

The corbelled stone structures of Glenfield Farm, Salem - some interpretations revisited

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Various postulates concerning the origin and purpose of the corbelled structures in the vicinity of the Assegaibos River on the farms Farmerfield, Glenfield and Springfield, Eastern Cape Province (previously Albany District) have been formulated since their discovery in 1962. For the largest of these structures on the farm Glenfield, each of these interpretations is elaborated upon, the traditions of each case investigated and the merits and demerits of each postulate presented.

Key words: Corbel, lime kiln, fortification, sweat house, charcoal oven.

Die karbeel strukture van die Assegaibosrivier - her-evaluering van sekere interpretasies

Verskeie stellings ten opsigte van die oorsprong en doel van die karbeelstrukture in die omgewing van die Assegaibosrivier op die plase Farmerfield, Glenfield en Springfield, Oos-Kaap provinsie (voorheen Albany distrik) is sedert hul ontdekking in 1962 geformuleer. Elk van die verduidelikings word vir die geval van die grootste van hierdie strukture op die plaas Glenfield op uitgebrei, die tradisies daaraan ondersoek en die meriete daarvan blootgele.

Sleutelwoorde: Karbeel, kalkoond, verdediging, sweethuis, houtskooloond.

Nora Pitman,¹ while botanising on Farmerfield farm near Salem in the Albany district of the eastern Cape in 1962, chanced upon some unusual structures. She published her findings in the Eastern Cape Herald (1962: [page unrecorded]) (fig. 1) and posits four postulates as to the origin of the structures:

Early Trekboer shelters.²

Shelter built by a marooned Portuguese sailor.³

Built for some ceremonial purpose (sweathouses?).⁴

Defensive structures.⁵

Figure 1

Nora Pitman's illustration of the corbel structure under discussion (Pitman, 1962: [page unrecorded]).

They were further investigated by others over the years, most notably John Rennie (1962),⁶ James [Webster (1988: 62) has 'Jennet', certainly an error] Walton (1964),⁷ and C. J. Skead (1977).⁸

At the time, Webster (1977: 21-22) adds the following postulates:

Nineteenth century lime burners' kilns.⁹

Revival by Bantu-speakers of ancient African skills.¹⁰
and later having revisited the site (1988:62)
Built by the 'Twa' - that is the 'Little People' or 'San'.¹¹

Simon Hall, then archeologist at the Albany Museum, further postulates a link with an extant charcoal burner in Swellendam.¹²

For purposes of this paper we are only considering the largest extant structure, the corbelled "hut" on the farm Glenfield, although others proximate to this have been identified, but not as large as this example.

We visited the farm in December of 2005 specifically to see the structures, and were immediately intrigued (figs. 2 & 3)

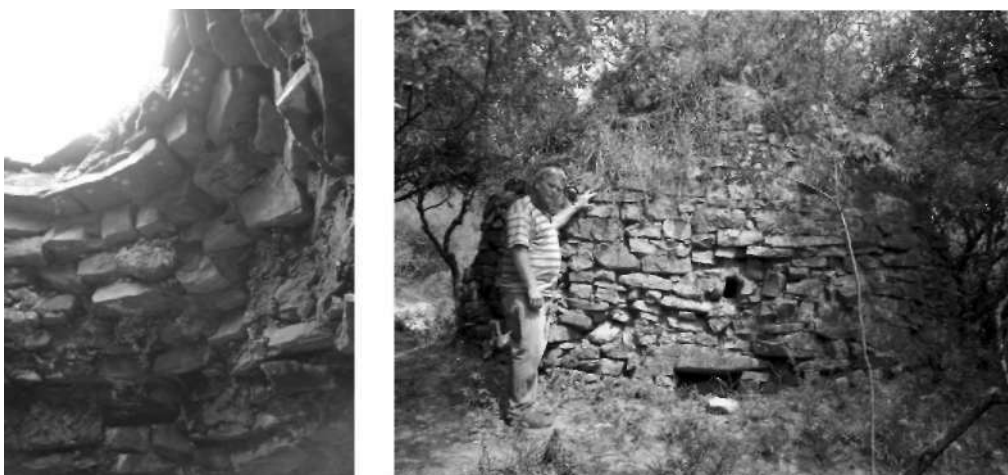


Figure 2
The western side of the corbel structure. Figure 3, the interior
(Clarke, 2005).

