Contents

Preface 3

Corbelled buildings: an overview: Pat Kramer 5

VASSA excursion to Loxton, September 2006: Looking, listening and recording 7

Corbelled buildings in Europe:
  Vaulting, facing and infilling as components of corbelled construction: Borut Juvanec 8
  Gordes, Haute Provence (the Village of the Bories): Guy Barroul 12
  Trulli of Italy: Wikipedia 14

Corbelled buildings in South Africa: James Walton
  Buildings of the stock farmer 15
  The stone masonry tradition of the Karoo 23
  Corbelled stone hut settlements in the Free State and Lesotho 24

Nieuweveld farms that tell a story: Judy Maguire 27

Preliminary list of sites 30

Brief notes on other corbelled structures 62

Directions for further for research 64

References and Resources 68

Maps 69

Cover illustration
Linked corbelled dwellings, drawn by James Walton in 1964

The Vernacular Architecture Society of South Africa is not responsible for authors’ opinions or factual errors contained in contributions.

© Vernacular Architecture Society of SA
Preface

This edition of VASSA Journal was compiled by Pat Kramer and Antonia Malan from previously published sources, SAHRA files, the VASSA archive and articles on the internet. It was inspired by a weekend excursion to Loxton in September 2006. We would like to thank the team who organized the excursion, the many people who contributed encouragement, words, ideas and photographs for this issue, and to acknowledge the enthusiastic hospitality of the owners and occupants of the places we visited.

This partial collection of bits and pieces is intended as a preliminary contribution towards promoting (provoking?) further and systematic research into the stone built structures of southwestern Africa. James Walton, an indefatigable detective and chronicler of the places that people built, carried out a survey of the corbelled buildings of the Karee Berge as long ago as 1960. There has been nothing comparable published since, and he was by no means able to record all the corbelled buildings let alone the other stone-built dwellings, outbuildings, kraalen and boundary walls that stretch for kilometers across the landscape of central South Africa. (His archive forms a special collection at the J.S. Gericke Library, Stellenbosch University.)

These stone-walled structures were constructed by intrepid people for practical purposes, they gave shelter as family homes to generations of farmers and farm-workers, and even as ruins today they are surrounded by stories and memories. Since the Vernacular Architecture Society is a voluntary group, we depend on the generosity of our members and contributors to find the time, skills and wherewithal to speak to people, do research and produce material for the journal. Most of us live in or near Cape Town, far from the Karoo, so we decided to produce this journal particularly for owners and occupants and builders. We’d like to encourage you to take a well-deserved pride in your properties and homes, to make a record of the structures and capture their history (see section on further plans for research). There are many people living in the area who are fascinated by the vernacular architecture of the region and we confidently expect their help too.

The last section outlines some current projects and discusses further plans and ideas for research. We hope that in a year’s time we will have enough new material to produce a second issue on previously unrecorded corbelled buildings. We rely on you, our readers, to tell us about gaps in the sources we have found so far, to provide descriptions of the missing places and copies of publications and images, to share your knowledge, and to think of ways of funding and leading some focused work in the region.

To avoid repetition and to save space we have abbreviated names of the photographers, and we have cited just the author’s initials and date as references to excerpts (the full reference can be found at the end of the relevant article or in the final section):

<table>
<thead>
<tr>
<th>AM</th>
<th>Antonia Malan</th>
<th>JS</th>
<th>Joy Saxon</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP</td>
<td>André Pretorius</td>
<td>JoS</td>
<td>Joanna Sharland</td>
</tr>
<tr>
<td>BNM</td>
<td>Brent Naude-Moseley</td>
<td>JW</td>
<td>James Walton</td>
</tr>
<tr>
<td>CB</td>
<td>Celeste Scholtz Burger</td>
<td>MF</td>
<td>Mary Floyd</td>
</tr>
<tr>
<td>GF</td>
<td>Gawi Fagan</td>
<td>NA</td>
<td>Nigel Amschwand</td>
</tr>
<tr>
<td>HF</td>
<td>Hans Fransen</td>
<td>PK</td>
<td>Pat Kramer</td>
</tr>
<tr>
<td>JK</td>
<td>John Kramer</td>
<td>SM</td>
<td>Steve Moseley</td>
</tr>
<tr>
<td>JM</td>
<td>Judy Maguire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We have not converted the old measurements. For those of you who attended school after 1969:

1 mile = 1,6093 kilometres
1 yard = 0,9144 metres
1 foot = 12 inches = 30,48 centimetres = 305 millimetres
1 inch = 25,400 millimetres
# SUBJECT

**NAME OF BUILDING/FARM/AREA:** Tjikolos Farmhouse  
**DATE OR PERIOD OF ERECTION:** 1857 inscribed over doorway

**OWNERS**

- **NAME:** Mr & J. Botha  
- **ADDRESS:** Coteeyes, RO 4027, Ceres

**HISTORICAL**

**ADDRESS:**  
**NUMBER & STREET:** Ceres  
**TOWN/DISTRICT:** Ceres  
**PROVINCE:** Cape

**PRESENT USE:** Abandoned

**PREVIOUS USE/S:** Farmhouse

**ERF/STAND/FARM NO:**

**TELEPHONE:**

**NMC REFERENCE:**

---

**2. PHOTOGRAPHS**

At least one clear photograph illustrating the important features of the building.
Corbelled buildings: an overview

Pat Kramer

The corbelled style of building is not uniquely South African, nor is it a relatively new architectural development invented by the trekboers of the 18th century. Archaeologists have shown that corbelled buildings have a long history, dating back 6000 years. The circular settlements at Skorba, Malta, for example, are dated at 4850BC. According to Juvanec (2001), corbelling is the second construction principle after the lintel. In his opinion, building gigantic megalithic buildings required extremely heavy stone, hard labour but very little brain work; corbelling, on the other hand, required lots of carefully selected stones and precise thinking for the exact work, but not as much heavy labour.

Corbelled buildings are found right across Mediterranean Europe – Greece, Croatia, France, Spain and Italy. There are many examples in Ireland, especially south western Ireland, where they are associated with monks who are credited with taking this architectural form to Scotland and the United States.

Although there are stylistic differences among these buildings, ranging from corbelled huts which resemble a pile of stones (bombo of Tomelloso, Spain) to the picturesque pointed-roof houses of Trulli in southern Italy, most of the European corbelled houses typically have an inner and outer layer of stones, the hollow between being filled with smaller stones or rubble. These buildings also often retain the corbelled dome shape inside, while the outer layer is often constructed in a different shape.

In South Africa, corbelled buildings appear to fall into two groups, both described by Walton (1951, 1960): the buildings of the ‘Ghoya’ people who settled in the eastern Free State and southern parts of Gauteng and Mpumalanga in the 17th century, and the buildings generally attributed to the early trekboers in the Carnarvon/Loxton/Fraserburg area of the Karoo. The South African corbelled buildings differ from those of the northern hemisphere in that the walls are only one layer of stone thick and they appear to be an adaptation to isolated environmental conditions in which stone is plentiful, but trees are scarce, if not totally absent.

Walton had studied the corbelled huts of Italy, France and Britain and he related his feelings on seeing the corbelled huts on Stuurmansfontein: “Even at a distance the giant stone bee hives were a strange and fascinating sight: one which I never expected in South Africa and almost as remarkable as the beehive villages of Alberobello, Gordes or Tel Bisseh” (Walton 1960).

Juvanec (2003) has an interesting description of corbelling as a construction technique:

“Corbelling is a construction system in which one stone lies above another, with the position of the upper stone not exceeding its centre of gravity. This rule however applies only to two stones. A third stone must not exceed the centre of gravity common to all three. If the ground plan is a small circle, or if a counterweight is applied on the rear part of the stone, then the structure works.”

Does this mean that this style of building placed size constraints on the corbelled buildings of the Karoo? Could those puzzling projecting stones, often described as aids to building or maintaining the building, possibly also play a role as counterweights?

How did this building style develop in the isolated interior of South Africa? No-one knows for sure. Walton was of the opinion that someone who had seen European corbelled huts introduced the idea, whereas Ferreira (1986) thinks that the early trekboers were indeed the originators of the idea – “uitmuntende voorbeelde van ‘n eie Suid-Afrikaanse volksboukuns”.

Despite the fact that over 40 years has passed since James Walton wrote Corbelled Buildings of the Karree Berge (1960), not much more research has been done on these buildings. Five were declared National Monuments in the 1960s (Arbeidersfontein, Gorras, Stuurmansfontein,
Grootfontein and Schuinshoogte) (Oberholster 1972), so they now have the status of Provincial Heritage Sites. For the rest it has been left to interested farmers, private individuals and societies such as VASSA to conduct research and keep records of sites and their condition.

References


Fig. 249 SteurmanSFosteen, Caernarvon

A small corbelled shelter reconstructed at Kilmartin House Museum, Argyll, Scotland [AM 2006].
VASSA excursion to Loxton, September 2006

Looking, listening and recording

Joy Saxon and Henk van den Bergh [PK 2006].

Gys van Wyk and Vernackers at Gorras [JK 2006].

Pat Kramer [JK 2006].

Celeste Scholtz Burger [PK 2006].

Rosemary Shand at Osfontein [JK 2006].

Mary Floyd at Droogeputs [NA 2006].
Corbelled buildings in Europe

- Barracca in Spain
- Both in Scotland
- Cabanne and borie in France
- Clochain in Ireland
- Girna in Malta
- Kuja in Slovenia
- Kummol in Greece
- Kuzan in Croatia
- Penetta in Sardinia
- Trulli in Italy

Vaulting, facing and infilling as components of corbelled construction

_Borut Juvanec_¹

Last summer I went to the region of Tomelloso, in Central Spain, to investigate about the _bombos_, quaint stone shelters that dot the vineyards there. They were quite an impressive sight. But above all, they enabled me to see the make-up of corbelled construction in a different light. Seeing a heap of stones, I thought it was a shelter. But it turned out to be only a stone heap. Seeing another stone heap, identical to the first one. I was surprised to find that that one was a shelter. How could that be?

*What looks like a stone heap but is in fact the rear part of a bombo.*

**The way I see corbelled construction**

*First point:* dry stone walling (i.e. without mortar) can be found in areas where surface stone is abundant and fields have to be cleared of stones.

*Second point:* corbeling is a constructional system in which one stone lies above another, with the position of the upper stone not exceeding its centre of gravity. This rule, however, applies only to two stones. A third stone must not exceed the centre of gravity common to all three. If the ground plan is a small circle, or if a counterweight is applied on the rear part of the stone, then the structure works. Besides playing its normal role, the counterweight can act as insulation from physical elements. While on house roofs stone normally serves as roofing material, in stone shelters all three functions (counterweight, insulation and roofing) coexist.

Third point: corbelled construction involves the interplay of three components. First there is the corbelled vault proper, theoretically circular in plan. Then there is the facing or revetment, made of big stones. And finally, the infill thrown in between the two skins (corbelling and revetment) or over the roof. The infill can be waste stone from cutting, or fine stone rubble. Of course this solution is possible only in areas with little rain.

**Corbelled construction in theory**

![Diagram of corbelled construction](image)

In corbelled construction two “skins” are present: the vaulting and the revetment.

Although circular at the top, the corbelled vault is not necessarily so at its inception (depending on whether it is for men or for animals). The angle of the slope in corbelled vaults is 60 degrees on an average, which means that the height of a vault is equal to the square root of three by two, if the baseline is equal to one.

The revetment can follow the corbelling closely, or it can be vertical in the base walls. It plays the role of outer wall as well as roofing material.

1 - Corbelled construction in real life

![Image of trullo](image)

A trullo, near Alberobello, Puglia, Italy

Corbelled vaulting and cladding joined together can be found in the roof of the trullo. The roof is constructed of flat stones inside and outside. The revetment overlays the vault itself. The roof is a double-skin affair, conformant to the theory of corbelling.

