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# EUROPEAN LIVESTOCK FROM ROCK SHELTERS IN THE UPPER SEACOW RIVER VALLEY*

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## ABSTRACT

Livestock remains from nine rock shelters in the upper Karoo are associated with European artifacts. Domesticates are absent from immediately below the first Dutch Contact horizon and remains correlated with the earliest recorded Bushman stock raids (AD 1770-1800) were not found. The earliest post-Contact remains are mainly head and foot elements from sheep, reflecting Bushman/trekboer interactions in the amnesty period (AD 1800-1820). These are overlain by increasing remains of hind and fore quarters, coming in mainly as gifts or wages of part carcasses to farm Bushmen. Cattle remains are scarce except at one shelter near a stock post. Goats, donkeys, turkeys and chickens are rare occurrences.

## INTRODUCTION

Domestic livestock remains have been recovered from the uppermost levels in deposits of nine rock shelters in the upper Seacow valley in the upper Karoo (Fig. 1). These invite comparisons with the documentary record of European livestock acquired by historical Bushmen in the same area (Moodie 1960; Raper & Boucher 1988; also see Sampson, this volume).

Although dry stone walling occurs across the mouths of five shelters (Fig. 2), only one was used as a stock enclosure: Abbot's Cave is capped with dung, indicating that it contained live sheep and/or goats at the end of its occupational history. Most other shelters were probably used by shepherds who corralled their flocks nearby. Leeuhoek shelter overlooked the original farmstead and may have housed field and/or domestic staff.

Items of European manufacture were interspersed with the livestock remains found in all shelters. Glass trade beads (Saitowitz & Sampson 1992), glassware and metalwork (Crass & Sampson 1993a), earthenware (Moir & Sampson 1993), clay pipes (Sampson 1993), gunflints and ammunition (Westbury & Sampson 1993) and clothing attachments (Crass & Sampson 1993b) all point to a European source for the domestic fauna associated with them. A thin copper sheet pendant is the only item of possibly non-European manufacture (Maggs 1994). At these same levels the frequency of stone artifacts, the traditional tools of the Bushmen, drops off sharply (Pease 1993), although indigenous potters thrived for slightly longer (Sampson *et al.* 1989).

Most European household wares were first introduced into these sequences in about 1840-1850 when a flood of cheap English goods was rapidly distributed to upper valley farms via the new stores at the villages of Richmond and Middelburg. Within a short time these items were reaching the Bushmen communities living around district farms. Before this time, only a few glass trade beads and lead grapeshot fragments had reached the shelter deposits.

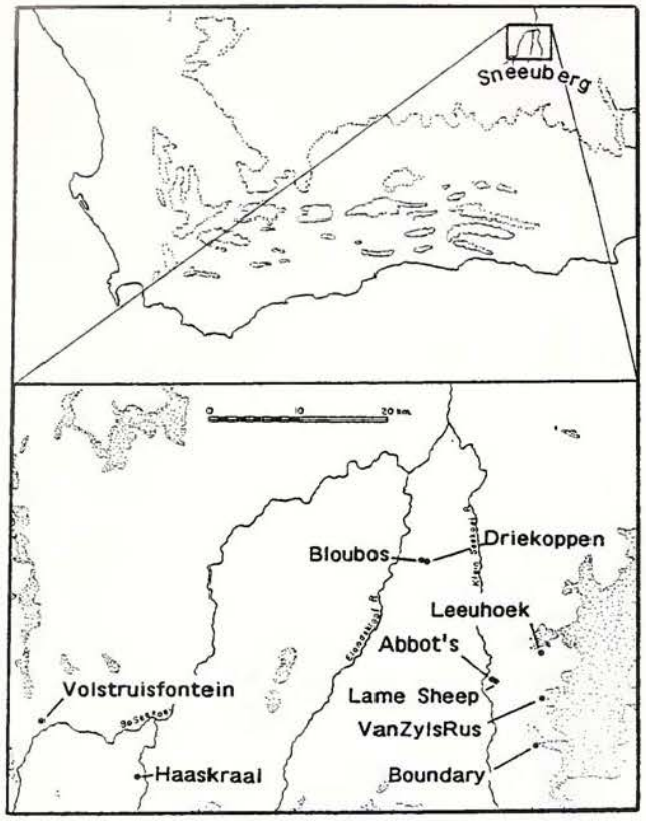


**Fig. 1. Location of rock shelters, showing main tributaries and mountains (stippled).**

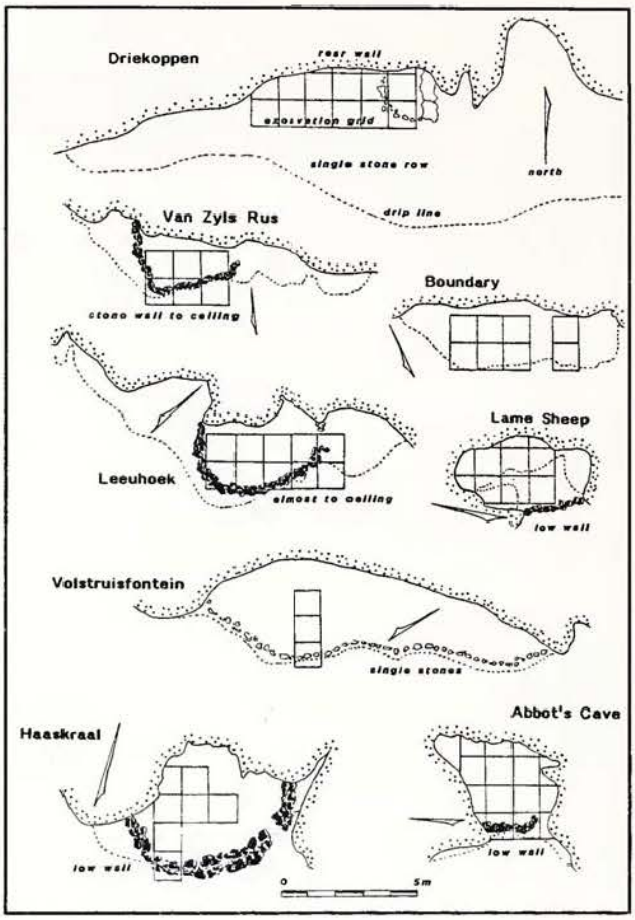


**Fig. 2 Plans of eight rock shelters, showing historical stone walling (black) in relation to other features.**

The same levels show a very rapid decline in the density of wild game remains, particularly at shelters near farmsteads. Faunal remains below the European marker horizon are usually so dense that they resemble bone middens. The sudden drop in faunal density at about 1840-1850 can be equated with the systematic extermination of game by local trekboers. (Sampson & Plug 1993). Straddling this sharp marker horizon is a dense layer of ostrich eggshell fragments, probably reflecting the increasing dependence of resident Bushmen on the eggs, as their staple meat supply disappeared (Sampson 1994). While domestic flocks came to replace the game, overgrazing caused a general decline in grass cover, as reflected in the pollen record (Scott & Bousman 1990) and the influx of desert-adapted micromammals (Avery 1991).

The trekboers were not the first to introduce livestock into the Seacow valley. At Haaskraal shelter, sheep and cattle remains are directly dated by the AMS-radiocarbon method to ca 500-400 BP (Plug *et al.* 1994), suggesting a minimal age for the many hundreds of low stone walled stock enclosures concentrated on the west side of the upper valley (Sampson 1985, Hart 1989). Possible pre-Contact domesticates are present in several other shelters, but always in small numbers (Figs 3-5).

## CONTEXTS OF THE DOMESTIC FAUNA

Domesticates from the post-Contact levels of each shelter form discrete lenses, in some cases separated by very thin, livestock free deposits. In the following sections, the configuration and content of each lens is briefly reviewed.

### Volstruisfontein Shelter

A detailed contextual analysis (Plug *et al.* 1994) of domestic fauna from the small trench in Volstruisfontein (Fig. 2) suggests that four pre-European sheep and sheep/goat remains may be present in this fill (Fig. 3). Twenty other fragments are firmly embedded in two separate lenses within the post-Contact levels. The lower lens at the rear of the shelter has 1840-1860 artifact associations; there are 10 domesticate fragments (Table 1) representing at least one sheep/goat. Only three pieces can be firmly ascribed to sheep (*Ovis aries*).