The area is imbued with a sense of *genius loci* or a spirit of place associated with so many of the ancient places in our land, for example Mapungubwe. The vegetation is typical eastern Cape - thorn-thicket below blazing oxide-red cliffs to the south beneath which the stream tributaries of the Assegaaibos Rivers run clear, at places ponding, here adrift with pale blue water-lily flowers (*Nymphaea capensis*). It has a sense of mystery and in the cliff faces are caves with relicts of Bushman/San art. The ground above the structure is disturbed by rutted tracks and ploughed fields where stone-age artefacts lie exposed or protrude from the walls of the erosion. As with most sites attracting human habitation, particularly in South Africa, these have done so for millennia.

The structure still bears the bronze plaque of the old National Monuments Council (these have disappeared from most monuments accessible to a broader public, for they serve the pockets of thieves better). As with all National Monuments the site has devolved to a Provincial Heritage Resource in terms of the more recent Act (National Heritage Resources Act, 25 of 1999). We determined to discover the statement of significance at the time of original declaration.

When the structures were declared National Monuments in 1982, it was for reason of being

...excellent examples of the vernacular architecture of the pioneers [of Settler origin] in the Karoo area in the nineteenth century.¹³

Was it an early Trekboer shelter?

Let us then first consider this option.

The extant examples of this architecture lie deep in the interior of the Great Karoo in the district of Carnarvon and surrounds.¹⁴ These are either cylindrical or cuboid structures of dry-packed sedimentary rock. This laminated geology typifies the Karoo, relict of the floor of a now lost inland shallow sea of some many hundred millenia ago. So as to facilitate the construction and maintenance of these buildings there are characteristic bands of cantilevered stones on the exterior which act as permanent scaffolding.

When these are compared to the structure of Glenfield the differences in appearance, size and technology are immediately apparrent (fig. 4).