2 - Pagliaddiu at Santu Pietru, Corsica (France)

In the corsican pagliaddiu, corbelling starts at shoulder height, above the vertical wall. The revetment is vertical up to the eaves of the roof, the latter being covered with big stone slabs from the roof top down. Alternatively, the roof may be covered with earth and grass. Instead of running parallel to the corbelled vault, the revetment diverges away from it.
The typical girna boasts a perfect corbelled vault and a nearly vertical revetment, of the height of a man reaching upwards (approx. 2.20 m). This corresponds to the height of the inner room, covered by a large slab. The roof is made of fine stone rubble thrown over the vaulting, with a few stones piled up at the apex. Some infilling material is also to be found between the corbelling and the cladding.

4 - Bombo near Tomelloso (Central Spain)

In the Spanish bombo, the inner vaulting is classical corbelling (with walls plastered inside with white lime - as in living rooms - and with brown clay - as in places for livestock - as far up as a man can reach - the upper part of the corbelled vault being left unplastered). The outer revetment is simply the wall round the bombo. The infill is made of stone rubble thrown into the interval between vault and revetment.

The exterior shape of the bombo follows the sliding angle of the rubble from the apex of the shelter down to the top of the wall. A bombo will have as many tops as it has rooms, and vice versa. The infill may represent ten to twenty times as much material as the vault itself. The top is sometimes adorned with a vertical stone, sometimes covered with white lime.
Some bombos are still in use, as is shown by the white lime covering round their entrance or on all walls. Even the rubble may be painted white.

Findings
Corbelled construction involves three elements: the vaulting itself, the revetment and the infill.

The vaulting is mostly made of cut, rough-cut or unhewn flat stones. The revetment, which also serves as counterweight, is made of big stones in the base part, and flat stones in the upper part. The infilling of waste stone or rubble occupies the space between the two, and sometimes even covers the roof. In some cases, a pile of big stones may crown the top.

Double-skin construction (together with hewn stones) is common in the trulli of Southern Italy, and in the Swiss crots (1). Where the revetment is not close to the corbelled vault, there is room for an infill of small stones or rubble, as in the pagliaddis or paillers of Corsica, France (2). The giren of Malta and some trulli in Puglia have a roof covered with stone rubble (3). The very wide wall of the bombo leaves ample space between corbelled vault and outer revetment for throwing in stone rubble. While in the first three examples the revetment defines the shape of the shelter, in the case of the bombo the appearance is that of a heap.

Bibliography
Egenter, Nold, Architectural Anthropology, Structura Mundi, Lausanne, 1992
Fsdni, Michael, Girna, Dominican Publication, Malta, 1992
Geist, Henri, Groupes de structures en pierre sèche, ARCHEAM, 2, Nice, 1995
Juvanec, Borut, Shelters in Stone, research, Ljubljana University, Ljubljana, 2001
Juvanec, Borut, Six Thousand Years of Corbelling, UNESCO Congress, Paris, 2001
Juvanec, Borut, Dry Stone Story, short version, Ljubljana University, Ljubljana, 2002
Juvanec, Borut, Arquitectura en Piedra Seca, Universidad Politecnica, Valencia, 2002
Lassure, Christian, Eléments pour servir à la datation des édifices en pierre sèche, ERAV, 5, CERAV, Paris, 1985
Pedrero Torres, J., Inventario de Los Bombos del término municipal de Tomelloso, Ediciones Soubriet, Tomelloso, 1999
Rohlfs, G., Primitive Costruzioni a Cupola, Olschi Editori, Firenze, 1963
Tiret, André, Stabilité des coupoles en pierre sèche, ARCHEAM, 7, Nice, 2000
Zaragoza Catalan, A., Arquitectura Rural Primitiva en Seca, Col leccio Politecnica, 10, Valencia, 2000
The group of dwellings at Gordes is without doubt spectacular and mysterious. Characteristic of life on a plateau, these constructions required the use of a considerable volume of stones – locally known as *lauses* – gathered on the spot and often the product of a centuries-old stone extraction, and above all the product of a technique much more skilful than may be believed at first sight. It is indeed such an art to assemble dry stone, without an arch or a scaffold to construct false corbelled vaults, with only the help of a hammer, that up to the 20th century, there were many masons in Provence that were specialized in such constructions and whose multiple and varied works are dotted around the whole region. These are building techniques typical of Mediterranean countries, which were apparently passed on down the generations from the end of the Neolithic Age (about 2000 years before Christ); this fact has now been proved in the South of France, where recent searches in the scrubland around Montpellier have uncovered real prehistoric villages including circular or oval constructions originally covered with false corbelled vaults. Single *bories* were used as temporary shelters, lofts or stores for agricultural tools whereas clusters of interconnected *bories* were used as rustic homes sometimes equipped with benches, alcoves, cupboards and chimneys. These buildings, grouped around threshing areas or cattle pens are sometimes fortified, surrounded by walls with loopholes to protect the inhabitants, animals and crops from bandits and the wolves which at that time still infested the area.

Most of the *bories* around Gordes would appear to date much later than the Neolithic remains found elsewhere and it seems that their construction stretched from the 14th to the 18th century.

The *bories* were built on the principle of the false corbelled vault which did not require any coffering. The stones were laid dry, without mortar, and inclined towards the outside in order to favourise the running off of the rain and ensure watertightness. The corbelling or extruding of the upper layer over the lower layer can start from the base of the construction, but we can most often observe vertical sides up to a certain height. From the corbelling, long stones were used to act as a counterbalance to the cantilevered part. Before reaching the point of loss of balance, and when the opposite walls were no more than 50 to 70cm apart, stone slabs were placed over to link them, forming a lid and ceiling. They themselves were covered with several layers of flat stones and the *borie* was finished with a row of slabs as roofing.

The dwelling house *bories* generally include a flue and are coated on the inside with rough mortar which prevents air and insects getting in. They almost always include a first floor, and sometimes a half-floor higher up, the size of a bunk – in the heat of the chimney. The upper floor is made of stone slabs of uneven size resting on beams placed widthways across the building. These beams are mainly holm oak, sometimes poplar, not squared off, with their fork and even their bark; we can make out the notches for the ladders which gave access to the upper floor. On the ground odd sized stone slabs level off the floor, or more simply the bare rock has been kept with its slope and natural relief. The original doors were not fixed by hinges, but were put together so that their single upright frame pivoted in holes in the lintel and in the threshold, thus economizing on materials. Stone and wood were found on the spot.

---

2 Head of research at the CNRS in France (Centre National de la Recherche Scientifique / National Centre for Scientific Research). First published in 1985 as ‘Bories de Gordes [Vaucluse]’ in *Lithiques, du minéral au mental*, no.1: 61-70.
Gordes, France [Barroul].
A *trullo* (plural, *trulli*) is a traditional Apulian stone dwelling with a conical roof. The style of construction is specific to the Itria Valley in the Murge area of the Italian region of Apulia (Puglia). They may be found in the towns of Alberobello, Locorotondo, Fasano, Cisternino, Martina Franca and Ceglie Messapica. *Trullo* is also a typical building in other areas of Apulia, such as the National Park of Alta Murgia.

*Trulli* were generally constructed as dwellings or storehouses. They were used as temporary shelters by shepherds or farmers. Traditionally they were built without any cement or mortar. This style of construction is also prevalent in the surrounding countryside where most of the fields are separated by dry-stone walls.

The roofs are constructed in two layers: an inner layer of limestone boulders, capped by a keystone, and an outer layer of limestone slabs ensuring that the structure is watertight. Originally, the conical structure would have been built directly on the ground, but most of the surviving structures are based on perimeter walls. Atop a *trullo*’s cone there is normally a pinnacle that may be one of many designs, chosen for symbolism. Additionally, the cone itself may have a symbol painted on it. Such symbols may include planetary symbols, the *malochio* (evil eye), the cross, a heart, a star and crescent, or quite a few others.

The walls are very thick, providing a cool environment in hot weather and insulating against the cold in the winter. The vast majority of *trulli* have one room under each conical roof: a multi-roomed *trullo* house has many cones representing a room each. Children would sleep in alcoves made in the wall with curtains hung in front.

There are many theories behind the origin of the design. One of the more popular theories is that due to high taxation on property the people of Puglia created dry wall constructions so that they could be dismantled when inspectors were in the area.

Today the surviving *trulli* are popular among English and German tourists and are often bought and restored for general use. However, anyone wishing to restore a *trullo* needs to conform with many regulations as *trulli* are protected under the United Nations Educational, Scientific and Cultural Organization (UNESCO) world heritage law.

---

Sheep Farms

At the beginning of the eighteenth century most farmers found it difficult to earn a reasonable livelihood, largely due to the fact that they had accumulated stocks of grain and wine for which there was no market. Even when the monopolies of the Government officials were removed the local market was still saturated and the overseas outlets were limited because of the poor quality of locally produced wines and the high price of Cape wheat which could not compete with that from Batavia and elsewhere owing to the high cost of transport.

As a result, many wine and grain farmers turned to stock farming. Prices of meat were comparatively high and less capital was required than for grain and wine farming. Several farmers had flocks of over five hundred sheep and sheep kraals began to figure on the plans accompanying deeds such as that of Kromme Rhee. A number of attractive early sheep kraals have survived, such as those at Fleurbaai and Hazendal.

But the growth of stock farming brought with it several attendant evils, notably overgrazing of the available pastures, and in 1750 it was decided by the Company that settlement in the areas of Cape, Drakenstein and Stellenbosch should be restricted. Accordingly many stock farmers looked for pasturage for their flocks and herds farther afield. This was facilitated by the fact that as early as 1703 the Government granted permits to farmers to graze their stock on outposts beyond the area of settlement. Such grazing grounds were known as loan-places (leeningsplaats).

Under the loan-place system of tenure the only right of the farmer was to graze his livestock. He had no title to the ground and he could not therefore sell or bequeath it. But if he erected a house and other buildings, known as the opstal, he was allowed to sell the property to the Government or to another tenant who was granted a permit.

By 1750 several stock farmers had made their loan-places into almost permanent farmsteads, and, as a result, settlement at the Cape was extended to the Hantam in the north and Mossel Bay in the east. There was no limit to the number of loan-places which a stock farmer could occupy provided that he paid the necessary fee, and many farmers moved from one loan-place to another at different seasons of the year. For instance, stock farmers who were granted loan-places in the Cold Bokkeveld moved during the cold winter months to pastures in the Karoo and this system of transhumance has persisted until the present day.

Several travellers in the early nineteenth century encountered stock farmers moving with their flocks from their loan-places in the Cold Bokkeveld or the Roggeveld to their winter pastures in the Karoo. In 1811 William Burchell, on his journey northwards through the Karoo, encountered several stock farmers who were occupying winter pastures. He drew and described in some detail one such sheep farm occupied by Veldcornet Gerrit Snyman, a short distance north of Windheuvel and near where the present roads from Ceres and Laingsburg meet. On 24 July he wrote, 'When daylight disclosed the place to our view, we beheld a miserable abode, corresponding exactly with the unfavourable description which had already been given me: a

small oblong low hut built of rough bits of rock; rudely thatched with reeds and sedge; having no window, excepting one small opening covered with white linen, instead of glass; and the doorway but half closed with a clumsy panel of reeds. The inside corresponded with the exterior, and was divided into two apartments, serving for sitting-room and bed-room, which last was also the store-room. No other furniture was to be seen, than a table and three chairs, or rather stools.'

'Near to this hut', continued Burchell, 'were two outbuildings, which at a little distance might be mistaken for hay-cocks; one of them was a storehouse, or barn, as it might be considered, and the other, the kitchen. In this the fire was made in the middle, on the ground; and the smoke escaped either out at the door, or through the ill-thatched roof. Every part of the hut within, was stained like ebony, of a glossy jet-black, the effect of long-continued wood-smoke. At a little distance from the building, or on the werf, as the space immediately surrounding a colonist's dwelling is termed, was a very large sheep-fold, hedged round with branches of Karro-thorn.'

'In common with all the boors of the Roggeveld, Snyman's whole property consisted of sheep and horses. Of the former, he possessed a flock of twenty-five hundred, exclusive of the lambs. This, he told me, was considered a small number; as a boor with five thousand could scarcely be called affluent.'