The upper lens is more widely distributed and has 1890s artifact associations; there are two molar fragments of cattle (*Bos taurus*) and only eight fragments representing at least one sheep/goat; one fragment can be firmly ascribed to sheep (*Ovis aries*).

### Haaskraal Shelter

Stratified above the pre-European livestock at Haaskraal (Fig. 2), are three lenses of post-Contact domesticates. The topmost lens has artifact associations of 1870 or later; the other lenses predate this, but without

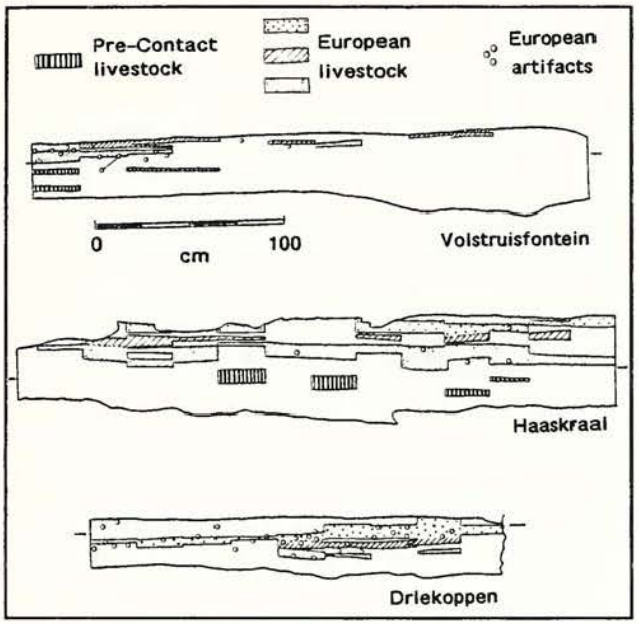


**Fig. 3. Composite sections of three rock shelter deposits, showing positions of 25 cm x 25 cm excavated blocks yielding livestock remains, in relation to positions of European artifacts.**

**Table 1. Volstruisfontein: NISP (and MNI) per species and lens.**

| | | lower | upper |
|---|---|---|---|
| *Ovis aries* | sheep | 3 (1) | 1 (1) |
| *Capra hircus* | goat | - | - |
| *Ovis/Capra* | sheep/goat | 7 | 7 |
| *Bos taurus* | cattle | - | 2 (1) |
| TOTALS | | 10 (1) | 10 (2) |
| | | | |
| *Ovis & Capra* elements | | | |
| Cranial & axial | | 1 | 1 |
| Fore & hind quarters | | 2 | 2 |
| Ankle & foot bones | | 7 | 5 |
| | | | |
| All fore limb elements | | 2 | 3 |
| All hind limb elements | | 4 | 3 |

precision (Fig. 3). The lowermost lens forms a widespread sheet of remains with localized concentrations (Plug *et al.* 1994: fig. 7). It is dominated by sheep, although cattle are present. There is also a rare specimen of donkey (*Equus asinus*), of chicken (*Gallus domesticus*) and a small patch of turkey (*Meleagris gallopavo*) bones (Table 2). The middle lens is smaller and patchy, dominated by cattle remains. The proportions of the very scattered upper lens are more like those of the lower sample, but there are more fragmented and less diagnostic

**Table 2. Haaskraal: NSIP (and MNI) per species and lens.**

| | | lower | middle | upper |
|---|---|---|---|---|
| *Ovis aries* | sheep | 79 (4) | 14 (1) | 28(1) |
| *Ovis/Capra* | sheep/goat | 35 | 12 | 13 |
| *Bos taurus* | cattle | 33 (3) | 16(1) | 7 (1) |
| *Equus asinus* | donkey | 1 (1) | - | - |
| *Gallus domesticus* | chicken | 1 (1) | - | 1 (1) |
| *Meleagris gallopavo* | turkey | 5 (1) | - | - |
| TOTALS | | 154 (10) | 42 (2) | 49 (3) |
| | | | | |
| *Ovis & Capra* elements | | | | |
| Cranial & axial | | 30 | 14 | 16 |
| Fore & hind quarters | | 13 | 7 | 12 |
| Ankle & foot bones | | 71 | 5 | 13 |
| | | | | |
| All fore limb elements | | 21 | 1 | 7 |
| All hind limb elements | | 13 | 7 | 7 |
| | | | | |
| Tooth eruption stages | | | | |
| *Ovis aries* | | II, III, IV, V | II, V, VI | II, V |
| *Bos taurus* | | III, VII, VIII | VIII | V |

**Table 3. Bloubos: NISP and MNI.**

| | | | |
|---|---|---|---|
| *Ovis aries* | sheep | 3 (1) | |
| *Ovis/Capra* | sheep/goat | 3 (1) | |
| TOTAL | | 6 (2) | |
| | | | |
| *Ovis & Capra* elements | | | |
| Cranial & axial | | 2 | |
| Fore & hind quarters | | - | |
| Ankle & foot bones | | 4 | (2 unfused = Juvenile) |

(*Ovis/Capra*) remains. A single chicken bone came from the surface deposits.

### Bloubos Overhang

The small sample from Bloubos overhang (Table 3) comes from a 1m square test pit. Dating is imprecise: European artifacts were not recovered *in situ*, but most domesticate specimens are in the fill above the main bone midden and the ostrich eggshell sheet, thus their post-Contact status is not in doubt. Of the seven sheep/goat fragments recovered, only three can be firmly ascribed to *Ovis aries*.

### Driekoppen Shelter

The rich upper deposits at Driekoppen (Fig. 2) are wind-lagged, possibly because the shelter surface was in heavy use for dance rituals (Pease 1993). Consequently the bone midden and the overlying ostrich egg shell sheet have merged into each other. Also, horizontal recording of some specimen positions is imprecise. Datable artifacts