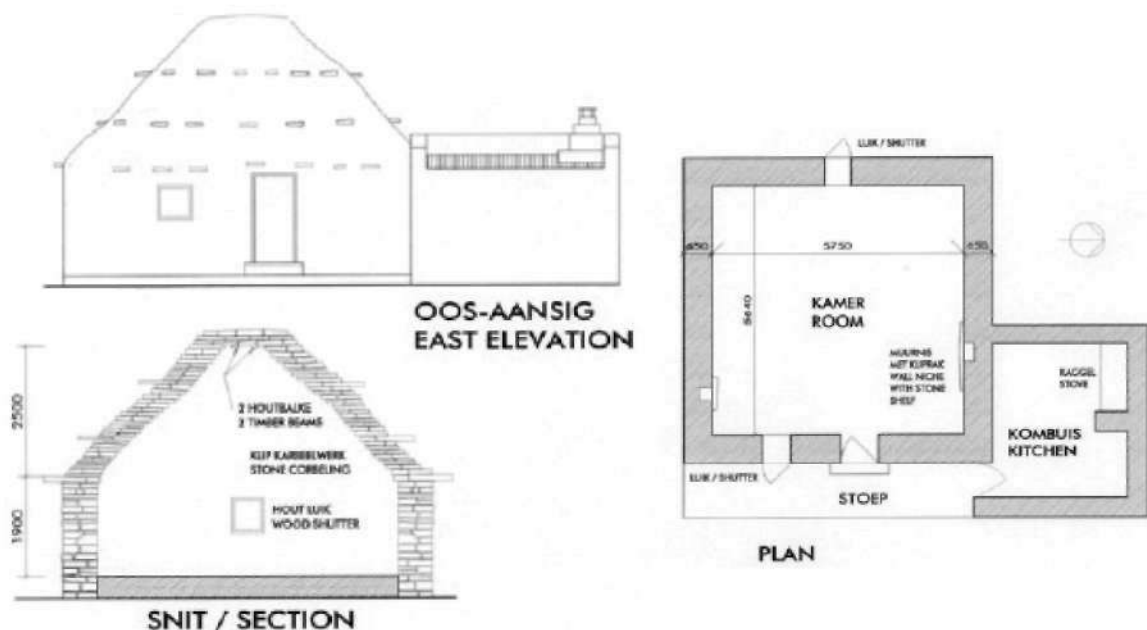


Figure 4
Corbelled houses of the Karoo (Wegelin, 1999: 61).

Because of the lack of suitable timber and vegetation for roofing the Karoo corbelled structures are of necessity made of continuous stone, from wall to roof. At Glenfield materials for conventional roofing abound.

A further advantage of this building type is that of the mass of the material, which moderates and regulates the extremes of temperatures. The form also offers the least exposed surface to the elements relative to the enveloped volume. While in the eastern Cape temperatures can reach extreme highs, the rainfall can be heavy and thus such a building would need regular maintenance, further precluding it as a suitable choice as a dwelling structure. Then there are features such as the lack of window openings, a clayed duct around the interior perimeter at approximately one third of the height, regular through holes of approximately 100x100mm at a third of the height up the wall, having obvious sooting or charring of the inner surfaces of the distinguishing features, all leading to a questioning of the primary purpose being that of permanent habitation.

Research would still need to be conducted as to the origins of the original [Trekboer?] owners of the farm and their cultural connections in order to determine if they authored the structure and for what purpose.

Shelter built by a marooned Portuguese sailor?

While this might be a tongue-in-cheek explanation offered by Pittman, we can consider if it holds any aspect of possibility

There are indeed records¹⁵ of at least one structure built by the Portuguese along the South African coast, that of an *ermida* or small chapel in Mosselbay. Ferreira (2005: 40) tells that Joao da Nova, having landed there in 1501, erected a *pequena ermida* or small hermitage chapel dedicated to Saint Blasius.¹⁶ The ruins were recorded by various visitors and by one account were still to be seen in 1870. Ferreira records that the ruins were finally dismantled and the stones used elsewhere.

As has also been recorded by Pitman, there is a tradition of the building of corbelled structures in Portugal, and many are extant, a particular example shown here (fig. 5) that of a chapel in the small town of Ferreira do Alentejo in central Portugal in the district of Alentejo¹⁷.



Figure 5
Emrida in Ferreira do Alentjo, Portugal (Ferreira, s. a.).

Nineteenth century lime burners' kilns?

This seems to have been one of the more favoured explanations for the use of the structure. It also seems, from the accounts, to be one that persists in the memory of those who have known of the site.

Lime burning is a process that requires large amounts of raw material and leaves vast deposits of debris. A source of raw material has not been readily discovered. When comparing the floor and surrounds with those places known to be used for lime burning, there is no evidence of residual material from such an industry. This observation is to the naked eye and the postulate might be verified by archaeological excavation.

Revival by Bantu-speakers of ancient African skills?

The idea that 'ancient skills' needed 'revival' derives from the record of such structures associated with black iron-age culture¹⁸ that came to the Eastern Cape perhaps 800-1000 years ago. Then, as Webster (s. a. [1977?], p.5) notes:

Mission policy seems to have been to encourage square houses, the official regulations of 1915 required that, (I quote) 'each tenant shall erect a decant Cottage, ... and whitewash it at least once a year. No Kafir [sic] or Beehive huts will be allowed.

While the record has enough evidence to associate earlier endemic cultures with the construction of corbelled dwellings, and while some of these cultures can undoubtedly be presumed to be earlier black cultures, there is no evidence of this manner of construction being used off the continental plateau in southern Africa.