'Very little corn being grown in that district, they are accustomed to live almost entirely on mutton. While I remained at Snyman's they had three meals of mutton every day; at half-past eight in the morning, at half-past one and at eight o'clock in the evening. During the latter part of this time, they had no bread; yet, as a substitute, and by him regarded as a rarity, he produced some potatoes grown on his farm in the Roggeveld, which were as good as any I had seen in Europe. At this time the family had no other drink than water or coffee.'

Many of the sheep-farmers chose to stay permanently on their winter loan-places in the Karoo. Eight miles north-east of Veldcornet Snyman's loan-place Burchell halted at Gerrit Vischer's. 'This place is a permanent residence, and consequently possesses a better house than the temporary cattle-places we had hitherto seen in the Karoo. An excellent garden, stocked with fruit trees and vegetables, and a constant supply of water, gladden the eye of the traveller, after passing the dreary waste. I purchased some fine lemons, out of his garden, at the rate of a hundred for six dollars.'

The permanent settlement by sheep farmers of the Roggeveld and the Karoo was no doubt facilitated by the decision of Sir John Cradock in 1813 to abolish the system of loan-places and to allow the occupiers to convert their farms to perpetual quitrent holdings, so affording them security of tenure. Although, due to the lack of surveyors, there was often a wait of up to twenty-five years before the property could be surveyed and a deed drawn up, yet, nevertheless, the farmer was assured of having some title to his holding and was therefore able to erect more permanent buildings on his farm. And so the settlement of the Karoo slowly extended the occupation of the Cape by the 'colonists'.

[Text cut]

As the sheep farmers moved north of Fraserburg, into the districts of Carnarvon and Williston, they encountered a stony, treeless, semi-desert country. Although timber and roofing materials were scarce, there was, however, abundant stone which could be easily split into slabs and broken into conveniently sized pieces. With these, the trekboeren built corbelled stone beehives, which were ideally suited for the climate and conditions of that part of the country, for they provided cool shelter in summer whilst being warm in winter and they afforded adequate protection against the peoples who roamed about that area.

Corbelled buildings very similar to those built in the Fraserburg-Carnarvon-Williston districts are widely distributed throughout the Mediterranean countries, particularly in Jugoslavia, southern Italy, southern France, Minorca, Spain and Portugal, as well as in western Ireland. It
seems very probable that some itinerant builder from a Mediterranean country, possibly Portugal, wandered inland from the west coast and, seeing the easily quarried stone, decided to build a corbelled dwelling. The Khoi, who helped him, learned the technique and from then on they were able to build corbelled houses for the trekboeren. One such building was erected by a Khoi on the farm Vischgat as late as 1960.

It is evident that the distribution of corbelled dwellings in the Karoo was the result of diffusion from a single point, as all the buildings exhibit the same features, whereas, if they had been the result of local experimentation they would have shown differences as the technique developed. Furthermore they exhibit many of the characteristics of the Mediterranean corbelled dwellings.

[Text cut]

Corbelling, which is by no means an easy technique to master, consists of building in courses which overlap until the walls converge at the apex to give a beehive shape. In the Middle Karoo the walls, which are some 78cm in thickness, rise vertically to a height of 1.8m or 2m and then slope in more sharply towards the apex. The final opening is closed by a large flat stone slab or occasionally by a series of slabs if the opening is large. Frequently the vertical walls are built of larger blocks of stone whilst thinner slabs, 5-7cm thick, are used for the upper corbelled portion.

The courses of projecting stones placed at intervals around the roof are a noticeable and characteristic feature. There are usually three such courses although in some cases there are only two and in the larger hut at Stuurmansfontein there are four and at Biesiespoort they are scattered over the whole surface, looking like a hedgehog. These stones serve as steps and as anchors for scaffolding and, were no doubt used by the builder when building the hut, but they are still useful when repairs are being carried out or when the building is being whitewashed.

Facing the entrance is normally a narrow window opening which was originally closed by a wooden shutter. Many farmers informed me that these windows were deliberately made small in case of attack by the San bowmen who lived in the district in fairly large numbers. Support for such statements is afforded by the fact that in some cases the openings breach the wall obliquely so that an arrow passing through the opening would merely traverse a chord of the circle and would not enter the centre of the living space.

There is frequently a small keeping-hole in the wall and usually a number of beams which are chords stretching across arcs of the wall. These were used for drying meat, hanging clothes and other similar purposes. In almost every hut horns of cattle or sheep or antlers of buck were used as wall pegs on which to hang guns, powder flasks, hats and bridles. At Konka and Schuinshoogte a loft covered part of the floor and provided a sleeping place, reached by a ladder.

The floor was usually a misvloer, that is a clay floor smeared periodically with a mixture of cow dung and water. In some cases, as at ‘Tkokoboos, the misvloer was coated with a mixture of ox blood and fat and was polished with a smooth stone until it shone like glass.

Very few of the early corbelled dwellings had any form of internal fireplace and cooking must have been done outside behind a skerm, but the circular room at De Puts has a small raised hearth and similar hearths are to be found in one or two such houses.

Although the majority of the corbelled buildings in the Karoo have a circular plan, there are quite a number which are square or rectangular in plan. These appear to be generally later than the circular buildings but at Konka the rectangular room was built before the adjoining circular room. Excellent examples of rectangular corbelled buildings have survived at Klipkolk, Arbeidersfontein and elsewhere.

[Text cut]
On many of the Karoo sheep farms a single corbelled building was erected first and other accommodation was added later. The methods of extending the sheep farmer's homestead varied considerably. The simplest way was to build a second corbelled room and connect it to the first, as was done at Konka. There, the rectangular room was built some time before 1885 by a man named Winkus and the circular room was added towards the end of the last century. An old man named Redelings informed the present owner that, when a young boy, he helped to build the circular room. A doorway was broken through to afford passage from one room to the other but the outside entrance to the circular room was made much later.

T'Kokoboos has three circular corbelled rooms, now linked by later rectangular rooms. The first of the corbelled rooms, which bears the date 1851 over the entrance, has an internal diameter of 5,1m and three courses of projecting stones. It is stated that this hut was built by the original owner and a coloured labourer in fifteen days. The two later corbelled buildings are more squat in appearance with flat tops and only two courses of projecting stones.

Several sheep farmers’ homesteads had three corbelled rooms linked together but not always interleading. Eendefontein has three circular corbelled rooms, each with its own entrance. The cluster appears to have originated as two separate corbelled huts which were later linked by a third. Two of the huts have an internal doorway affording access from one to the other. The third has only an outside door.

Aasvogel Vlei has two homesteads made up of corbelled rooms and later flat-roofed rooms. Each started as a single circular corbelled building. In one homestead a square corbelled room was added to the circular room and the two were linked by a smaller square corbelled room. Entrance to the two square rooms was gained through a doorway in the central room. As at Eendefontein, the circular room has only an outside door. Flat-roofed rooms with mud brick walls were later built around the three-roomed corbelled nucleus, but when the homestead was abandoned the mud brick walls collapsed and only the corbelled stone rooms remained.

The linking of two corbelled rooms by a roofed central room to make a three-roomed unit was a method quite widely adopted, as at Eendefontein and Aasvogel Vlei, where the central room is also corbelled.

At De Puts, however, the space between the original circular corbelled room and the later square corbelled room was enclosed by connecting walls and the irregular space so produced was covered by a flat brakdak. Each of the three rooms has its own entrance and there are no internal doorways affording passage from one room to the adjoining room.

During the fourth quarter of the last century the sheep farmers of the Karoo reverted to more conventional rectangular dwellings. At first these had flat brak roofs but when corrugated iron became more easily available this roofing material was widely used. The reason for this development is no doubt that the area had become more highly populated and more accessible, so that building materials, particularly timber, could be obtained for roofing and for making windows and doors. The need for protection from San bowmen also became less, as these nomadic hunters were pushed into more remote areas.

Although corrugated iron did not afford the same protection from the hot summer sun nor the same warmth in winter as the corbelled building or the brak roofed dwelling it provided cover for a larger living space and it required less in the way of maintenance. At Gorras, on the road between Carnarvon and Williston, the sheep farmer's dwelling was a single circular corbelled building with the usual internal diameter of 5,4m. When the farmer decided to enlarge his dwelling, corrugated iron was available and so he built a square extension with a corrugated iron roof. The square addition was divided into two rooms but it and the circular corbelled building had separate entrances.

The change from the early corbelled buildings to rectangular flat-roofed dwellings and finally to corrugated-iron pitch-roofed dwellings can be seen on several of the old sheep farms. A fine
and well-preserved example of such a development is provided by the homestead at **Stuurmansfontein**, which consists of two linked circular corbelled rooms to which were added a flat-roofed room on one side and a pitch-roofed room on the other side. Doorways were made to provide intercommunication between the various rooms.

[Text cut]

Built into the wall of the *trapvloer*, opposite the entrance is a corbelled stone hut having an internal diameter of 4m. ... Similar *trapvloers* with associated corbelled storage huts may be seen at **Riet Braak**, **Sterling** and **Driefontein**. The wheat was ground in a hand mill.

Several early Karoo sheep farms have survived almost unchanged until recently. Such a farm is **Vischgat**, situated about thirty kilometres west of Loxton. It was possibly a loan-place held by Gabriel Gerhardus Jacobs for whom it was surveyed in 1830, but it was not registered as a quitrent holding until 1838, when it was granted to Gabriel Johannes Jacobs. After the death of Gabriel Johannes Jacobs in 1860, Vischgat was transferred to Martinus Jacobus Krugel, whose widow in 1865 sold the farm in two parts, Vischgat and Davidskolk. The neighbouring farms along the Brakriver, Vanaswegensfontein and Slingersfontein, were both registered as quitrent holdings before 1830.

[Text cut]

A still finer example of an early sheep farmstead is that of **Driefontein**, situated in De Rante, near Hondefontein, on the old road from Sutherland to Fraserburg. Apart from the fact that some of the buildings have been recently roofed with corrugated iron, the entire farmstead has been little changed since the buildings were first erected and, although now unoccupied, every detail of such an early sheep farm has been carefully preserved.

On 12th March 1764, **Driefontein** in Nieuweveld was granted as a loan-place to Henderik van Aswegen, who held several loan-places in the Karoo. It was transferred eventually to Petrus Gerhardus Marais, who applied for a perpetual quitrent grant, and the farm was surveyed in 1830 but, as in the case of Vischgat, the grant was not made until 1838. For this 12,492 morgen sheep farm Marais was ordered to 'punctually pay, or cause to be paid, at the expiration of every twelfth month the sum of four pounds sterling'. On the death of Marais, Driefontein passed to his son-in-law, Nicolaas Olivier and another, and it remained in the hands of the Olivier family until well into this century.

The builders of **Driefontein** made full use of the local stone, which was quite easily dressed into flat slabs. Every building, including even cooking *skerms* and outside tables, was constructed in stone. The dwelling is a rectangular stone building with a pitched roof which was formerly thatched but is now covered with corrugated iron. The rooms have an internal width of only 3m, which is almost the same as the first house at **Hondefontein** and **Vischgat**. Probably this was the width which local timbers allowed at that time.

[Text cut]

**References**


**Wolwehokke**

Although the early sheep farmers built high stone-walled kraals in which to house the sheep at night and herdboys slept in huts either within the kraals or adjoining them, they continually
suffered losses through the depredations of leopards, hyenas and jackals. In order to ensnare these animals the farmers built traps (wolwehokke) which were similar in construction throughout the country, being stone huts with low entrances.

I have not met a farmer who actually used a wolwehok and their descriptions of the method of operation vary, but Thomas Pringle has left an account of the traps which were built at Glen Lynden in Baviam's Kloof in 1820. 'I have cursorily noticed in my diary', he wrote, 'the depredations of the hyenas in our folds, and our success in catching them in traps. For this contrivance we are indebted to the Hottentots. The trap was built of large loose stones, precisely in the form, and on the same principle, as the common mouse-traps to be seen in England, with a hanging door, also of stone, sustained by a cord, and baited at the farther end with a dead dog or the entrails of a sheep. By this simple contrivance we speedily entrapped several of the depredators that had so much harassed us; and, after having killed them with spears, their carcasses were thrown out on the open plain.'