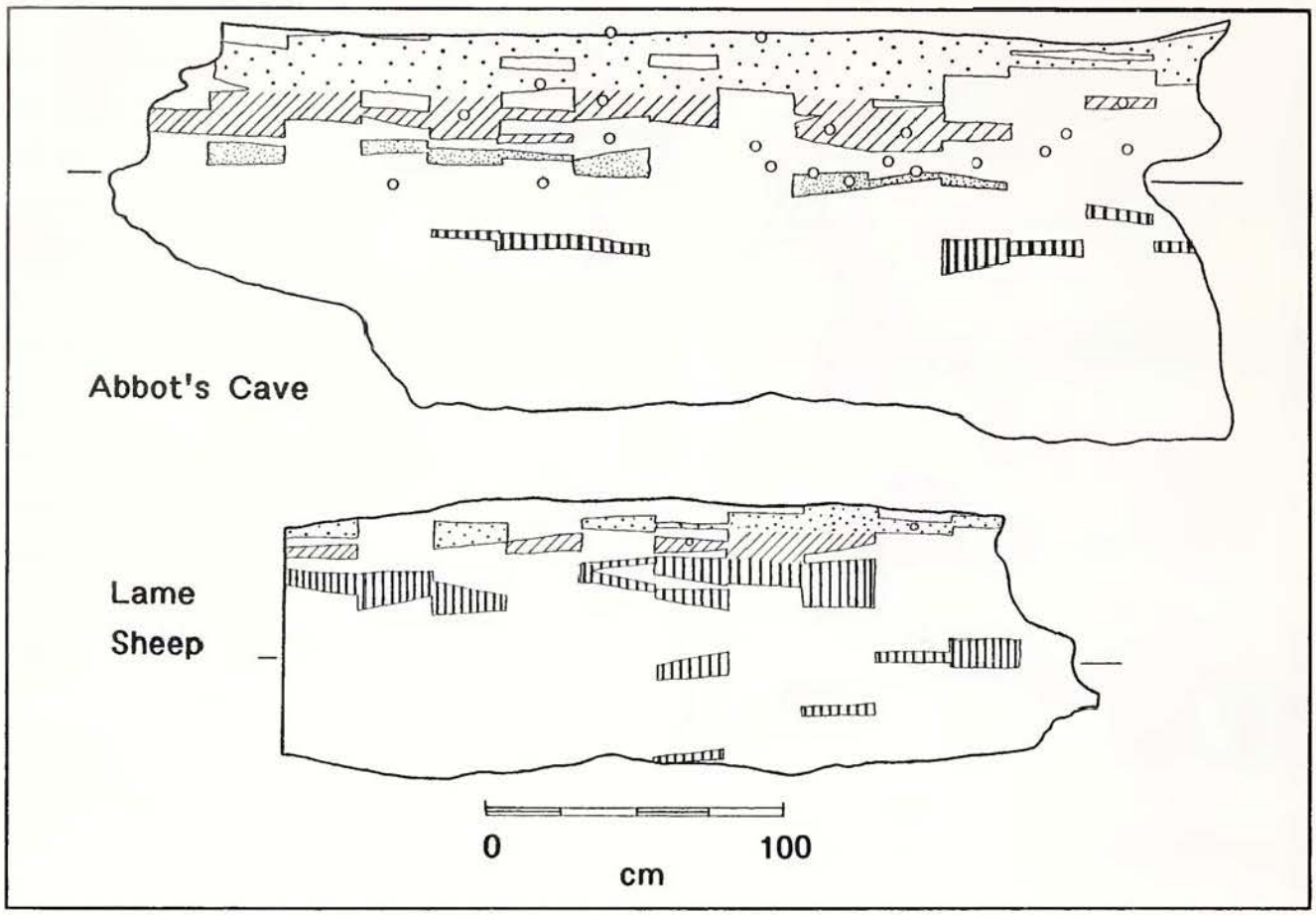


**Fig. 4. Composite sections of two adjacent rock shelter deposits, showing positions of 25 cm x 25 cm excavated blocks yielding livestock remains, in relation to positions of European artifacts. See Fig. 3 for key.**

**Table 4. Driekoppen: NISP (and MNI) per species and lens.**

| | | lower/middle | upper |
|---|---|---|---|
| *Ovis aries* | sheep | 12 (1) | 38 (2) |
| *Capra hircus* | goat | - | 2 (1) |
| *Ovis/Capra* | sheep/goat | 8 | 32 |
| TOTALS | | 20 (1) | 72 (3) |
| | | | |
| *Ovis & Capra* elements | | | |
| Cranial & axial | | 7 | 14 |
| Fore & hind quarters | | 2 | 17 |
| Ankle & foot bones | | 11 | 41 |
| | | | |
| All fore limb elements | | 3 | 14 |
| All hind limb elements | | 1 | 22 |
| | | | |
| Tooth eruption stages | | | |
| *Ovis aries* | | III | II, V |

are scarce, being mostly glass trade beads. Nevertheless, three lenses of livestock remains appear in this compressed stratigraphy (Fig. 3). There are no cattle remains present (Table 4), but two ovicaprines from the abundant upper lens can be firmly attributed to goat (*Capra hircus*).

### Abbot's Cave

Associated charcoal dates at Abbot's Cave (Fig. 2) indicate pre-European livestock probably at ca 500 BP (Fig. 4). There is a well defined gap above the pre-Contact remains, followed by the lowest lens of post-Contact domesticates. This lens also contains artifacts dating to ca 1830 at the earliest, but there are glass beads which may be older. There is another short gap, then a more extensive middle lens in the front of the shelter. Most artifacts date to the 1840-1860 range. There is poor separation between the middle and top lenses. The latter is in compact sheep dung extending to the back of the cave and containing much fresh bone, with artifacts dating between 1890-1910. It also contains traces of older material kicked up from ground squirrel burrows (Plug 1993).

Most of the Abbot's Cave material is identified as *Ovis aries*. Apart from a low frequency of pieces identifiable only to ovicaprine there are also fragments of goat (*Capra hircus*) in each of the post-Contact lenses (Table 5). Rare traces of *Bos taurus* occur in the middle lens and in a patch near the surface in the upper lens.

**Table 5. Abbot's Cave: NISP (and MNI) per species and lens.**

| | | lower | middle | upper |
|---|---|---|---|---|
| *Ovis aries* | sheep | 18 (3) | 33 (4) | 291(5) |
| *Capra hircus* | goat | 1 (1) | 1 (1) | 1 (1) |
| *Ovis/Capra* | sheep/goat | 3 | 5 | 66 |
| *Bos taurus* | cattle | - | 1 (1) | 4 (1) |
| TOTALS | | 29 (4) | 42 (6) | 358 (7) |
| *Ovis & Capra* elements | | | | |
| Cranial & axial | | 11 | 16 | 64 |
| Fore & hind quarters | | 2 | 2 | 82 |
| Ankle & foot bones | | 16 | 24 | 212 |
| All fore limb elements | | 8 | 5 | 47 |
| All hind limb elements | | 2 | 2 | 80 |
| Tooth eruption stages | | | | |
| *Ovis aries* | | II, III, VI | I, IV, V, VI | I, II, III, IV, V |

**Table 6. Lame Sheep: NISP (and MNI) per species and lens.**

| | | lower | upper |
|---|---|---|---|
| *Ovis aries* | sheep | 7 (2) | 24 (1) |
| *Ovis/Capra* | sheep/goat | 6 | 1 |
| TOTALS | | 13 (2) | 25 (1) |
| *Ovis & Capra* elements | | | |
| Cranial & axial | | 6 | 1 |
| Fore & hind quarters | | 4 | 4 |
| Ankle & foot bones | | 3 | 20 |
| All fore limb elements | | 2 | - |
| All hind limb elements | | 4 | 13 |
| Tooth eruption stages | | | |
| *Ovis aries* | | II, V | - |

**Lame Sheep Shelter**

Lame Sheep (Fig. 2) is a scree-laden extension of the Abbots's Cave fill, connected to the latter by a side passage. The Lame Sheep fill apparently contains abundant pre-European livestock (Fig. 4), but a wire fragment has been thrust down into this material by groundsquirrel burrowing (Plug 1993), casting doubt on the true age of some livestock specimens. The stratigraphic hiatus between pre- and post-Contact livestock is not well defined, due to deeper than usual excavation spits. There may be two lenses of post-Contact livestock, again poorly separated. A wire peg in the upper lens dates it to the 1870-1890 range, coeval with the top of the middle lens in the adjacent Abbot's Cave sequence. Most of the Lame Sheep material is *Ovis aries*, with a few less definable ovicaprine fragments (Table 6).

**Table 7. Leeuhoek: NISP (and MNI) per species and lens.**

| | | lower | upper |
|---|---|---|---|
| *Ovis aries* | sheep | 5 (1) | 17 (3) |
| *Capra hircus* | goat | 1 (1) | - |
| *Ovis/Capra* | sheep/goat | 24 | 13 |
| *Bos taurus* | cattle | - | 3 (1) |
| TOTALS | | 30 (2) | 33 (4) |
| *Ovis & Capra* elements | | | |
| Cranial & axial | | 7 | 14 |
| Fore & hind quarters | | 6 | 5 |
| Ankle & foot bones | | 17 | 11 |
| All fore limb elements | | 8 | 1 |
| All hind limb elements | | 7 | 10 |
| Tooth eruption stages | | | |
| *Ovis aries* | | V | II, III, IV |

**Leeuhoek Shelter**

The sloping deposits in Leeuhoek (Fig. 2) require three separate sections to show stratigraphic relationships (Fig. 5 top). There are scarce pre-European livestock remains, again separated from the Contact horizon above by a sterile gap. Abundant European artifacts indicate two depositional episodes, the earliest of which is tightly dated to 1840-1860 and the second to 1880-1910. Lenses of livestock remains are associated with each episode. Although they have similar quantities (Table 7), their composition differs. The lower lens has few sheep remains and many fragments identifiable as ovicaprine; one fragment is attributable to *Capra hircus*. The younger lens has more pieces identifiable as *Ovis aries*, but there are also rare fragments of *Bos taurus* as well as the only recorded examples of chicken (*Gallus domesticus*).