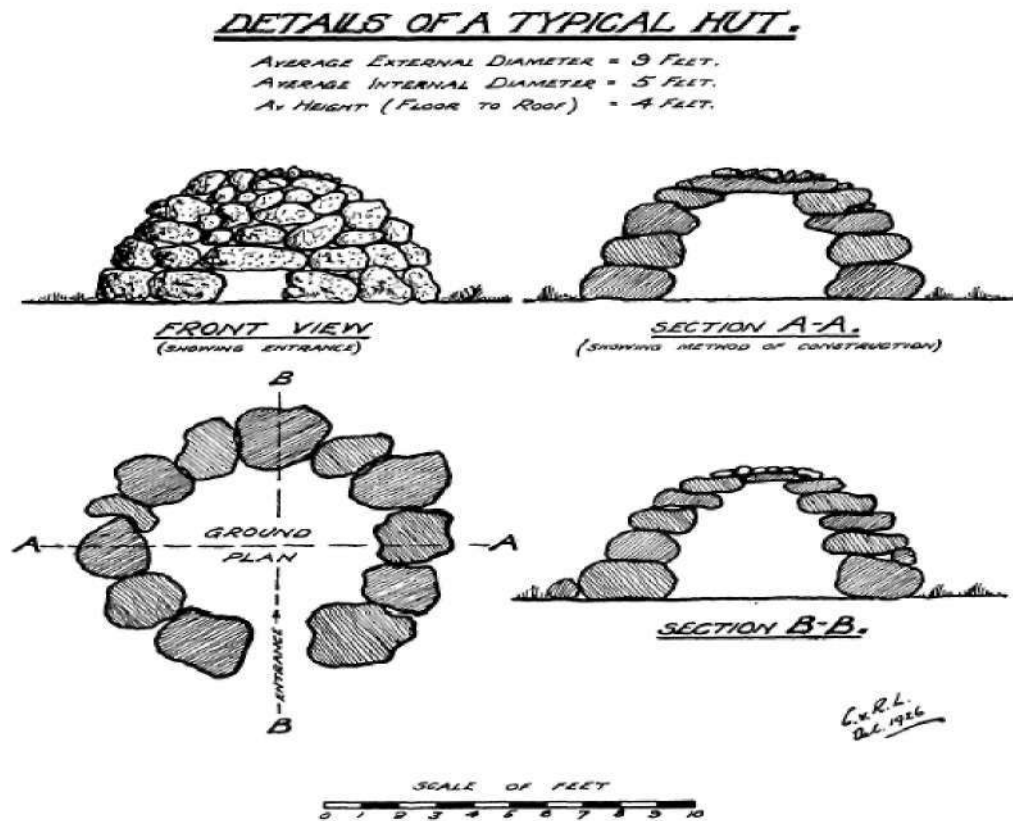


Figure 6
Typical 'Ghoya' hut (Van Riet Lowe, 1927: 219).

However if what is recorded is correct, and some of the black residents in the mission were of freed slave origin, it is possible that there were cultures represented in their midst that might have had knowledge of such structures elsewhere.

Webster (s. a. [1977?]: p.5) records:

There is plenty of evidence that some of the population regarded themselves as Basotho, and still do to-day, despite the fact that they normally speak Xhosa and are registered as such. The nearest ruined house to the stone huts was occupied by Albert Mayi, and I have talked to his descendents, they say that he was a Basutho and 'observed customs that were different.

Through this observation Webster wishes to establish the Sotho connection, and hence a possibility of a continued tradition of the building of corbelled stone structures. This seems highly unlikely since it would appear the tradition died out centuries before.

What would, however, be of interest is to discover what industries the Wesleyan Mission brought and fostered at Farmersfield.

Defensive structures?