'The leopard, like the hyena, is often caught in traps, constructed of large stones and timber, upon the same principle as a common mouse-trap. When thus caught he is usually baited with dogs, in order to train them to contend with him, and seldom dies without killing one or two of his canine antagonists.'

A well-preserved example of a wolwehok is that situated near the famous Heerenlogement cave in the Vanrhynsdorp district. It fell into disrepair but it was completely restored about fifty years ago and it was proclaimed a national monument in 1939. It is almost rectangular in plan but it has rounded corners and the rubble walls stand vertically to a height of about a metre. On the inside, thick stone corbels stretch across the corners and carry the corbelled roof of thinner slabs which are further supported by three iron girders, although it seems likely that these were introduced only when the wolwehok was restored.

It is entered through a small opening in one end and at the opposite end an iron peg was driven into the wall. The bait was placed around the peg and over the end of the peg was fitted a loop at the end of a long riempie (thong) which stretched to a dropstone and held it suspended over the entrance. As the hyena tugged at the bait it dislodged the loop of the riempie from the end of the iron peg and thus released the dropstone which dropped down and closed the entrance.

References

Soap Houses
On some of the Koue Bokkeveld and Karoo farms one may still find small unpretentious-looking buildings which today serve as fowl-houses or stores but which formerly played a much more important role. They are the buildings in which farmers’ wives and their servants made soap, the sale of which made it possible for many of them to survive on their remote farms.

When Henry Lichtenstein journeyed through South Africa at the beginning of last century he commented, as did several other travellers, on the seasonal transhumance of the stock farmers from the Bokkeveld to the Karoo. 'As. soon as in the cooler season the rains begin to fall', he wrote, 'the colonist with his herds and flocks leaves the snowy mountains and, descending into the plain, there finds a plentiful and wholesome supply of food for the animals.'

'Before the inhabitants of the mountains descend into the Karoo, their fields and gardens are put into winter order. The children and slaves are sent to gather the young shoots of the Channa bushes (Salsola aphylla and Salicornia fruticosa). The ashes of these saline plants produce a
William Burchell in 1812 reported a similar soap industry in the Agter-Sneeuwberg, where 'the family, with their slaves and Hottentots, being fed with mutton at every meal caused a daily consumption of two sheep, the fat of which was considered almost equal in value to the rest of the carcass, by being manufactured into soap. It was, as they informed me, more profitable to kill their sheep, for this purpose only, than to sell them to the butchers at so low a price as a fixed dollar or less, and even so low as five schellings. I saw a great number of cakes of this soap, piled up to harden, ready for their next annual journey to Cape Town: whither they go, not merely for the purpose of selling it, but of purchasing clothing and such articles are not to be had in the country districts, but at an exorbitant price.'

The part which soap manufacture played in the sheep farmer's life is well summarized by William Talbot. 'Sheep's tail fat', he wrote, 'was widely used in cooking and at the table; for ships' stores it was preferred to butter. In the remoter districts, however, the chronic shortage of casks and the distance from markets made tail fat as such unsaleable. Much of it was, therefore, combined with the ash of Karoo bushes, particularly the brak ganna (Salsola aphylla) to make soap or, mixed with the harder goat tallow, to make candles - both products economically transportable from the frontier, especially when part of the wagon load could be made up of more valuable products of the hunt such as ostrich feathers, ivory, horns and skins. Therefore the Cape sheep, whose inherent suitability to the Karoo had made the initial advance into the arid regions technically possible, continued in the second half of the eighteenth and the first decades of the nineteenth century to provide the major economic incentive to advance the frontier beyond the regions that could adequately supply the market with slaughter stock.'

Soap was often made behind the shelter of a skerm and it was quite a lengthy process. The brak ganna bushes were burnt and the ash was soaked in water to produce the lye, which was decanted from the ash. The fat was put in the soap pot and covered with water. This was heated and the lye was added, the mixture being stirred with a long stick. The heating continued for ten days or more, fresh lye being poured in from time to time, at the end of which time salt was added and the soap rose to the surface. This was cut into bars and stacked to harden.

On several sheep farms a small building was erected in which to make soap. An excellent example of such a soap house is that at De Puts, in the Carnarvon district.

The decline of the rural soap industry was largely brought about by Leblanc's new process of manufacturing caustic soda from brine and by the use of palm oil instead of fat, which resulted in the development of the large Merseyside soap industry at the beginning of the nineteenth century. 'The impact of this new competition', wrote Talbot, 'was accentuated by the shrinkage of the local market with the reduction of the South Atlantic squadron and the Cape and St. Helena garrisons following the death of Napoleon.'

The wife of the stock farmer continued to make soap for the use of her family but, by using caustic soda instead of lye derived from the bushes, she was able to make her batch of soap in a day instead of nearly a fortnight as previously. The wives competed with each other in the production of soap and at local shows their products, which were often attractively carved (Fig. 269), were exhibited.

The introduction of Merino sheep at the end of the eighteenth century heralded the change from fat-tailed sheep to wool producing breeds and the whole economic position of the sheep farmer changed. His income was then derived from wool instead of soap and candles but he continued for a long time to have a flock of fat-tailed sheep to provide meat for his family.
References


![Wolvehok at Elandsfontein (CB 2006)](image1)

![Fig. 264 Soap house, De Puts, Carnarvon](image2)

![Fig. 266 Interior of the De Puts soap house](image3)
The stone masonry tradition of the Karoo

The first thing that strikes one in most Karoo towns is the stone masonry, whether dry stonework, dressed stonework or random stonework, whitewashed or not.

Where very old stone buildings survive you may find that they were plastered in the tradition of the Western Cape. But soon the local inhabitants began to notice and appreciate the typical Karoo stone and to develop stonework techniques: kraal walls (and corbelled dwellings) were often of random dry stone; early houses were often of random dry stone with a slurried finish and whitewashed; later public buildings and important houses were built of dressed stone.

It is a great pity that this tradition has died out in the last fifty years or so.

VASSA 1989

---

VASSA 25th anniversary excursion to the Great Karoo 1989.

Reiersvlei [CB 2006].
Corbelled stone hut settlements in the Free State and Lesotho

James Walton*

On the flat hill tops bordering the Walsch, Rhenoster, Wilge, Sand and other Free State tributaries of the Vaal are extensive stone-walled settlements characterized by corbelled stone beehive huts. This is the country formerly occupied by the Ghoya and it is almost certain that these settlements belong to that tribe, proof of which is afforded not only by their distribution but by the tribal traditions of the Ghoya themselves who until recently continued to live in south Basutoland in corbelled huts known as lifala.

Three distinct varieties are recognizable and it is probable that they represent an evolutionary sequence arising out of a desire for greater living space. The simplest huts are true beehives, usually built from boulders of spheroidal dolerite or untrimmed blocks of sandstone and having an internal diameter of from five to seven feet and in internal height of about four feet. The walls curve inwards until an opening, from 12 to 18 inches in diameter, is left at the top and this is closed either by a single flat slab or by four flat slabs with a fifth covering the reduced opening between them. The walls have a thickness of about 2 feet 6 inches decreasing to about a foot at the top. The doorway is low, not usually more than two feet high, as a precaution against wild animals and the older Ghoya laughingly recollect the time when they had to wriggle through these tiny openings. It has a width of about one foot six inches at the base, widening slightly towards the top which is spanned either by one large block of stone or by two or three long flat slab lintels.

At Doringberg, near Winburg, and at Sedan, near Lindley, where this type of hut is most common, the entrance is frequently protected by a semi-circular or circular stone wall enclosing a paved courtyard, or lelapa, from six to eight feet in diameter, thus providing what Van Hoepen (1939) terms a ‘calabash plan’. The diameter of these huts agrees closely with that of Scottish, Irish and West Yorkshire examples and it seems to be the maximum diameter which corbelling in rough boulders would allow. In response to a desire for more space a second type was evolved which was built of flat dolerite slabs and had an internal diameter of about nine feet and a height of up to six feet. The walls rise with only a slight inward curve to a height of from 3 feet 6 inches to 4 feet and then curve inwards sharply as far as the corbelling would allow. The central opening was then closed by three or more long slabs of dolerite, set about four inches apart, and covered with rubble and broken sherds to give the roof a flattened dome shape. The doorway varies in height from 2 feet to 3 feet 6 inches. This type of hut never has a lelapa but it invariably has a two-handed quern a few feet in front of the doorway whereas such querns are never found in association with Type A huts. As the two-handed quern stone was employed for grinding maize, which was only cultivated by the Ghoya from about 1830 AD, this indicates that Type A huts were in use before that date and that the Type B huts continued in use after 1830.

[Text cut]

A fourth type of corbelled hut, outside the line of development already indicated, occurs at Sand Riviers Poort, near Winburg, where lenticular huts were produced by building a single curved wall and utilizing a portion of the cattle kraal wall as the second wall of the hut.

Van Riet Lowe (1927) has suggested that the corbelled stone huts in the Orange Free State were built by the Ghoya and that they turned to stone for their huts because of the absence of trees. Ellenberger (1912) also writes of the Hlakoana that they “lived in a district which was

---

more than usually infested by lions, and in order to better protect themselves and their families they learned to build huts of stone and mortar in the shape of an oven with a rough pavement in front, so as to prevent the lions undermining the door by scratching under it”.

[Text cut]

Until quite recently it was the traditional dwelling of the Ghoya and the Tsoeneng and stone beehive huts have survived as grain stores and poultry huts among the Phuthi and Xhosa. This would indicate that the *sefala* is an old type of dwelling whose origin must be sought in the area to the north from which these peoples came.

Outside the northern Free State and Basutholand examples are rare but one or two stone beehive huts are often found on sites where the majority of dwellings were built of wattle and daub, as at Klipriviersberg, south of Johannesburg, and at Blouboskraal, between Machadodorp and Lydenburg. Further north Roger Summers (1952) has recently discovered a corbelled beehive hut in the Inyanga district of Southern Rhodesia [Zimbabwe]. This has an internal diameter of 8 feet and is constructed of large rounded boulders covered with a coating of red mud; it is dug out of the hillside and has a sloping paved floor. The entrance is protected by a tunnel, one foot wide and two feet high which could be closed by means of a stone slab.

[Text cut]

The simplest corbelled-hut settlement is the ‘calabash’ arrangement consisting of a low stone hut, the entrance to which is fronted by an almost circular stone-paved *lelapa* surrounded by a stone wall and having an internal diameter of six to eight feet. As among the Bantu today, the *lelapa* was the real living quarter during the daytime and the hut served only as a shelter at night or in rainy weather. The subsequent development of this single-hut dwelling is clearly shown at Doringberg.

**References**


Nieuweveld farms that tell a story

Judy Maguire

The Karoo landscape with its endless empty spaces and overarching sky is one which has been immortalised in literature, in poetry, in photography, in art and in the memories and souls of those who choose to travel its dusty byways. Its emptiness is somehow deeply fulfilling and draws visitors to return again and again to experience this Karoo speciality – space.

A fascinating part of the Karoo is the upland plateau above the Great Escarpment – the lonely expanses known as the Roggeveld and the Nieuweveld. One nineteenth-century travel writer described traversing this seemingly endless landscape as akin to being adrift on the sea. It is a landscape of muted colours, with no fat on it anywhere – understated soft pastels of olive, ash and grey, muted with a patina of fine Karoo dust.