**Van Zyls Rus Shelter**

Van Zyls Rus (Fig. 2) contains no definite trace of pre-European livestock, in spite of the low stone kraal ruin with a pre-European outline on the talus slope. The earliest trace of domesticates is a small patch of sheep remains at the same level as a solitary European artifact (Fig. 5). There is a small gap in the accumulation followed by a more extensive sheet of sheep remains and some less diagnostic ovicaprines. Only one piece can be firmly attributed to *Capra hircus* (Table 8). Rare artifacts from the upper sheet date to the late 19th century.

**Boundary Shelter**

The yield from Boundary (Fig. 2) is too small to suggest stratigraphic separations (Fig. 5). There are no pre-European livestock remains. The European artifacts are not easily dated but the lowermost in the sequence

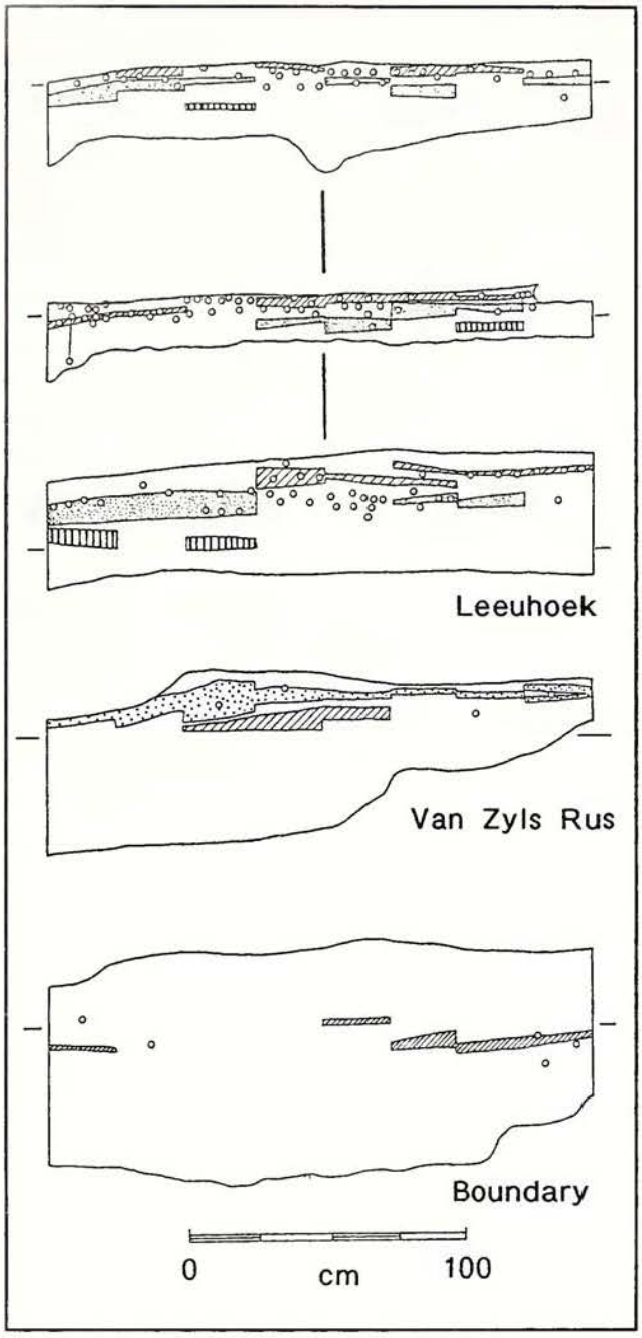


**Fig. 5. Composite sections of three rock shelter deposits, showing positions of 25 cm x 25 cm excavated blocks yielding livestock remains, in relation to positions of European artifacts. See Fig. 3 for key.**

could be early 1800s. This is the only site at which goat and sheep remains are about equal, but the sample total limits further interpretation (Table 9).

## CORRELATION AND DATING

The earliest horizon (ca 1810-1830) of post-Contact livestock remains includes the samples from Haaskraal - lower, Driekoppen - lower, Abbot's Cave - lower, all with scarce glass trade beads and rare lead grape shot. Abbot's Cave - middle dates to late in this horizon Boundary may also belong to this group.

A middle horizon (ca 1830-1860) includes those horizons with abundant domestic ware but without wire. They include: Volstruisfontein - lower, Leeuhoek - lower and Van Zyls Rus.

The younger horizon (ca 1860-1890) contains samples with wire and rarely other datable items like ammunition or molded bottle glass. Among these are Volstruisfontein - upper, Haaskraal - upper, Driekoppen - upper and Leeuhoek - upper.

The youngest sample of the set is the livestock-rich dung cap in Abbot's Cave - upper with artifacts which bracket it between ca 1890-1910.

**Table 8. Van Zyls Rus: NISP (and MNI) per species and lens.**

| | | lower | upper |
|---|---|---|---|
| *Ovis aries* | sheep | 4 (1) | 23 (2) |
| *Capra hircus* | goat | | 1 (1) |
| *Ovis/Capra* | sheep/goat | 1 | 7 |
| TOTALS | | 5 (1) | 31 (3) |
| | | | |
| *Ovis & Capra* elements | | | |
| Cranial & axial | | 2 | 5 |
| Fore & hind quarters | | - | 12 |
| Ankle & foot bones | | 3 | 14 |
| | | | |
| All fore limb elements | | - | 9 |
| All hind limb elements | | 2 | 6 |
| | | | |
| Tooth eruption stages | | | |
| *Ovis aries* | | V | II, IV |

**Table 9. Boundary: NISP and MNI.**

| | | |
|---|---|---|
| *Ovis aries* | sheep | 2(1) |
| *Capra hircus* | goat | 3(2) |
| *Ovis/Capra* | sheep/goat | 2 |
| | | |
| **TOTALS** | | 7(3) |
| | | |
| *Ovis & Capra* elements | | |
| Cranial & axial | | 4 |
| Fore & hind quarters | | 1 |
| Ankle & foot bones | | 2 |
| | | |
| Tooth eruption stages | | |
| *Capra hircus* | | IV, V |

## SHEEP/GOAT ELEMENT DISTRIBUTIONS

The proportions of ovicaprine elements from the richer post-Contact lenses are shown in Figures 6-10. Percentages were derived from the totals given in Tables 1-9. Sheep remains dominate all the samples. The smaller