The eastern Cape frontier region is associated with domestic scale defensive structures used both by the pioneer Trekboers and later after the Sixth Frontier War (1834-5), the British Settlers. Walton (1961: 20) has it that the windows of the corbelled huts between Carnarvon and

Williston had purposefully small windows that traverse the wall obliquely to prevent Bushman/San arrows being shot directly into the space. It is also related that the Trekboers of the Langkloof had 'rondables' adjacent their homes and stockades as defensive structures against the Bushmen/San.

To protect himself from these [Bushman/San] raids the farmer used to build a little cylindrical shaped tower between the house and kraal, loop holed all round and commanding views of both home and fold. Here he would spend night after night with his grown-up sons watching, and awaiting the attack of the Bushman. These "rondables" (round towers) as they were called, are still to be seen on the oldest farms in the Longkloof and in other parts of the country.

With the advent of the Frontier Wars in 1779 the Trekboers took to fortifying their farmsteads, as is related in several accounts of the early travelers, for example, that of Janssens (1932[1803]: 132)

De bewoonders van de Lange Kloof hebben alle verschansingen en suffisante zoode wallen om hunne huiseu gemaakt; de defensie kan goed zijn, maar gelykenen niet na die van Vauban 19 evenwel hebben zij de Caffers [sic] uit de huiseu gehouden en dit prouveerd het nut. Tot aan Algoa-baai vond men bijna alle huiseu zo verschanst.²⁰

And Lichtenstein (1932[1803]: 253)

Men zag pachthoeven, waar aarden verschansingen tegen de Kaffers [sic] waren opgeworpen, zoodat het geheel een kleine vesting met bastions geleek. De opening was tegenover de huisdeur en in tijd van nood maakte men de opening dicht.²¹

However when we compare the structure under review to these it does not correspond with any of these descriptions.

The British Settlers took to fortifying their farmsteads after the Sixth Frontier War (1834-5), and did employ corbelling to protect wellheads, such as the example of Southwell (fig. 7), here constructed in brick. There is however no evidence of such fortifications being covered in corbelling, even though the deliberate torching of thatched roofs by the attackers might have encouraged the settlers to resort to such a technology.

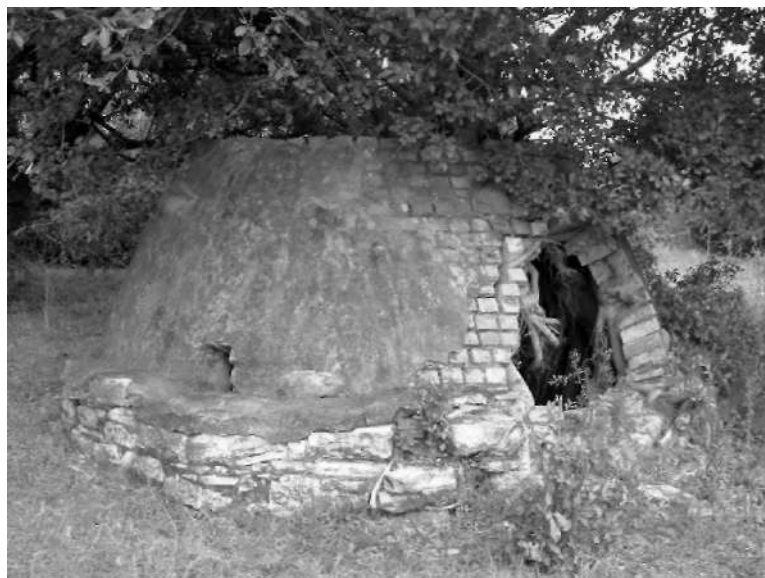


Figure 7
The corbelled well head at Southwell, Albany district (Clarke, 2004).