Permanent European settlement in the Roggeveld and Nieuweveld in the turbulent years of the late eighteenth century was won at a terrible price – the extermination of the original /Xam ‘Bushmen’ inhabitants. That they fought back as fiercely as they could is attested by the ruins of fortified pioneer homesteads which have embrasured loopholes instead of windows, like the original homestead still standing at Cuylenberg (also spelt Kuilenberg). Stone corbelled houses had tiny gaps which breached the walls obliquely instead of windows, so that the ‘Bushmen’ could not shoot their arrows directly into the room. In some, the remains of sleeping platforms at a level higher than the windows can be seen. Eventually, the take-over of every fountain and seep sterilized the surrounding grazing for everyone except the settlers. Soon the game was shot out and the ‘Bushmen’ faced starvation. ‘Theft of livestock (the ‘Bushmen’ referred to sheep as “starvation meat”) became common – and so did the armed reprisals of the commandoes. Cuylenburg was a mustering point as long ago as August 1790, and the sobering journal of the local field cornet, Gert Maritz, reports (translation mine):

“At Paardefontein we attacked a kraal of five people, exterminated two and spared three children … on the 7th we took on two kraals, one on the Boemsansberg and the other below the Karee Berge: at the Karee Berge kraal we exterminated three; at the kraal on the Boesmanberg we exterminated seven, but because it was a dangerous place … and they were hiding in the caves and kloofs, and shot at us with poisoned arrows we were obliged to depart as our powder and lead were insufficient to pursue the kraal further. We returned to Cuylenburg where we divided the small Bossimans and the cattle that we had recovered among the men …”

Captured ‘Bushmen’ women and children were given out as servants and the women were sometimes given as wives to the trekhoers’ existing ‘Hottentot’ menials, and in this way, the life of the ‘Bushmen’ as independent hunters and gatherers reached extinction. They live on in the gene pool of the rural Coloured community, and tantalizing relics of their former presence such as stone tools and ostrich eggshell beads occur at their resting places on the veld.

Driefontein farm was acquired in the mid-1740s from “the widow Bezuidenhout”, about whom nothing else is known, except that one could assume that it would have been easy to “acquire” a farm from a woman alone in that unforgiving environment. It remains one of the finest examples of an early Karoo sheep farm still in existence. Apart from the fact that the buildings have been roofed with corrugated iron in recent times, the entire farmstead has been little changed and many details of this way of life have been preserved.

7 First published in Village Life, 22, February / March 2007: 38-41. Dr Judy Maguire is a palaeontologist who lives on a farm at the foot of the Swartberg near Prince Albert with her husband John, a geologist. She regularly does conservation assessments of historical sites and buildings for various organisations and institutions. She may be contacted by e-mail at questar@icon.co.za. You may subscribe to Village Life online – www.villagelife.co.za - or contact Ronél Vosloo, tel 028 514 3300, fax 028 514 2540, subs@villagelife.co.za (ZAR125 for 6 issues in Southern Africa; ZAR250 overseas).
The long, rectangular main dwelling originally had four rooms and probably once accommodated two families, as was often the case on the northern frontier on account of safety. A fifth room was added later, creating an L-shaped floor plan. The builder seems to have literally followed the Biblical injunction to “build your house upon a rock”, because the dwelling is sited flat onto an extensive stone slab near the crest of a rise, adjacent to the nearby stream. An interesting drain carries run-off right through under the house. To sleep safely inside this snug thick-walled stone-built home, with the Karoo wind blowing over the chill moonlit wastes outside, is something worth experiencing.

Built up against the nearby low krantz are the livestock pens, with deep deposits of manure that probably date back to the 1700s. Driefontein and all its outbuildings are built out of the local blue-grey Beaufort shales which is quite easily dressed into slabs. Even the outdoor cooking shelter or kookscherm – normally constructed with asbos brushwood in the upper Karoo – and the associated outside tables are constructed in stone. Originally all food preparation and cooking was done out of doors and many pioneer houses still have the remains of kookscherms attached to the farmhouse.

Close to the homestead is a corbelled ‘soap room’ where soap was made in a huge iron pot, and which once had a chimney. The departure of the St Helena and Cape garrisons following the death of Napoleon indirectly caused the demise of the farmers’ ‘wives’ pin money: they used to make and market soap to the soldiers at the Cape. When this market packed up and left, so did the soap-making home industry. The burgeoning Merseyside soap industry at Port Sunlight (developed in 1888 by Lord Leverhulme for his soap factory workers) which used palm oil (Palmolive) and caustic soda instead of animal fat and lye, also had an impact. However, many a Karoo village museum, including the one at Fraserburg, still has splendid but slightly desiccated examples of ornately hand-carved callus-coloured boereseep, silent testimony to the creativity of these isolated women in an environment devoid of all that might nurture the creative muse.

At one end of the house is another corbelled structure which served as a meat store – even in summer this high-domed stone room keeps an even cool temperature. A little further up the slope is a truly magnificent dorsvloer or threshing floor, arguably the best constructed and best preserved in the country. It is enclosed with a low stone wall beautifully faced and coped with matched hand-dressed stone slabs and has tall stone pillars set into the wall at intervals. Opposite the entrance is a well-preserved corbelled kafhok (chaff-barn) with a raised entrance in which the harvest was stored before threshing. The wheat swept from the antheap-clay screed threshing floor was ground in the horse-mill which once stood in the nearby stone millhouse.

A little beyond the kafhok is a smooth rock hilltop which has a low stone wall built around it – the fruit-drying place. The low walls are to keep the tortoises out as they have a great predilection for still-succulent drying fruit.

The old wheat lands are also surrounded with stone walls of great charm, but most of them have succumbed to verbrakking (salination), a fate which overtakes many a Karoo agricultural enterprise. Salts in the water and indeed in the soils are remobilized by irrigation and rise by capillary action into the zone of the roots of plants. After some years, nothing will grow in the salty ground – a fate which also overtook even the great cities of the Euphrates like Ur of the Chaldees and Babylon.

In the nearby river is the washing hole, where sheets were washed and set to bleach on the washing green and huge slabs of rock scoured by the river.

The farm is still active, and Abraham Blaauw (Blou) is the shepherd there. At least he does not have to contend with wolve (the brown hyaena, locally long extinct) as did his predecessors: Driefontein boasts a rare ‘wolf trap’. The invention of the traps is attributed to the ‘Hottentots’. Thomas Pringle has left us a graphic description dating to 1820:
“The trap was built of large loose stones, precisely in the form, and on the same principle, as the common mouse-traps to be seen in England, with a hanging door, also of stone, sustained by a cord, and baited at the farther end with a dead dog or the entrails of a sheep. By this simple contrivance we speedily entrapped several of the depredators that had so much harassed us; and, after having killed them with spears, their carcasses were thrown out on the open plains.”

Yet another focus of interest at Driefontein is the fossiliferous outcrop. At least six or seven partial skeletons of a Diictodon species are preserved on a surface of bright blue mudstone. The outcrop also contains a proven uranium deposit which maybe mined in the future if demand for uranium grows. A mine would of course severely impact on this well-preserved historic farm.
Preliminary list of sites

- Aasvogelvlei
- Arbeidersfontein
- Biesiespoort
- Biesiesput
- De Dam
- De Puts
- Driefontein
- Droogeputs

- Eendefontein
- Gorras
- Grootfontein
- Janklaasleegte
- Klipkolk
- Konka
- Leeufontein
- Onderplaas

- Osfontein
- Riet Braak
- Schuinshoogte
- Stuurmansfontein
- ‘Tkokoos
- Vischgat
- Willow Glen
- Windheuwel

The landscape of the Great Karoo [AM and JM]
Aasvogelvlei

Aasvogelvlei has two homesteads made up of corbelled rooms and later flat-roofed rooms. Each started as a singular circular corbelled building. In one homestead a square corbelled room was added to the circular room and the two were linked by a smaller square corbelled room. Entrance to the two square rooms was gained through a doorway in the central room. As at Eendefontein, the circular room has only an outside door. Flat-roofed rooms with mud brick walls were later built around the three-roomed corbelled nucleus, but when the homestead was abandoned the mud brick walls collapsed and only the corbelled stone rooms remained.

The linking of the two corbelled rooms by a roofed central room to make a three-roomed unit was a method quite widely adopted, as at Eendefontein and Aasvogel Vlei, where the central room is also corbelled.

JW 1989

![Diagram of Aasvogel Vlei homesteads](image)

JW 1989

Aasvogel vlei

JW 1965
The original corbelled dwelling, built by Hendriks Esterhuyse in 1872, is almost identical with that at Klipkolk. It is rectangular in plan and has an internal length of 18ft (5.4m). The walls are 2ft 3ins thick and the doorway, placed centrally in the front, is 2ft 19ins wide and 6ft high. It has two stone lintels and still retains its halved stable doors. A small window opening faces the entrance and there is a second similar opening to the left of the entrance, both of which are fitted with external hinged wooden shutters. There is a tiny keeping hole in the left hand wall and it is noticeable that the keeping hole is invariably placed in this position whether the huts are rectangular or circular in plan. The interior was originally divided into two rooms by a wooden partition which has since been removed.

It is stated that 1200 wagon loads of stone were brought to build this dwelling which has three courses of projecting stones. The large opening at the top is closed by a number of flat stone slabs partly supported by two timber joists. The hut is fronted by a paved stoep.

At a later date three small rectangular flat-roofed rooms were tacked on to the original corbelled dwelling.

*JW 1960*

On the farm Arbeidersfontein near the town of Williston the interior of the corbelled house – now a national monument – has been left furnished in the same manner as when it served as a homestead.

“This house was built in about 1870 and it served as a dwelling until 1939,” explains Chris Esterhuise, of the present generation on the farm. “My father lived in the dwelling when he was a youngster, and the building reputedly took 1200 buck-wagons of stone to complete.”

Here the Spartan existence of the early settlers is quite evident with the furnishings limited to the usual bed, wagon kist, and dresser. Smaller items include a spinning wheel, and cast iron soap pot, both items being required to ensure a level of self-sufficiency. ‘Keeping-holes’ are a feature of most buildings, and on Arbeidersfontein the Bibles still take pride of place in the niche made for their safe storage, while another would have held the all-important medicines, gunpowder, tobacco, and other smaller necessities.

*SM & BNM 2006*
Biesiespoort

At Biesiespoort the courses of projecting stones are scattered over the whole surface, looking like a hedgehog.

JW 1989

Fig. 23: Circular corbelled dwelling, Biesiespoort, Caravan
Biesiesput

The corbelled structure at Biesiesput became derelict and was dismantled (each stone was numbered), moved and rebuilt in Carnarvon in 1987. The work was carried out with the help of the farm owner, Roy Riley, under the auspices of the Rapportryers. The reconstruction still stands in the grounds of the Carnarvon Museum.

Top: The corbelled building at Biesiesput in its original location was associated with several other stone-built structures.
Bottom: The corbelled building alone was reconstructed in Carnarvon in 1987.
De Dam

At the isolated farm of De Dam there were two homesteads situated about a hundred yards apart. One of these has been completely demolished. This included a rectangular corbelled building which was the original dwelling and which eventually formed the nucleus around which other rectangular rooms were built.

The second homestead included a circular corbelled hut which served as a store room, for which purpose it is still employed. It has an internal diameter of only 14ft, but it is very well built. There is a small window opening facing the entrance.

JW 1960
De Puts started as a single circular corbelled room (note the raised hearth in this room). Later a square corbelled room was built and the two were linked by a small central room having a *brak* roof.

Nearby is a delightful small corbelled hut housing a set pan in which the housewife made soap. Prior to the introduction of the Merino sheep, the Karoo farmer had fat-tailed sheep and from the tail fat the farmer’s wife made soap which was annually taken to market.

**VASSA 1989**

At De Puts the space between the original circular corbelled room and the later square corbelled room was enclosed by connecting walls and the irregular space so produced was covered by a flat *brak dak*. Each of the three rooms has its own entrance and there are no internal doorways affording passage from one room to the adjoining room.

During the fourth quarter of the last century the sheep farmers of the Karoo reverted to more conventional rectangular dwellings. At first these had flat *brak* roofs but when corrugated iron became more easily available this roofing material was widely used. The reason for this development is no doubt that the area had become more populated and more accessible, so that building materials, particularly timber, could be obtained for roofing and for making windows and doors. The need for protection from San bowmen also became less, as these nomadic hunters were pushed into more remote areas.

Although corrugated iron did not afford the same protection from the hot summer sun nor the same warmth in winter as the corbelled building or the *bak* roofed dwelling it provided cover for a larger living space and it required less in the way of maintenance.