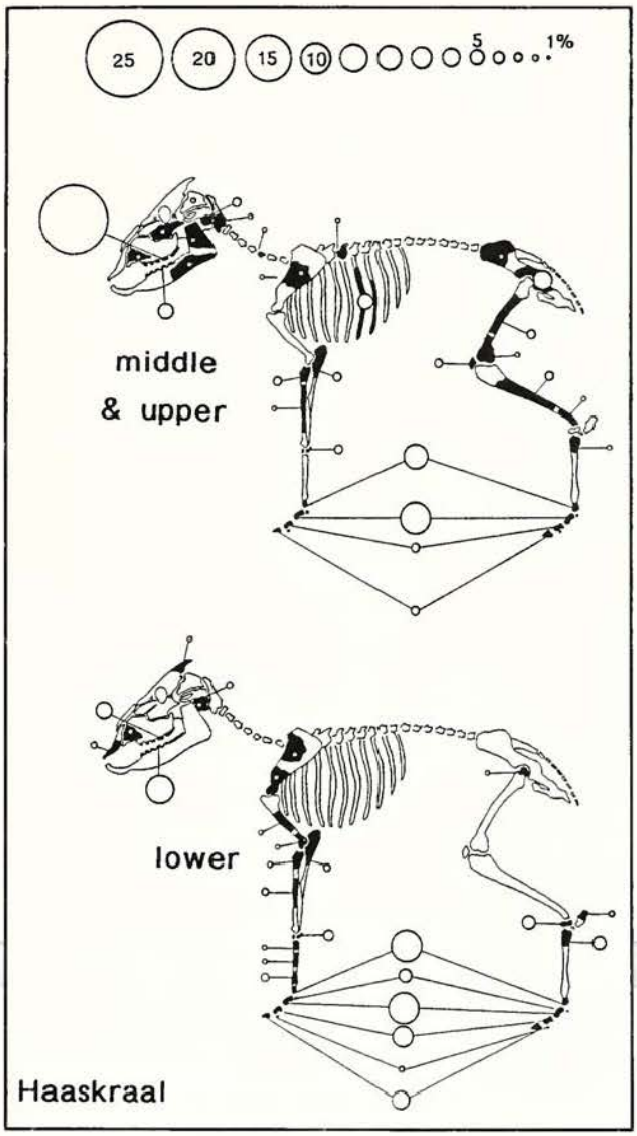


**Fig. 6. Percentage distribution of ovicaprine elements from the post-Contact levels of Haaskraal rock shelter.**

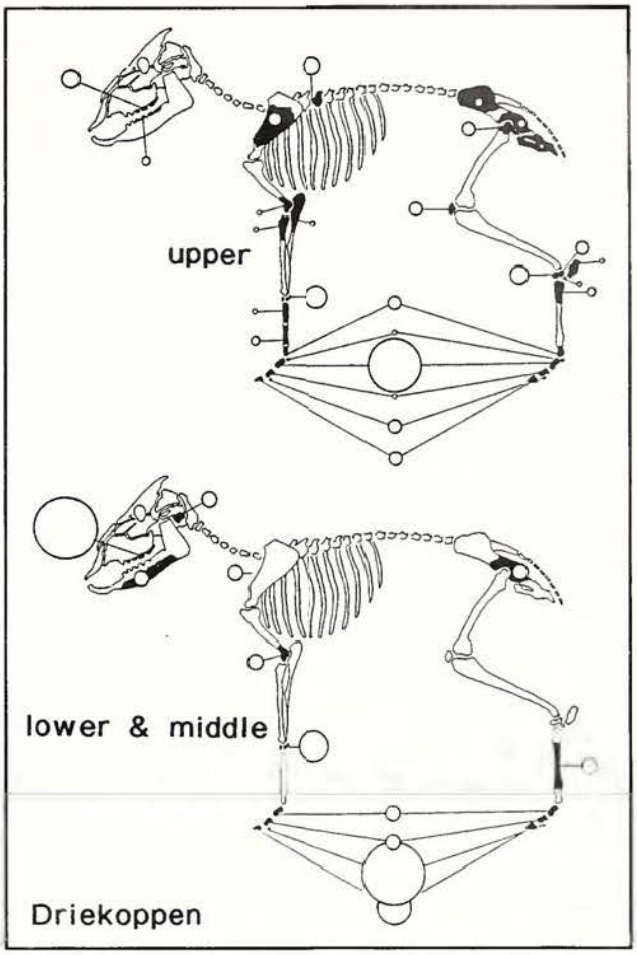


**Fig. 7. Percentage distribution of ovicaprine elements from the post-Contact levels of Driekoppen rock shelter.**

samples from Volstruisfontein Shelter (Table 1), Bloubos (Table 3) and Boundary (Table 9) are omitted from the next analysis as they are too small for reliable percentage calculations.

The Haaskraal lower unit is dominated by foot and ankle bones (Fig. 6), a feature common to most of the assemblages. There is also a marked emphasis on the fore limb, with hind quarters scarcely represented. The middle and upper units, combined to increase sample size, show a wider distribution of parts about the skeleton, with notably higher frequencies of loose teeth.

The Driekoppen lower and middle units were also combined to enhance sample size; the fore limb is again more evident, but with a high ratio of cranial parts (Fig. 7) In the upper unit, fore and hind quarter elements appear more evenly distributed.

The Abbot's Cave lower unit again shows a bias in favour of the fore limb, with cranial parts also prevalent (Fig. 8). The middle assemblage may contain vertebrae thrust down from the overlying dung layer; foot bones dominate the sample. The very fresh upper (dung) unit shows the widest possible distribution of elements about the skeleton, with many articulating pieces. Much of this material derives from sheep which died in the cave and became only partially disjointed as it filled with dung. Thoracic vertebrae may have been thrust down into the middle lens and it could be that cranial parts were carried as far as the lower lens by groundsquirrel activity.

The very small lower unit from Lame Sheep (mostly loose teeth) has been combined with the upper unit to enhance the sample size. Figure 10 shows a very marked preference for the hind limb.

At Leeuhoek the lower unit has a more even balance between fore and hind limbs (Fig. 9) and the upper unit shows a marked preference for hind limbs and cranial parts.

The Van Zyls Rus samples were also combined (Fig.10), showing a more generalized distribution of elements about the skeleton.

### Three groups

From this brief review it is apparent that three sets of articulating elements are responsible for most of the differences between the ovicaprine assemblages. The first

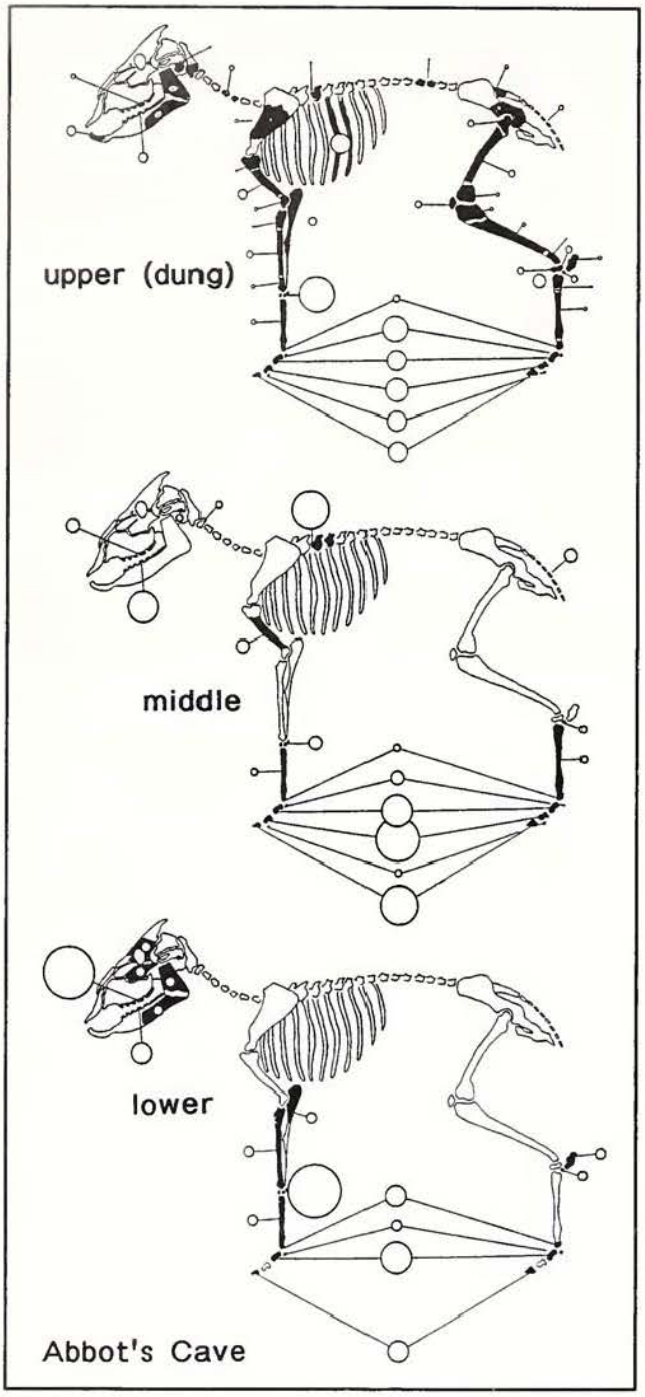


**Fig. 8. Percentage distribution of ovicaprine elements from the post-Contact levels of Abbot's Cave.**

set is the head (cranial, mandible, loose teeth) together with the rare axial parts (vertebrae, ribs, sternum). The second set is the fore quarters (scapula, humerus, radius & ulna) with the hind quarters (pelvis, femur, patella, tibia). The third set is all the ankle and foot bones.

When percentages are combined for these sets of elements in each assemblage and the three values are plotted as a single point on a tri-axial graph (Fig. 11), all the assemblages can be compared on a quantified basis.