Loopholes have a distinctive elongated shape splayed from narrow vertical external slots to an almost square aperture inside, and the reveals are usually formed by two flat stones placed vertically and angled inwards so that a rifle or gun barrel is aimed without impediment. The

holes placed regularly around the perimeter of the structure under review at about a third height from the ground have been interpreted as loop- or peepholes. If one examines them *in situ* one finds that they are mud lined, almost square with rounded corners and that the mud is discoloured as if scorched by heat or smoke. These do not comply with defensive loopholes, but are more easily interpreted as places where tuyeres²² were inserted, or perhaps exhaust holes for emitting smoke.

Built by the 'Twa' - that is the 'Little People' or 'San'?

It is intriguing that the local black community associates the structure with the Bushman/San. Possibly it is merely the size of the entrance and the handprints in the mud-walled duct at about two thirds height at the inside circumference of the structure that has fostered this association.

The record²³ has it that there have been associations between black and Bushman/San communities, particularly in the conducting of shamanistic rituals as well as trade, marriage and cattle reaving. Proximate to the site are caves where the surface has rock paintings. Who the authors were and whether these cultures existed contemporaneously with those who erected the corbelled structures, and whether there was any synergistic relationship between them, and if so what these were is not documented and would need to be researched. It would however be an exceptionally unique structure if it were indeed associated with Bushman/San or even Khoekhoen (Khoi-khoi), since nothing of this nature is recorded. The association is therefore highly unlikely.

Built for some ceremonial purpose (sweathouses?).

The Irish have a tradition of corbelled structures used as sweat houses (fig. 8). These would be heated by burning peat sods and then the ill or unwell would crawl in through a very small door, and then be muddled up inside the structure to build up a sweat and thereby cure the illness.



Figure 8
A corbelled Irish sweathouse (Weir, 2007).

Weir (2007) speculates that for a population riddled with arthritis and rheumatism these would have been numerous and omnipresent although distanced from the homestead and secreted in the boscaries. They would also of needs be near water, sometimes a man-made well, for the practice amongst the younger users was then to plunge into water after emerging in a

feverish sweat. It is also speculated that the smoke would be infused with the fumes of burnt magic mushrooms to facilitate the healing process. Such rituals in various forms are also associated with other cultures, but of interest to us is the associated form of the structures, since there is a strong resemblance between these and that under consideration. It is also recorded that the structures were covered in sods to counterbalance the thrust of the corbelling as well as to insulate the stone structure.

While there are strong similarities between the Irish sweathouses and the eastern Cape structure, that under review has features, such as the regular through-holes and duct which do not seem to feature in the Irish examples. Again, the provenance of occupancy of the site would need to be researched to find out if there is a possible cultural connection before pursuing this line of inquiry.

Was it built for the manufacture of charcoal?

Groscott's Mail reported in the Friday 16 September issue of 1983 [copy s.p.] the opinion of Simon Hall, then archaeologist at the Albany Museum:

Perhaps the most telling point in favour of the charcoal burning function is the actual location of the structures. They are situated immediately adjacent to the Assegai River, where water was available to cool the burning process and keep the burn going at the correct rate. More importantly is their situation within the fairly dense woodland of the Riverine fringe and therefore the wood for conversion into charcoal was available on the spot.

There is no doubt that the Assegai River structures were built for charcoal burning. There is no domestic refuse within or around the structures to show that they formed permanent or semi-permanent living places. The most interesting questions which can be asked about them is whether they were built pre- 1820 by Dutch settlers. Their limited number and distribution suggests that the charcoal was made for local consumption and in small quantities. Perhaps some archival digging can throw more light on this aspect.

As noted by Hall [1983?]²⁴:

The purpose of these so called corbelled huts was most definitely for the making of charcoal. The design of the Assegai River huts matches fairly precisely with a charcoal burner seen at the Swellendam Museum. Comparison shows that the scale is roughly the same and that features such as rake holes(?) ventilation apertures and a central chimney opening (post burn?) match with the Swellendam example.

In order to check the veracity of this observation the authors visited the extant structure on the farm Voorhuis in the Swellendam district (figs.9&10). Measurements were taken for comparison.