**JW 1989**
Driefontein

Driefontein is a veritable open-air museum, for it has retained, ‘unrestored and un-recycled’, almost every feature of an early Karoo sheep farm, square and circular corbelled buildings, extensive sheep kraals, a very fine trapvloer with an associated corbelled kafhok, a corbelled meat store with its pole from which joints of meat were hung after slaughter, stone-walled cooking skerms with stone tables on which to prepare the food, and flat-roofed wagon-shed and stable. Although the farm [12494 morgen] is now unoccupied, the buildings are well cared for.

“Driefontein in Nieuweveld” was granted as a loan-place to Henderik van Aswegen on 12 March 1764. It was transferred eventually to Petrus Gerhardus Marais, who applied for a perpetual quitrent grant, and the farm was surveyed in 1830, but the grant was not made until 1838. On the death of Marais, Driefontein passed to his son-in-law, Nicolaas Olivier and another, and it remained in the hands of the Olivier family until well into this century (memorials to members of the Olivier family may be seen in the graveyard.)

Full use of the local stone was made by the builders of the Driefontein farmstead. This is particularly noticeable in the trapvloer, which is probably the best constructed in the country and should be preserved. It is surrounded by a low stone wall which has tall stone pillars set at intervals and is lined on the inside by vertical slabs of stone. Opposite the entrance to the trapvloer is a typical circular corbelled kafhok in which the wheat was stored before threshing and the grain was kept afterwards. It has the usual raised doorway to prevent dust and straw from entering the building during threshing and also to prevent animals from entering the hut.

There is no hearth or fireplace in the house but there is an iron cooking stove in the kitchen. Before the introduction of the stove, cooking was done outside behind the shelter of a circular dry stone skerm, situated a short distance from the house. The farm caretakers, who live in a rectangular stone-walled house with a corbelled storeroom nearby, still cook inside such a circular stone-walled skerm, but they do have in their dwelling a corner hearth, such as is quite common in the Karoo and other parts of the country.

VASSA 1989

The dwelling originally housed two families, possibly those of Nicolaas Olivier and the ‘another’ to whom the farm was transferred in 1843. The present living-room and the adjoining bedroom constituted one family dwelling, which included a flat-roofed rectangular buitekamer (a on plan). The present kitchen and adjoining bedroom housed the other family. To this was added a second bedroom to give the building a T-plan. Each part of the building had a front entrance on the north side and a rear entrance on the south, but when the two parts were joined together under one ownership earlier this century one front doorway and one rear doorway were walled up and a doorway was made to link the two sections. What was the living-room of the eastern half of the building then became the present kitchen.

Outside each of the rear doorways is a raised area, paved with flat slabs of the local stone, and associated with this is a table consisting of a thick slab of stone resting on two upright slabs.

To the east of the dwelling is another rectangular building which now has a flat roof covered with corrugated iron but which had either a thatched pitched roof or a brakdak. This housed a stable, a horse-mill and a wagon-shed. A little higher up the slope is a circular corbelled building which served as a storehouse, particularly of meat, and in front of it is an upright post from the top of which sheep carcases were hung after slaughtering.

JW 1989
Close to the homestead is a corbelled ‘soap room’ where soap was made in a huge iron pot, and which once had a chimney.

*JM 2007*
Droogeputs

Near the Williston-Sutherland main road, an interesting group of corbelled huts forming what must have been a complete dwelling. Two rectangular huts, with tapering tops on square and vertical bases, stand alongside each other, backed over their full joint width of 8,50m by a flat-roofed lean-to. On the left with doors into the one hut and into the lean-to, remnants of what must have been a low stoep. Facing the group, some 12m away, stands a slightly smaller hut topped by a chimney that was the separate kookhuis.

HF 2004

Near the farmstead at Droogeputs is a small circular corbelled field shed similar to that at Gorras.

JW 1960
Eendefontein

Eendefontein also started as a single circular corbelled hut, to which a second and then a third similar corbelled hut were added.

VASSA 1989

Several sheep farmers’ homesteads had three corbelled rooms linked together but not always interleading. Eendefontein has three circular corbelled rooms, each with its own entrance. The cluster appears to have originated as two separate corbelled huts which were later linked by a third. Two of the huts have an internal doorway affording access from one to the other. The third has only an outside door.

JW 1989
Here the circular domed hut adjoins a rectangular building with pitched roof, also of stone, of c1840, and is part of a large farm werf. A double storey stone shed adjoins the other at the other side, and there is a rectangular two-roomed-deep house between straight gables of c1860, with a fretwork veranda. Close to a rocky river bed stands a ‘miniature’ corbelled hut, some 2m high.

The original dwelling was a circular corbelled building with the usual internal diameter of 5.4m. When the farmer decided to enlarge his dwelling, corrugated iron was available and so he built a square extension with a corrugated iron roof. The square addition was divided into two rooms but it and the circular corbelled building had separate entrances.

**JW 1989**

In the farmyard at Goraas the old homestead still stands in its original condition. It comprises a squat circular corbelled room, which was the first dwelling, and a rectangular building, divided into two rooms, which was added later. The corbelled room has an internal diameter 18ft. Opposite the entrance is a small window after the usual pattern and on the left hand side in the center is a keeping-hole.

A second circular corbelled hut stands on the roadside at the approach to the farmstead. This is lower, smaller and more roughly constructed than the dwelling and was probably used by the farm labourers. It has an internal diameter of 11ft. The window is a tiny opening, 6 inches square, passing obliquely through the wall at a point almost opposite the entrance. The roof rises nearly vertically to a height of about 5ft and it is constructed of fairly large blocks of stone. From the top of the wall thinner slabs are used for the corbelled roof. The final opening is closed by a large stone slab which is covered by a rounded capping of rubble and soil.

**JW 1960**
Gys van Wyk – the farm has been in his family for five generations. [JK 2006]
Grootfontein

A round corbelled hut on a cylindrical base, about 5.5m high. It adjoins a flat-roofed rectangular building, also of painted stone, and behind it stands a long flat-roofed building used as workers’ quarters.

HF 2004

At Grootfontein there is an early homestead which is very similar to that at Gorras and is still very well preserved. Unfortunately I was not able to make a plan of it as the owner was away on the day of my visit. It comprises a squat circular room with three projecting courses and to this is attached a rectangular flat-roofed building. Both are fronted by paved stoeps.

In general plan and arrangement the corbelled building follows the usual pattern. It differs only in having a definite drip-stone over the entrance.

JW 1960

JW 1960
Janklaasleegte

This complex is some 25km south-south-east of Williston, one large (5m x 5m) and one smaller such hut; also a bakkiespomp and a klipkraal.

HF 2004

On the farm Janklaasleegte near the town of Williston stands an example of a square corbelled dwelling. In many of these examples the walls rise vertically to a height of two metres before being stepped in more sharply towards the apex. Thicker blocks were frequently used for the walls, with thinner slabs of five to seven centimetres thickness being the norm for the upper corbelled portion. The cement was a mixture of mud and chaff, with anthills, if available, being useful for their lime content, an excellent binding agent.

Cooking was mostly done over an open-air fire, protected from the prevailing winds by a rock shelter that abutted the building. A large number of the dwellings in the Karoo are unpainted, the natural rock of their exteriors causing them to blend into the surroundings and rendering them nearly invisible to passers-by.

SM & BNM 2006
Klipkolk

Klipkolk is a rectangular corbelled building, which has been altered considerably and is now used as a store, though still very well preserved. Internally it measures 18 feet by 19 feet. The walls are vertical to a height of 7 feet and from the top of the walls the roof is corbelled inwards to a final opening 3ft 6ins in diameter, which is closed by seven flat slate slabs arranged side by side.

JW 1960

The corbelled building at Klipkolk measures 5,4m by 5,7m (a span of about 5,5m appears to be the maximum which the local builders could safely construct). The walls are vertical to a height of 2m and from the top of the walls the roof is corbelled inwards to a final opening, one metre in diameter, which is closed by seven flat slate slabs arranged side by side. At the corners the corbelled roof springs from large slabs placed across the corners and these largely carry the weight of the roof. The same construction has been recorded by R.M. Buchanan from rectangular corbelled buildings in Lecale, County Down, Ireland and it was also used in building the wolwehok at Heerenlogement.

JW 1989
Konka

[Konka] has a large circular corbelled room linked to an equally large square corbelled room. These two formed the nucleus around which a later house was built.

VASSA 1989

This is a late pair of corbelled huts, one square and one round, the former apparently built as late as 1885, the round hut even later.

HF 2004

Konka is situated in a sheltered hollow, about 16 miles from Carnarvon on the road to Swartkop. The old homestead, as it was in 1885, when the father of the present owner, Mr W.J.J. le Roux, came to Konka, comprised a rectangular corbelled room linked to a circular corbelled room. The rectangular room, built by a man named Winkus, was erected first. The internal measurements are 13 feet 3 inches by 12 feet 10 inches and the walls are 2 feet 7 inches thick. The doorway is 2 feet 8 inches wide on the outside and 2 feet 10 inches on the inside. In the opposite wall there is a new window, added by the present owner, but it originally had a window like that in the circular room. An opening, 3 feet 4 inches wide, connects the two rooms and this was the only means of access to the circular room.

The circular room was built later and an old man named Redelinges informed Mr le Roux that, when a young boy, he helped to build this room. It is 13 feet 9 inches in diameter and has a window opening, 2 feet 7 inches wide on the inside and 1 ft 6 inches wide on the outside. The external doorway was made by M Le Roux’s father when he added the other rooms of the house. A loft, carried on three trimmed joists, covers about two-thirds of the area and it has a boarded floor. An unusual feature is a large deer antler peg on the outside, near the top of the wall where the two rooms join.

JW 1960
Leeufontein

At Leeufontein, on the side of the road from Carnarvon to Williston, is a circular corbelled hut with two courses of projecting stones. It has cracked considerably but has been preserved to some extent by a cement coating. It stands at a distance of about 100 yards from the homestead and was probably the home of the first settler.

JW 1960

JW 1960
Leyfontein

The farms Rietfontein and Leyfontein, north-east of Loxton, are owned by Willie and Sandra Nolte. Leyfontein is only accessible by 4x4 vehicle along a dirt track. The settlement, beside a substantial spring, covers a large area and includes several styles of buildings and stone walling.

Willie’s grandfather attended school in one of the corbelled huts, which would have been in the 1890s. He bought Leyfontein in 1911.
Onderplaas / Brakkefontein

Some 20km north-west of Middelpos, two tall, bullet-shaped corbelled huts.

HF 2004

Small corbelled structures built on a stone shelf alongside the river.

Nigel Amschwand pers.comm.
Osfontein

Some 35km south-east of Carnarvon, 7 km east of the Loxton road, a complex of four corbelled huts standing hard up against each other forming a square. The lowest hut houses the kitchen.

_HF 2004_

On the farms Stuurmansfontein and Osfontein the corbelled house complexes have been turned into self-catering accommodation for people wishing to try and capture a feeling of the times of the early settlers. The facilities have been purposefully kept basic with no electricity — and in the case of Stuurmansfontein no running water — but the interiors are comfortably furnished with period and rustic items giving a mix of basic comfort and rural simplicity.⁸

_SM & BNM 2006_

---

⁸ Stegmann and Natasha Lubbe lovingly restored this complex of corbelled huts and added a bathroom. It can be rented as a self-catering guest house. There are San paintings on the rocks nearby.
Riet Braak

Near the small trading station at Sterling is a square corbelled store hut having sides measuring 17ft externally. The corbelled roof is circular and is built up of thin slabs embedded in mud. The final opening is closed by a mass of rubble resting on a number of crossed timbers, over which is a rounded mass of soil held in position by a layer of small flat stones. This covering has the appearance of being later make-shift expedient.

The entrance, which is 3ft 6ins high and 2ft 6ins wide is set in the wall about 2ft 6ins above ground level. In this it resembles the threshing floor hut at Stuurmansfontein and it served a similar function.

JW 1960

JW 1960
Schuinshoogte

This bullet-shaped corbelled hut of c1850 also stands in open terrain, on the other side of the road from the farm’s homestead, with a flat-roofed outbuilding nearby.

HF 2004

On the older, now deserted, farmstead of Schuinshoogte is a very fine circular corbelled hut which was made the subject of a painting by Vera Valschenk in 1955. This painting is in the possession of the owner of the farm, Mr G.S. Esterhuysen, who, although he has now moved to a new homestead some distance away, still retains considerable interest in the old corbelled hut and maintains it in good condition.