The points, each representing single assemblages, form three clusters in the scattergram, labelled Group A,

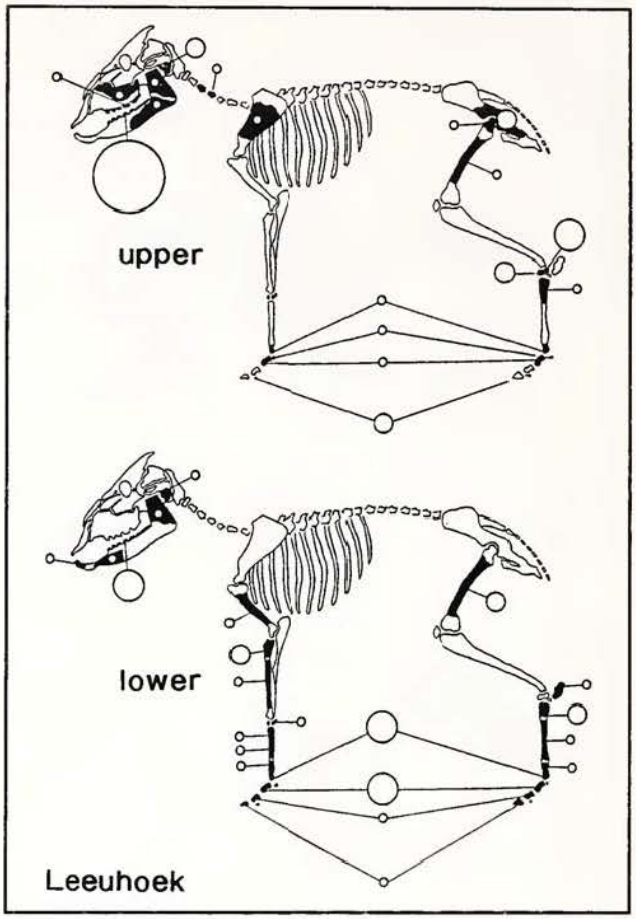


**Fig. 9. Percentage distribution of ovicaprine elements from the post-Contact levels of Leeuhoek rock shelter.**

B & C on Figure 11. The Lame Sheep (upper unit) forms a solitary outlier.

Group A is dominated by ankle and foot bones (55-65%) and head bones (20-35%) with only a trace of fore and hind quarters. The assemblages falling within this group are Haaskraal - lower, Driekoppen - lower, Abbot's Cave - lower and Abbot's Cave -middle. Thus the earliest post-Contact assemblages show a remarkable homogeneity right across the upper valley.

Group B is also dominated by foot and ankle bones (50-70%), but head parts are relatively scarce (10-25%) with proportionally more of the meat-bearing quarters present. Assemblages in Group B are Van Zyls Rus, Driekoppen - upper, Abbot's upper, Leeuhoek lower and Volstruisfontein - combined. Although an outlier, Lame Sheep-upper is closer to Group B than to the others, but has too few cranial and axial parts.

Group C has relatively fewer foot and ankle bones (20-40%) and more cranial and axial parts (40-55%). Fore and hind quarters fall within the same range as Group B. The three assemblages in Group C are Haaskraal - middle, Haaskraal - upper and Leeuhoek - upper

**Fore versus hind quarters**

Figures 6-10 indicate that there are also differences in

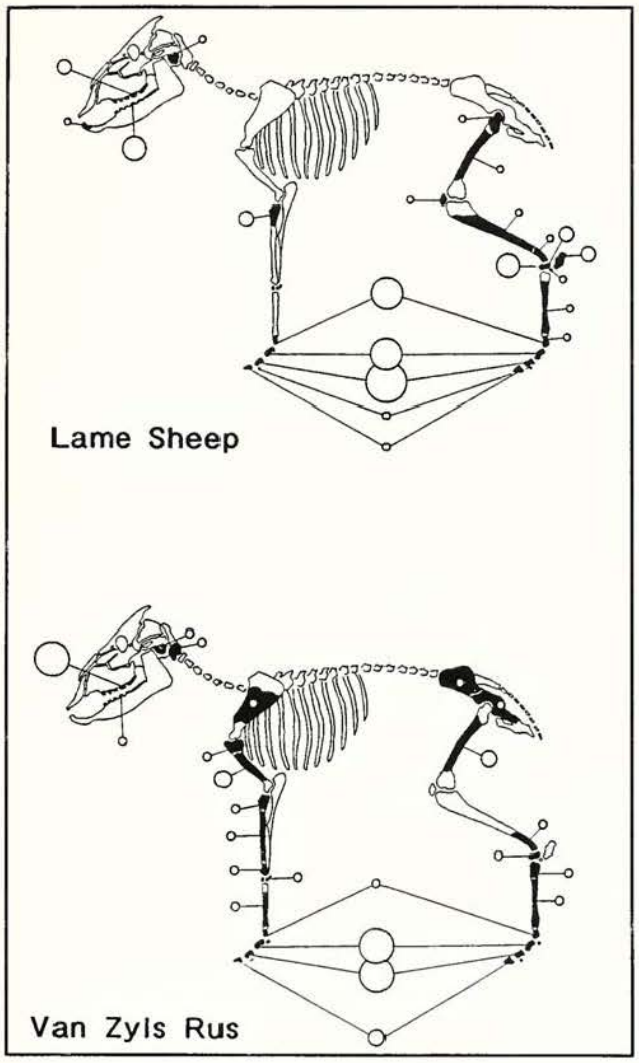


**Fig. 10. Percentage distribution of ovicaprine elements from the post-Contact levels of Lame Sheep rock shelter and Van Zyls Rus rock shelter.**

the ratios of fore to hind quarters present in each ovicaprine sample. A more systematic view of these differences is given in Figure 12, a scattergram comparing combined percentages of fore quarter elements (scapula, humerus, radius and ulna, carpals and metacarpals) with hind quarter elements (pelvis, femur, patella, tibia, tarsals and metatarsals). All the Group A samples contain more fore quarter than hind quarter elements.

Group B samples are widely distributed on the diagram. The two with slightly more fore-quarters are Leeuhoek - lower and Van Zyls Rus nearby (Fig. 1). Those with more hind quarters include Driekoppen - upper, Abbot's Cave - upper and the small Volstruisfontein - combined sample plotted on the far right of the diagram.

Two Group C samples, Haaskraal - middle and Leeuhoek -upper are also dominated by hind quarters, but the Haaskraal -upper sample has equal proportions of both quarters. The Lame Sheep sample is more closely aligned with the Group C samples in this diagram.

**Summary**

The earliest horizon (ca 1810-1830) of post-Contact ovicaprine remains in the upper valley rock shelters (Group A) is dominated by foot and head parts, with a marked scarcity of meat-bearing limb bones. Where limb bones are present the fore quarters invariably dominate. The middle horizon (ca 1830-1860) contains assemblages with increased frequencies of meat-bearing limbs, among which the fore or hind limb may be slightly dominant. Middle horizon assemblages may be poor in cranial and axial parts (Group B) or contain quite high frequencies of them (Group C). Hind limbs invariably dominate in the latter group, as in the outlier sample of Lame Sheep. The same variability exists in the younger horizon (ca 1860-1890). The youngest sample from Abbot's Cave (1890-1920) falls within Group B.

**Interpretations**

The earliest post-Contact ovicaprine samples share a remarkably consistent pattern of element distribution (Group A) across the upper valley. The most obvious modern analogue for this pattern is the post-slaughter package known colloquially as "kop en pootjies" (head and hooves), still distributed to upper valley farm staff today, along with the offal. The remaining (dressed) carcass is normally retained for household consumption. The rare limb bones present in Group A samples are the less desirable fore limbs. This suggests that the haunches were normally kept for the farmer's family table.

By the middle horizon, half carcasses, parts of half carcasses and sometimes whole carcasses were more likely to arrive at the shelter. In some cases the portion was with the head but without the feet (Group C); in others the portion came without the head but with the feet still attached. Modern farm analogues in the area would be the division of a monthly slaughter sheep to the family members of an employee who has received a whole sheep as part of his wages.

**Note on age-at-death**

Such ovicaprine teeth as are sufficiently intact to determine their eruption/wear stages are listed in Tables 1-9. No single faunal sample has sufficient numbers to delineate mortality curves, but when all recovered teeth are combined (Fig. 13), a bimodal distribution emerges. There are no obvious differences between the mortality distributions of Groups A-C, nor were any changes through time detectable.