The Glenfield example is double the size of that of Voorhuis. Visible in the Voorhuis example is an additional set of holes at floor level. There is no indication of a clayed duct where the corbelled dome meets the drum, as in the Glenfield example. The door is at the scale of a human, far higher than that of Glenfield, although this appears to be a later alteration when the use of the building most probably changed. Voorhuis does not have an exit opening opposite the door and the door opening is much larger. No associated subsidiary structures can be readily distinguished, although it is associated with the pioneer settler 'langhuis' of the brother of Hermanus Steyns which has evidence of a smithy and wainwright workshop. Oral tradition has it that where it is located at the drift is on the old wagon road and that this structure was built for Steyn by his brother, Hermanus.

However, if the Voorhuis example is indeed a charcoal burner, then this is the example closest to that of the eastern Cape.



Figure 9 & 10
Voorhuis charcoal burner, entrance and close up of tuyere aperture (Fisher 2007).

What would need to be discovered is what the contemporary late eighteenth century practices were for the making of charcoal in order to interpret all the features associated with the structure. A further enquiry as to the uses of charcoal once it was prepared would also need to be investigated. It is assumed that it was used for iron-working, but there is a need for more thorough investigation of the practices of the cultural groups associated with the area.

Recapitulation

All the cited possible uses under review draw on the resemblance of the corbelled structure at the Assegaiibos River to analogous structures. This is their merit. There are also tenuous connections between the cultures associated with the cited examples and the locality, some more immediate than others.

The demerits of the explanations of the use of the structure are that there is as yet no factual connection between the culture that each is associated with, the site, and the familiarity of that group with the technologies employed for the creation of the structure. This is what needs further research if a plausible explanation as to its use is to be found.

It seems evident that there is a strong possibility that there are cross-cultural associations in the making of the structure, the most compelling being the size of the handprints left in the inner clayed perimeter duct. These may be those of children or of smaller Settler stock, but this is unlikely. It is either that of slave labour, or the diminutive local Khoi/San community.

The only way in which this riddle will be solved is through archival and archaeological investigation in order to identify the cultures associated with the site, their period of association, and their cultural practices²⁵.

Notes

1. Pitman was the botanical artist who illustrated Eve Palmer's *Trees of South Africa* (1962). *von and Williston. They were built about the middle of last century and were clearly the an-*
2. *AT in a countryside devoid of timber. (Pitman, In South Africa there is a type of corbelled hut found in the north-west Cape between Carnar-* 1962: sp.; see also Webster, 1977:21).

3. *It is interesting here to notice that there are Neolithic corbelled stone beehive tombs at Alcalar, very close to the old city of Lagos in southern Portugal. In the great bay there Prince Henry the Navigator had his shipyards for fitting out his exploring fleets. Sailors manning the caravels which slowly pushed their landing stages down the coast of Africa must have been recruited from the neighbouring villages and towns.*

