporaneous assemblage, then the site may afford a very unique glimpse of what was perhaps a technologically transitional phase wherein the older undecorated lugged vessels were still partially in use, but in the process of gradually being phased out by the new ceramic style with an emphasis on incised and punctate decoration. As noted above, the site's dates make this a reasonable possibility.

More certainly, it seems clear that the pottery at DFM exists as a snapshot in time of what was a relatively temporally discrete group's ceramic assemblage during one stage of a dynamic use-history. It is the discarded material consequence of the everyday use of around 20 vessels in varying states of repair; the assemblage is thus characterized first and foremost as reflecting transition. The various combinations of forces, both natural and cultural, acting to alter this assemblage were complex, and not least of all conditioned by a high degree of variation in vessel size and robusticity. It seems the assemblage was in a constant state of regeneration, continually being transformed by fresh production and use with parts of vessels probably often changing functions. Some vessels, represented by the more completely reconstructed pots and 'body-less bases', were approaching the end of their use-lives during the time spent camping at DFM, and were thus discarded upon site abandonment. Others, by contrast, whose presences are suggested only by rim and neck fragments (and perhaps also by anomalous sherds), were likely more recently manufactured and thus just at the outset of their potential use. This has been repeatedly documented ethnographically, and holds important implications for meaningfully interpreting single assemblages as well as establishing adequate chronologies based on pottery types. As Kramer (1985: 90) noted,

> "Given the variation in use lives reported in the ethnographic literature, it is clear that in any ethnographic setting some pots will be older than others. Excavated assemblages will also include seemingly contemporaneous pots of different age, and in surface collections, vessels and types presumed to have been contemporaneous need not have been so."

We must therefore be sensitive to the possibility that many LSA ceramic assemblages in the Western Cape and elsewhere in southern Africa that have been interpreted as contemporaneous may in fact be typologically 'mixed bags'. Pending further spatial analysis of the ceramic distributions at DFM to explore on a fine-grained intra-site level prehistoric activities such as dumping and caching of different vessel fragments, this report is intended as a first step towards more firmly understanding southern African LSA ceramic use-life variability.

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