## DISCUSSION

Although travellers in the Seacow valley (Burrow 1806; Plumptre 1815; Campbell 1823; Burchell 1824; also see Sampson, this volume) invariably stated that the resident Bushmen were not traditional herders, there are grounds for suspicion. In the late 18th century, Bushmen encountered here with livestock (or even with a sheepskin, in Barrow's account) were taken to be thieves. Consequently the 'recovery' of stock from Bushmen

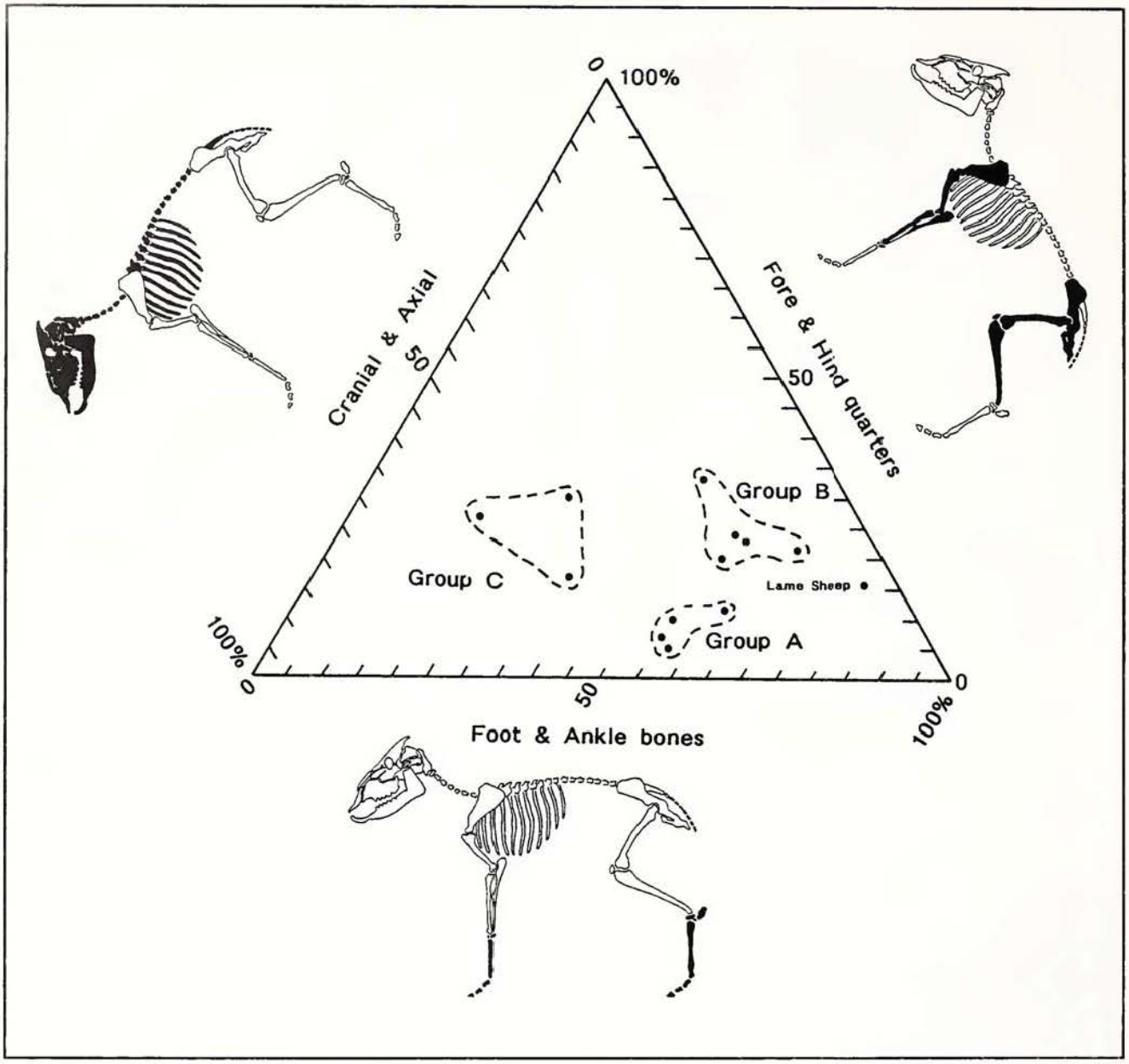


**Fig. 11. Tri-axial diagram showing relationships between three groups of elements in 13 assemblages of ovicaprine remains.**

could always be justified. So self-serving a view requires careful scrutiny, particularly as Bushmen took readily to European herd management after the amnesty of 1798. If they already had these skills before the trekboer invasion, then they may have had flocks of their own. Pringle (1835) was the only contemporary writer to declare outright that they had been herders, but were stripped of their flocks by the incoming trekboers. However Napier (1851) rightly pointed out that this minority view could not be supported by hard evidence.

The archaeological record casts new light on this old controversy. Perusal of the sections in Figures 3-5 reveals a thin, livestock-free gap between the uppermost pre-Contact livestock specimens and the lowermost lenses of domesticates associated with European artifacts. This is evident in Volstruisfontein, Haaskraal, Abbot's Cave and Leeuhoek. It may also occur in the small Bloubos test pit, not illustrated here. Only in the Abbot's Cave annex (*i.e.* Lame Sheep) is the gap missing due to a large disconformity in the sequence. Although the other three sites do not display such a gap, this is only because they yielded no pre-Contact specimens. In balance, the evidence strongly supports the existence of a brief, livestock-free period in the upper valley before the first appearance of European artifacts.

Unfortunately the duration of this gap cannot be precisely fixed by AMS-radiocarbon dating because it is too short (R.A. Housley pers. comm.); probably one or two centuries, given the slow sedimentation rates of all shelter fills in the region. This would support the European pioneers' view that the Seacow River Bushmen were indeed without livestock in the late 18th century. However, their recorded herding propensities suggest that stock could have been present in low numbers and/or in