This lends possibility to our rather romantic theory that the Farmerfield corbelled domes may have been built by a survivor from a Portuguese wreck. (Pitman, 1962: sp.).
4. *Today, at various places which are often quite close to the sites of the late Stone Age corbelled tombs, or close to the sites of the corbelled cells of the Christian monks, we find that the local people were, until recently, still building corbelled stone domes for one purpose or another. It is usually considered an ancient skill that began to die out during the nineteenth century. In parts of Ireland corbelled beehive huts used as "sweat-houses" are still found. They were used much as modern Finns use their steam bath-houses. In the Outer Hebrides corbelled beehive stone huts were built as seasonal shelters by shepherds pasturing their flocks and the same applies to Malta and to certain rural areas of southern France. (Pitman, 1962: sp.).*
5. *So the most likely explanation of the buildings would seem to be that the traditional method of building corbelled huts, brought from the hills between the tributaries of the Vaal, was adapted by means of the addition of loopholes for firearms, and turned into a fort for defence against the Xhosa. These two buildings, one now in ruins, must be unique among nineteenth century forts. (Pitman, 1962: sp.).*
6. Webster, 1977: 21.
7. Webster, 1977: 22.
8. Albany Museum Files on Farms of the Albany District.
9. Mr Feltman Gabo, who was born in Farmerfield in 1919 and now works in Grahamstown, says that he remembers the nearest (now ruined) stone structure being used as a lime kiln. But possibly the fact that structure "B" was used in this way is the reason for its collapse; originally it may have been a much older dwelling-place. Mr Matthew Dixon, now of Kenton, who used to burn lime, always made his kilns by digging into the side of a bank; he thought that if stones were used they would break up in the great heat, particularly if it rained. (Webster, 1977: 22).
10. *So there were a considerable number of stone hut people in areas which are now the north-eastern Free state and southern Transvaal. In all the disturbances and migrations of the 1830's, the last remnants of the stone-building tribes seem to have been scattered. Is it not possible that among the "five different nations of Africa" which William Shaw describes as collecting in his congregation at Grahamstown in the years 1830 to 1837, there might have been members of these scattered tribes? Might they not have joined the Wesleyan Church and been sent to Farmerfield and there made use of their stone-building skill? At Farmerfield they were required to make a break with their past. Indeed, Mission policy was to encourage square houses. But perhaps a hankering for ancient ways may have persisted. (Webster, 1977: 22).*
- 11 Webster, 1988: 62.
- 12 In a draft on the old NMC (now SAHRA) files.
- 13 Government Gazette, Republic of South Africa. No. 363, 29. February 1980. Promulgation no. 10/2/753.
- 14 See Ferreira, 1986.
- 15 See Ferreira, 2005: 40-41 footnote 95 for references.
- 16 It can be assumed that Saint Blasius was a bishop who was martyred by beheading at the beginning of the fourth century. According to legend Blasius was a physician at Sebaste before he was raised to the episcopal see. At the time of the persecution under Licinius he was taken prisoner at the command of the governor, Agricolaus, whose hunters had found him as a hermit in a cave in the wilderness. In the Latin Church his feast falls on 3 February, in the Oriental Churches on 11 February. (Catholic Encyclopedia, 1997. www.newadvent.org)
- 17 However Ouzman (personal communication): *See also Liz van Tonder's work on Portuguese shipwreck survivor camps, most recently published in The Digging Stick and the subject of her PhD.*
- 18 Van Riet Lowe, 1927: 217-233; Hoernle & Hoernle, 1930: 33-47; Dauberton, 1938: 364-70; Van Riet Lowe, 1944: 195-207; Walton, 1956: 37-51; Walton, 1965; Mason, 1973: 485-487; Maggs, 1976: 318-332.
- 19 Renowned French Military Engineer (1633-1707).
- 20 The residents of the Long Kloof all have fortifications and sufficient soil walls around their homesteads; these defenses are adequate, but do not compare with those of Vauban, however they

- have proven effective against the indigenes and kept them out of their houses. Most houses up to Algoa Bay are fortified in this manner. [Authors' translation],
- 21 One sees quitrent farms with earthen fortifications erected against the indigenes so that the whole resembles a small fortress with bastions. The entrance was opposite the door of the house and was battened down in times of need. [Authors' translation].
- 22 A tuyere is a nozzle formed from timber, horn, burnt clay or a metal for use at the end of bellows and invariably inserted through the wall of an oven or furnace for charging the smelting or firing furnace with air.
- 23 For discussions of Bushman/San intercultural links with the Xhosa see for example Thackeray, 1988: 2-3; Prins, 1990: 110-116; Prins, 1992: 133-147; Prins & Hall, 1994: 171-203.
- 24 In a draft on the old NMC (now SAHRA) files.
- 25 The authors would like to extend their thanks to Dr. Sven Ouzman of the department of Anthropology and Archaeology at the University of Pretoria for his support in their researching this subject.

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