The walls are 2ft 6in thick and it has an internal diameter of 18ft. The usual small window opening faces the entrance, which is 3ft 6ins wide. At the rear of the hut are two sawn-off joists which formerly carried a loft similar to that at Konka although in this case it covered rather less than half the floor area. In the wall are a number of pegs of cow’s horn. There are two full courses of projecting stones, placed closely together and a third uppermost course of four stones only.

The hut is estimated by Mr Esterhuysen to be about a hundred years old.

JW 1960
Stuurmansfontein

The change from the early corbelled buildings to rectangular flat roofed dwellings and finally to corrugated-iron pitch-roofed dwellings can be seen at Stuurmansfontein which consists of two linked circular corbelled rooms to which were added a flat-roofed room on one side and a pitched roof room on the other side. Doorways were made to provide intercommunication between the various rooms.

Many of the Karoo sheep farmers grew a small amount of wheat for the use of the family. … Built into the wall of the trapvloer, opposite the entrance is a corbelled stone hut having an internal diameter of 4m. The doorway, which measures only 60cm in width and 90cm in height, is placed about 60cm above ground level, to keep out animals. This hut was used to store the grain after threshing. The wheat would then be ground in a hand mill.

JW 1989

There are two separate homesteads at Stuurmansfontein, about 800 yards apart, and for convenience of reference I have labeled these Stuurmansfontein I and Stuurmansfontein II.

Stuurmansfontein I

This is the main homestead and comprises two linked circular corbelled rooms with a later pitch-roofed rectangular room and a flat-roofed rectangular building all of which have intercommunicating doors and short linking passages.⁹

The larger of the corbelled buildings is one of the finest examples in the area having an internal diameter of 18 feet and a height of about 24 feet with four courses of projecting stones. It is fronted by a slightly raised semi-circular stoep and the doorway, which has the usual timber lintels, is closed by half-doors brought by ox-wagon from Beaufort West. The small window opening, 15 inches wide externally, faces the entrance. The adjoining hut is similar in construction although smaller and has only three courses of projecting stones.

Some distance below the homestead is a threshing floor, trapvloer, 50 feet in diameter and surrounded by a low stone wall. Here the harvested ears were spread out on the floor and trampled under the hooves or horses to dislodge the grain which was then separated from the chaff. Built in to the wall opposite the entrance is a corbelled stone hut, 13 feet internal diameter. The entrance, which measures only 2 feet in width and 3 feet in height, is about 2 feet above ground level. This hut was used to store the harvested crop before threshing and the grain and straw after threshing.

Stuurmansfontein II

This homestead, which may have been occupied by the farm labourers or by another branch of the family, comprises one complete corbelled hut and a second corbelled hut which has partly collapsed. A third, now without roof, stands on a slight rise nearby. The complete hut has an internal diameter of 14 feet and walls with a thickness of 2 feet 6 inches. The doorway is 3 feet 6 inches wide and opposite is a window opening, 2 feet 4 inches wide and 2 feet 6 inches high, with rough wooden lintels. This hut has much more provision for storage than is usual. In the centre of each side is a keeping hole and there is a third between the entrance and the middle of the right-hand side. On the left-hand side, flanking the central keeping-hole, are two narrow stone ledges and opposite are a number of rough wooden rails stretching across as chords. Sheep horn pegs protrude from the wall in a number of places.

JW 1960

⁹ Piet and Charmaine Botha take great pride in keeping these buildings going as a self-catering cottage to rent.
Stuurmansfontein I, Carnarvon

Stuurmansfontein II, Carnarvon

JW 1960

Stuurmansfontein, Carnarvon

Threshing Floor (Traploir)

Stuurmansfontein, Carnarvon
‘Tkokoboos

One of the most interesting of all groups of corbelled huts. Three huts grouped together, one dated 1851, form the farmhouse, with beams of karee wood. The outer ones are the oldest, with the central hut as a later link.

HF 2004

‘Tkokoboos adjoins Stuurmansfontein and the farmsteads are some two or three miles apart. It comprises three circular corbelled huts now linked by later rectangular rooms. The earliest of the three bears the date 1851 over the entrance and has an internal diameter of 17 feet. Up to a height of 7 feet the wall is practically vertical and the roof is corbelled inwards from this point.

It has three courses of projecting stones, one near the top of the wall and two in the roof. The door is of the double stable door type and was brought by ox-wagon from Beaufort West. The window opening is set obliquely in the wall in order to prevent the Bushmen who lived and painted in the nearby kloof, from shooting their arrows directly into the room. It has the original smeared earthen floor, coloured a rich red by a mixture of ox blood and fat and polished until it shines like glass. It is stated that this hut was built by its original owner and a Coloured labourer in fifteen days.

The two later huts are more squat in appearance with flat tops and have only two courses of projecting stones. There is another corbelled hut some little distance away which serves as a store shed.

The owner of this farm, Mr T.E. Vlok, and his wife are very interested in their homestead and have made every effort to preserve the original feature of the huts.

JW 1960
Vischgat

Some 30 kms west of Loxton, a fascinating little complex, in open country and built on a rocky plateau. It consists of a small asymmetrical T-shaped homestead, now a labourers’ dwelling, iron roofed with a massive outside chimney at the end of the tail and moulded end gables. There are no ceilings inside. Next to it, set a little back from the house, two good corbelled huts, one square, the other round in plan and a little taller and with a little stone enclosure in front. A splendid packed stone kraal enclosure is no longer there. Vischgat was a quitrent grant to Gabriel Gerhardus Jacobs in 1838, though it was a loan-place before that.

HF 2004

Several early Karoo sheep farms have survived almost unchanged until recently. Such a farm is Vischgat, situated about 30km west of Loxton. It was possibly a loan-place held by Gabriel Gerhardus Jacobs for whom it was surveyed I 1830, but it was not registered as a quitrent holding until 1838, when it was granted to Gabriel Johannes Jacobs in 1860. Vischgat was transferred to Marthinus Jacobus Krugel, whose widow in 1865 sold the farm in two parts, Vischgat and Davidskolk. The neighbouring farms along the Branrivier, Vanaswegensfontein and Slingersfontein, were both registered as quitrent holdings before 1830.

When I first saw Vischgat in 1960 it consisted of a circular corbelled hut, a square corbelled hut and a T-plan pitched-roof house with a flat brak-roofed buitekamer attached. No buildings were mentioned in the transfer of Vischgat to Martinus Jacobus Krugel in 1860 so it seems unlikely that the T-plan dwelling existed at that time and possibly the only buildings on the site then were the two corbelled buildings, which were not considered of sufficient value to be mentioned. The front part of the T-plan house was divided into two rooms: a larger living-room, which also had a bed, and a smaller bedroom. The living-room was entered through a doorway with a bo-en-onder door and each room had an unglazed window opening, closed by a hinged wooden shutter. Behind the house were two circular enclosures (skerms) bounded by thick thorn fences, which were used for cooking. Even though there was a hearth at the end of the kitchen, much of the cooking was done outside behind the skerm, which was a gathering-place for the farm labourers to sit around the fire and talk.

A little distance from the homestead was a large stone-walled kraal. Such extensive kraals were necessary in the days before the farms were enclosed by jackal-fencing, for the sheep, often, as stated by Veldcornet Snyman, numbering two thousand or more, had to be housed in the kraal each evening as protection against predators. Between 1960 and 1969 several large kraals were added to the original kraal and a corbelled hut for the herdboy was built near the entrance to the kraals. Still later, the kraals, the cooking skerms and the flat-roofed buitekamer have been demolished, and only the T-plan house (which has been fitted with larger glazed windows) and the two corbelled outbuildings now remain.

JW 1989

---

10 Occupied by Abraham and Sara Willemse in 2006. The farm is owned by Jan and Hankie Wiese.
Fig. 250 Aerial view of Vischagt, Fraserburg

Fig. 251 Plan of Vischagt, Fraserburg
Willow Glen

Where the road from Fraserburg to Fraserburg Road drops down from the Nuweveld Berge a tiny farmstead nestles in the kloof. It consists of three linked circular corbelled rooms, one of which, now used as a kitchen, is somewhat earlier than the other two. This house, I was informed, was only built in 1914 but I could not obtain any history from the present occupants, who assured me that it is the only corbelled building in that area.

There is also a small circular corbelled outbuilding.

_JW 1960_
Windheuwel

Some of the homesteads of the early sheep farmers have survived, although often in an empty and ruinous state. Such a dwelling is that on the north slope of Windheuwel, near where Burchell stayed with Veldcornet Gerrit Snyman from 24 July to 3 August 1811. It consists of a circular kitchen adjoining a rectangular living-room, both of which have rubble walls and had flat brakdak roofs, although the kitchen may have been corbelled at an earlier stage. The front wall of the rectangular part has a height of 1.9m and the lower rear wall is 1.7m high. These walls are smeared inside and out with clay and are whitewashed on the inside. Across the room stretch lengthwise two stout tree joists, 16cm in diameter, resting on the top of the end wall at one end and carried on a heavy cross beam at the other. At intervals of about 0.25m rafters of agave stems were tied across the joists from the front wall to the back, and these carried bundles of coarse grass torn up by the roots. This was the foundation on which the brak soil was laid and watered in.

In the relatively dry Karoo the flat brakdak proved eminently suitable, as it required far less in the way of material and its construction was much simpler than that of a pitched roof. However, in the mountainous areas of the Roggeveld and the Nieuweveld, which experience heavy winter snows, flat roofs were not weatherproof until corrugated iron became available, as the snow lay on the roof, broke up the brak soil covering and the water seeped through when the snow melted.

JW 1989
Brief notes on other corbelled structures

**Banksfontein**

At Banksfontein there is a small circular farm hut, the corbelled roof of which has almost disappeared.

*JW 1960*

**Biesjes Dam**

This site is outside the area where corbelled huts mainly occur, as it is on the very eastern border of Williston district, on the side of the road from Carnarvon to Vosburg. Two circular corbelled huts are occupied by farm workers. One of these is more squat than the other, has a flat top and two courses of stones projecting from the wall. The second is taller and more pointed and has no courses of projecting stones.

*JW 1960*

**De Hoek**

Various people informed me that a circular corbelled hut (or huts) exists at De Hoek, but time did not allow me to visit this farm which is somewhat remotely situated.

*JW 1960*

**Gunsfontein**

This corbelled hut is by far the southernmost of the fifty or so recorded in the Sutherland, Fraserberg, Williston and Carnarvon districts. It differs slightly from the more northerly in that it is of unplastered stone, has no projecting ‘scaffolding’ stones, and has no vertical base. It stands among a somewhat untidy array of stone outbuildings and *kraalmure*.

*HF 2004*

**Hartbeesfontein**

At Hartbeesfontein there is a well with corbelled cover and stone steps down to the water.

*Nigel Amschwand pers.comm. 2007*

**Kalkgat**

I was informed by Mr Cloete that a circular corbelled building formerly existed at Kalkgat, but that it leaked and was eventually demolished.

*JW 1960*

**Knegtsbanken**

A storage shed, 1m diameter by 1,5m high, with remains of iron hinges built into stones at doorway.

*Nigel Amschwand pers.comm. 2007*

**Krabfontein**

The original corbelled hut at Krabfontein is a large circular structure having an internal diameter of 20 feet, and it is one of the finest examples of this type of construction. A rectangular room, with a pitched thatched roof, was added to the circular room shortly afterwards. [Also see section on dating, below.]

*JW 1965*
Louw se Plaas
Some 45km south of Fraserburg on the Rante road, four corbelled huts are to be found as well as a trapvloer.

HF 2004

Luttigshoop
Almost opposite the Luttigshoop siding [on the road between Williston and Carnarvon] is a small circular field hut.

Omkeerkolk
Two corbelled buildings, the larger of which has an oval shape.

VASSA 2006

Rietpoort
Two round corbelled buildings with fireplaces and external chimneys.

VASSA 2006

Rietvlei
Corbelled hut and double-storeyed flat-roofed house. Fraserburg district.