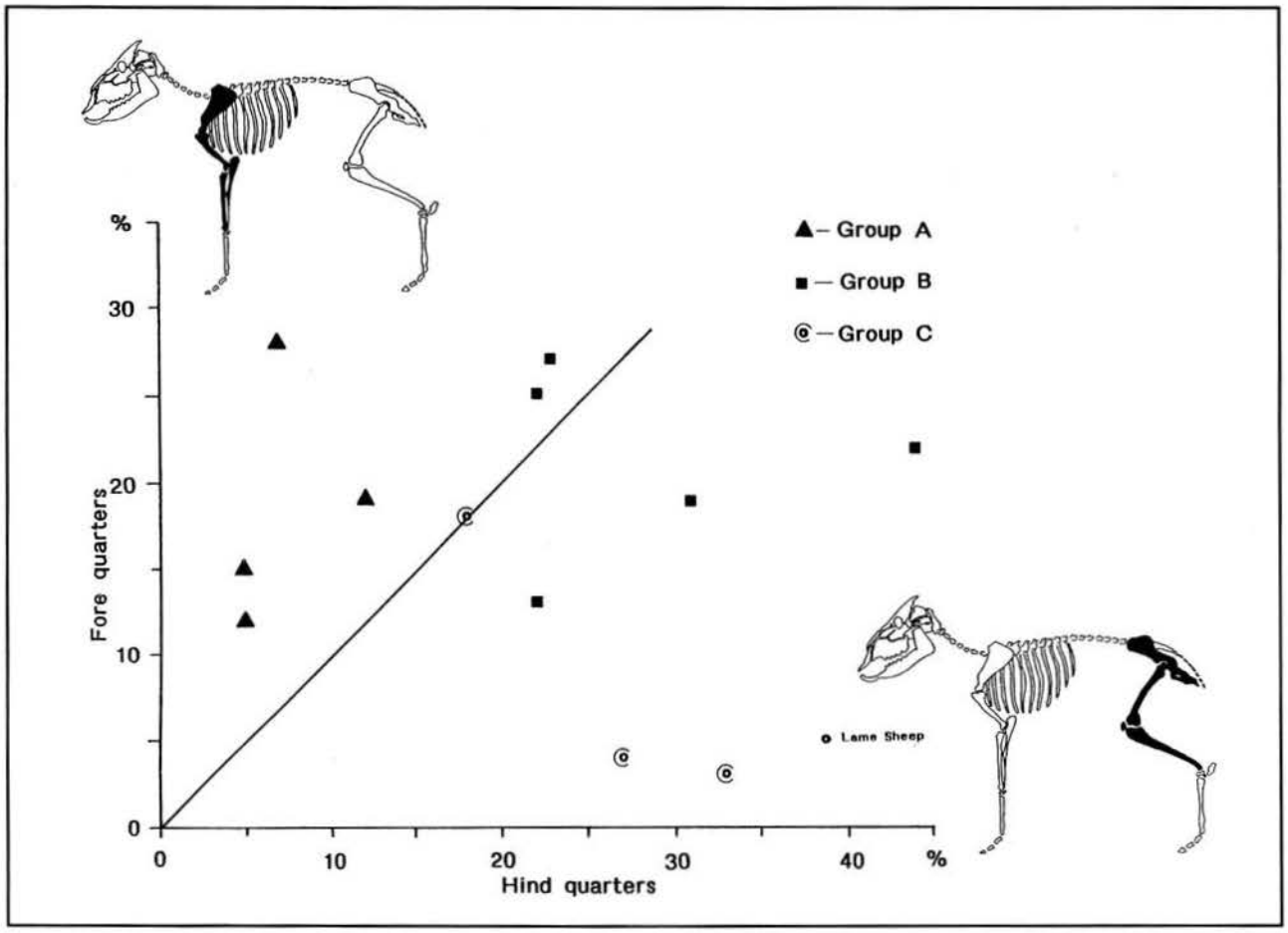


**Fig. 12. Scattergram showing ratios of hind and fore quarter elements among thirteen assemblages of ovicaprine remains. Groups defined in Fig. 11.**

the vicinity of the upper valley.

The stock-free gap in the record has other implications. There are no clear-cut traces of the large scale livestock raids on pioneer farms in the upper valley during the 1770-1780 period. If stock remains were being deposited from these events, they have merged with the earliest material associated with 19th century artifacts. While it is possible that rare pieces of lead grape shot could belong to the stock-raiding period, this is far from certain. Either the raiders made no use of these shelters, or they brought back too little of what they slaughtered in the field to form a recognizable deposit.

When livestock does appear, the remains strongly suggest a "kop en pootjies" (head and hooves) configuration for ovicaprines. This fits well with Thompson's 1820s observation that "...they also come in for the offals of the cattle [stock] killed for food". By this time, regular (even daily) rations were received by Bushmen retainers living in the vicinity of most homesteads, producing a sufficient volume to register in the archaeological record. On the rare occasions that meat-bearing limbs were included in the hand-outs, these were more likely to be the less desirable fore limbs, the haunches being kept for the farmer's family table. Such details have not emerged anywhere in the documentary record.

Cattle remains were rarely deposited except at Haaskraal (Table 2). As this shelter overlooks an historical cattle post, *i.e.*, a stone shepherd's hut, calcined dung and partial stone kraal walling, this is the most likely source for the faunal remains. The presence of donkey and turkey in the earliest level is unexpected as contemporary documents make no mention of these domesticates. The early appearance of chickens is better documented: 'fowls' are mentioned at a Sneeuberg farm in 1823 by Thompson (1827 I:83). Turkeys are still kept by farm labourers today.

Leeuhoek overlooks the ruins of the original farmstead and was probably used by field hands and possibly by domestic staff. This might explain the presence of chicken remains in the later levels here. Merriman was given eggs from a farm bordering on Leeuhoek in 1849 (Varley & Matthew 1957:71).

The shift in ovicaprine element distributions during the later 19th century away from the "kop en pootjies" pattern towards more limb bones could reflect two quite different trends. Some of this material may result from rising incidents of stock theft in which the whole sheep was more likely to arrive at the shelter for slaughter and consumption (Group C). The other process by which part

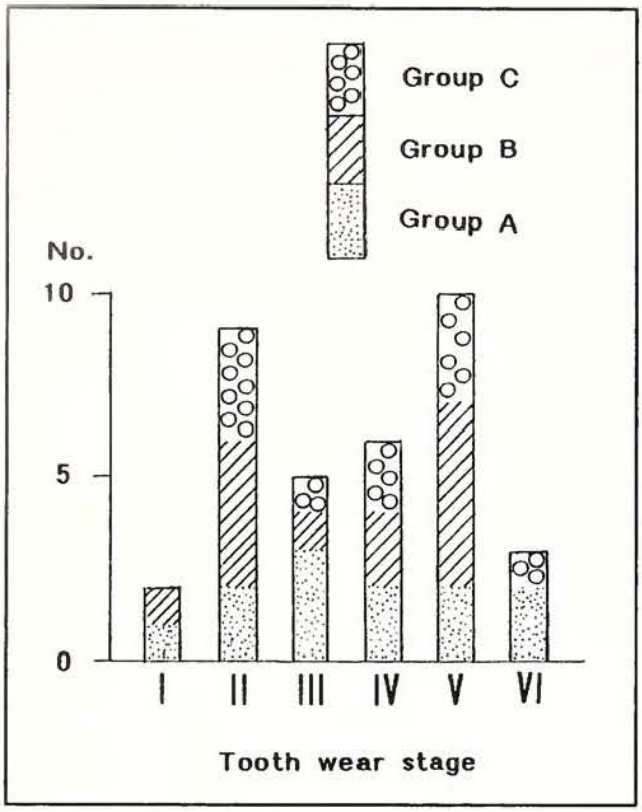


**Fig. 13. Age distribution of all ovicaprine teeth recovered from rock shelters in the upper Seacow valley. Groups defined in Fig. 11.**

carcasses might arrive at the shelter would be that farm Bushmen were increasingly paid in whole sheep for their services. Still a common pattern at upper valley today, the sheep would have been slaughtered near the homestead, heads and feet would have been passed on to other staff, and the dressed carcass brought back to the shelter (Group B). Leeuhoek, close to the homestead and containing a very rich compliment of European artifacts, was certainly occupied by farm servants. It yielded faunal samples typical of both Group B and C. Either pattern could also arise from the slaughter of the sheep or goats owned by the Bushmen themselves.

## CONCLUSIONS

Although sheep and cattle were present in the upper Seacow valley a few generations earlier, resident Bushmen who received the brunt of the Dutch trekboer invasion in 1770 were without livestock of their own. Reasons for the the brief disappearance of domestic animals from this region remain elusive, but the archaeological record shows a stock free horizon immediately below the first European artifacts. This gap in the record also supports the view that large-scale stock raids by Bushmen on pioneer farms were not frequent enough to form recognisable deposits in adjacent rock shelters.

The documented pathways by which Bushmen hunter-gatherers became herders are not immediately recognisable in the archaeological record. However, the latter adds details which are not available in published or archival sources. It was not until the early 19th century that European livestock remains were arriving at rock shelters in sufficient numbers to become incorporated in the shelter fills. They include sheep, goats and cattle. Donkey, chicken and turkey also occur, but rarely. Most of the material is sheep, nearly all of which is head and feet. Very rare limbs are dominated by the less meaty fore quarters.The most parsimonious interpretation is that the bulk of this material came in as "kop en pootjies" (offal) hand-outs to Bushman hangers-on living in the vicinity of farmsteads.

Deposits containing more hind and fore quarter remains have later 19th century associations, and there are two distinct patterns of body part survival among the sheep and goat remains. One, with high foot bone frequencies but few head parts, is probably a mix of isolated stock thefts and part-payments in whole sheep to farm staff as wages. The other pattern, with more heads and fewer foot bones, may reflect prior subdivision of the carcass away from the shelter. Some of this material could come from Bushman-owned flocks, but these cannot be distinguished from wage or theft-derived transfers. Cattle remains are too scarce throughout to allow any interpretation of butchery patterns. Both sheep/goat slaughter patterns persisted into the first decade of the 20th century.

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