HF 2004

Ruitersfontein
At this farm, which adjoins De Dam, there is a circular corbelled hut, similar to that at Gorras which is used as a dwelling by the farm labourers.

JW 1960

Scorpions Drift
At Scorpions Drift there is a small circular corbelled store shed.

JW 1960

Silvery Holme / Van Aswegenfontein
20 km west-south-west of Loxton. There are two corbelled huts here, close together in wide-open country, one half the height of the other.

HF 2004

Slingerfontein
A tall, bullet-shaped building, with two rectangular stone-built structures nearby.

VASSA 2006

Swartfontein
I was informed by Mr le Roux that there are two linked circular corbelled huts at Swartfontein, mid-way between Carnarvon and Zwart Kop, but these were not visited.

JW 1960
Origins of corbelled structures in South Africa

In the absence of definite evidence it is interesting to speculate on the origin of the corbelled buildings in the Karroo. Did some building genius, finding himself in a country without timber but abounding in readily obtainable flat stone slabs, discover anew the technique which the megalithic builders in the Mediterranean had evolved more than four thousand years before? It is a possibility which cannot be ignored but it is hardly likely when one considers that corbelled buildings in Greece, Turkey, Italy, the Balearic Island, France, Spain, Portugal, Ireland, Scandinavia, Syria and even Afghanistan and Greenland, all arose from one common centre in the Mediterranean. It is much more probable that some early settler, already familiar with corbelling, came to this barren part of South Africa and constructed for himself a giant stone beehive.

If this reflects the true picture then it remains to consider from where the builder derived his inspiration. Apart from two corbelled huts at Farmerfield, near Salem in the Eastern Province, whose origin is still shrouded in mystery, the only corbelled buildings in South Africa are the huts of the Ghoya, one of the earliest Sotho tribes to enter the country, which are scattered throughout the northern Free State and southern Transvaal. Corbelled jackal traps were built by the early settlers in the southern Free State, in the Piquetberg and in the Eastern Province, but both these and the Ghoya huts are small, roughly constructed structures which are not comparable in any way with the fine corbelled buildings in the Karroo.

The corbelled buildings in the Karroo are identical in detail with those found in Europe and it would be an exceptional coincidence if in two regions so far apart the same structures should have arisen independently. Furthermore, corbelling is a difficult building technique and there is no indication of experimentation and development which one would expect if a method of building had been newly invented. On the contrary, the earliest Karroo buildings evince considerable skill and one is forced to the conclusion that the first corbelled building in this area was erected by a craftsman from southern Europe who was already familiar with the technique. It is even possible to determine from which part of Europe the builder most probably came, for there are regional characteristics. It is only in Portugal that stones are left as projecting steps and it is very probable therefore that the first corbelled building in the Karroo was erected by a Portuguese artisan who eventually trained Coloured builders, for it is frequently asserted by farmers in the area that some of the huts were built by Coloureds, and they do in fact still build such huts today. Whatever their origin, which only further research will elucidate, the corbelled buildings in the Karroo represent one of the most interesting regional developments in South African vernacular architecture.

JW 1965

What sparked corbelling in South Africa?

Stone walled structures are spread across the relatively treeless tracts of South Africa. The origin of corbelling, however, was not necessarily only introduced from west to east. As Walton pointed out, the corbelled huts of the Ghoya predate those of the Karoo, and in the 18th century well built stone-walled settlements housed up to 20,000 Tswana people long before Cape Town’s population reached more than a few thousand.

During the ‘Difaqane’ period displaced people moved huge distances throughout southern Africa, and the highveld plateau became a landscape of interaction, conflict, strategic alliances and resettlement. Sotho refugees were working on settler-owned farms in the Karoo in the years.
well before the Great Trek of 1838. Secret ‘Commissie Treks’ explored the areas to the north and reported back to the Boers. Those that assessed the Zoutpansberg in the northern Transvaal and Natal returned with glowing reports of perennial water, adequate grazing, abundant game and ‘empty’ land.

There was therefore extensive cultural and economic exchange. Farmers with cattle shared the land with farmers with sheep, and would have exchanged information about grazing sources.

Conversation between Tim Maggs & Antonia Malan, 2007

Frontier outlaw Coenraad Buys, a huge, powerful man, was an adventurer and smuggler who left a dash of wildness in the story of Beaufort West and the Nuweveld farms recently acquired by the Karoo National Park. Buys, also known as Coenraad de Buy or Buis, was born of Huguenot stock in Montagu in 1761. He clashed with the law and took refuge among Xhosas on the eastern frontier. He also traded in cattle with them, illegal in those days. His treatment of these people is said to have contributed to the outbreak of the Second Frontier War. Buys developed a passionate hatred for the British who declared him an outlaw, banished him from the Colony and put a price on his head. Buys wandered through the Karoo in the late 1700s. When Graaff Reinet burghers chased their magistrate out of town and declared a republic, Buys tried to persuade the Xhosas to join these burghers in an uprising against the British. He failed. For years, Buys lived among the Ngqika people. Then, with his Thembu wife and numerous children from that marriage, as well as from a liaison with Maria van der Horst, a woman of BlackKhoi-khoi descent, he moved to the area of present-day Beaufort West. There he disrupted the mission work of Erasmus Smit on the farm Kookfontein, raided cattle herds and generally created havoc. By 1821, he had moved across the Vaal and settled in the Soutpansberg. When his wife died in 1823, he was so grief-stricken that he wandered off into the veld and was never seen again.


Typology

To identify who built the corbelled structures it would help to be able to recognize the ‘hand’ of the craftsmen.

We can analyse the forms of the buildings, style of stonework and attributes of various features, and look for patterning or clustering over space and time, but it is difficult to establish patterning and chronology stylistically as the stones they used did not need trimming. Even though construction periods and sequences can possibly only be estimated once datable carpentry is introduced, it is still important to describe all the fittings even if they don’t have an absolute date.

Conversation between Tim Maggs & Antonia Malan, 2007

Dating and chronology

In view of the fact that many corbelled dwellings in the Karroo are occupied by descendants of the original builders and also since this part of the country has only been settled for less than a hundred and fifty years, one might expect that the name of the first builder and the approximate date would be known. Patient enquiry has failed to obtain an answer to either question. In 1811 Burchell passed through the heart of the country where corbelled buildings are found today and, although he was a most observant traveller, he makes no mention of them. It is unlikely that such an unusual architectural feature would have escaped his attention, and one can only conclude that such buildings were not in existence at the time.

Mr. J. J. le Roux, the present occupier of Krabfontein, in the Loxton district, informed me that his father was born there in 1879, and his grandfather was also born there. This would place
the date of the building as not later than 1860. The original corbelled hut at Krabfontein is a
large circular structure having an internal diameter of 20 feet, and it is one of the finest
examples of this type of construction. A rectangular room, with a pitched thatched roof, was
added to the circular room shortly afterwards. Mr. Le Roux stated that the walls were decorated
on the inside with a painted design, and the itinerant painter responsible for the decoration had
added his name, Te Boer, and the date, 1815. Unfortunately this inscription was later effaced
but, if it can be accepted, then it is the earliest definite date for the introduction of corbelled
building into the Karroo.

The only other dated corbelled building is a circular hut at ‘Tkokoboos which bears the date
1851 over the entrance. Estimates of the age of other dwellings indicate a similar date.
Schuinshoogte is considered by its owner to be over a hundred years old; Arbeidersfontein
was built about 1872; and both huts at Konka were standing in 1885, the rectangular one having
been built at least twenty years earlier. At Aasvogel Vlei, on the old road from Carnarvon to
Fraserburg, is the grave of Lowiza Petronella Cloete, who died on the 10th December, 1892,
and adjoining an old homestead above Yzerfontein is a tombstone bearing the date 1826.
These indicate that the homesteads were in each case built earlier than the dates on the
tombstones. From this evidence it can be deduced that the first corbelled building was probably
erected between 1811 and 1815 and that the majority of these structures were built before 1890,
although farm labourers still build such dwellings.

_JW 1965_

**Archaeological evidence**

A systematic search of Surveyor-General and Deeds Office records would pinpoint the date
of property grants. While grants are not evidence of when the buildings were constructed, they
provide an indication of the date at which a place was permanently occupied. The grant and
subsequent transfer papers sometimes include incidental dating information and may include
survey diagrams with the buildings marked on them.

The archaeological evidence is important. Although the artefacts have often been scattered
over the years through flooding, ploughing or clearing, whatever was brought to the settlements
and used and discarded is still lying around somewhere, provided it has not rotted away.
Ceramics and glass are particularly durable, and we noticed both thin scatters and thick deposits
(usually marking old kraals) of sherds dating from the 1860s onwards. The sheer density of
imported materials dating from the late 19th century was very striking and we wondered how
this related to the construction of the railway line between 1876 and 1880. It was also
interesting to see pieces of tea-sets and other signs of ‘gentility’, which suggests that far from
being rugged pioneers of an isolated frontier, by the late 19th century some of the farmers’ wives
were entertaining friends with the same bourgeois trappings as townspeople.

_AM 2007_

**Heritage surveys**

Since 2004 Judy Maguire, who lives on a farm near Prince Albert, has voluntarily undertaken
an extensive survey of places in the region in order to establish a database of heritage sites. Her
intention is to promote and facilitate suitable conservation and management planning
programmes by local and provincial government and property owners. Her approach is from an
environmental perspective whereby the landscape settings, the natural and cultural features and
the social histories are integrated into the survey. (She warns that corbelled buildings are only
part of a much larger context and so perhaps it is dangerous to treat them as too ‘special’!) The
original loan places were based on good water points and grazing. These often correlate
with the occurrence of dolerite sills and dykes, many of which can be seen on geological maps.
She also emphasizes the importance of retracing the old wagon roads and other routes, and tries
to follow the old highways and byways herself to better understand how the land was traversed and settled. Many stone road markers are still in place, which were intended to be visible from far away.

Judy describes her methodology as quite simple, although it takes a lot of time and travelling. She finds the work fascinating because of the many new people she meets and the extraordinary amount of unexpected information she learns from them.

First she takes photographs of the sites in an area, then she goes to the local police station to ask if they know of other such places, and makes a list of farms and who to contact. The site locations are plotted on a 1:50,000 topocadastral map, though she agrees it would be a good idea to take GPS readings (global positioning system co-ordinates) as well. If there is a graveyard, she notes any dates on the grave markers.

Oral traditions and older informants are a most valuable resource. Judy chats to the old-timers to find obscure and forgotten places. Local museums are another source of useful contacts, and even if the current caretaker is young and new s/he usually knows the names of ex-curators and ex-mayors or officials, and it is often possible to track them down.

*Judy Maguire pers.com. 2007*

**Expanding our list of places**

We have compiled as much information about corbelled structures that we could find during the time available for preparing this issue of the *VASSA Journal*. This list is just a basis for further research and recording. There are some buildings that are well cared for, several that are derelict or in a state of collapse, and others that will disappear soon. We need to fully record all of these and rediscover those that are ‘forgotten’. Please contact VASSA if you have any information or would like to do some recording yourself.

**Cataloguing**

The basic requirements for a description of any place:

- Name(s) of place, past and present, farm/erf number
- Name and contact details for current owner and/or occupant
- Location (marked on 1:50,000 map plus GPS co-ordinates if possible)
- Description, including past and current usage and condition
- First grant and subsequent transfers
- Photographs – historical and recent (include scale) – and setting in landscape
- Sketch plan of whole werf and relative position of structures (with orientation) – distances can be roughly paced
- Measurements, floor plan and elevation, detail of elements if possible
- Datable elements, such as carpentry, metalwork, ceramics and glass
- Anecdotes
- References and sources
References and Resources

Genootskap vir Afrikaanse Volksunde in samewerking met die Nasionale Kultuurhistoriese en Openplugmuseum, Johannesburg.


---

*Design for a modern house constructed of linked corbelled buildings [Courtesy John Smith, Hillbilly Homes: first published in Farmers Weekly 20 April 2007].*
Maps

Sites visited on the VASSA excursion to Loxton [CB 2006].