

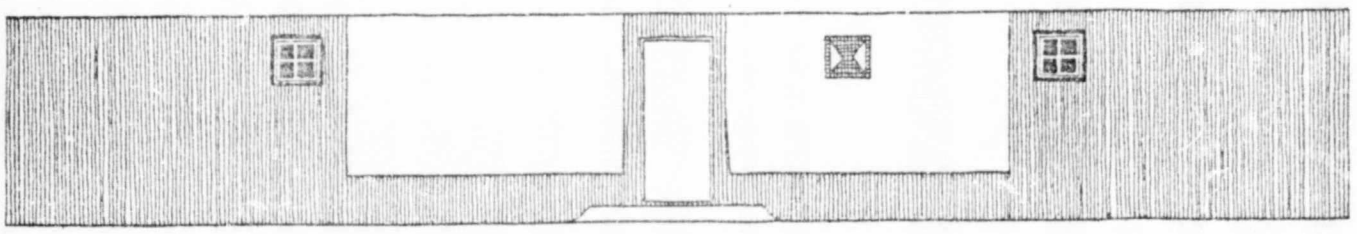
https://dspace.org/

The development of rural vernacular architecture in Southern Africa

Frescura, Franco

2015-01-26
http://hdl.handle.net/10539/16763

Downloaded from a DSpace repository. https://dspace.org/



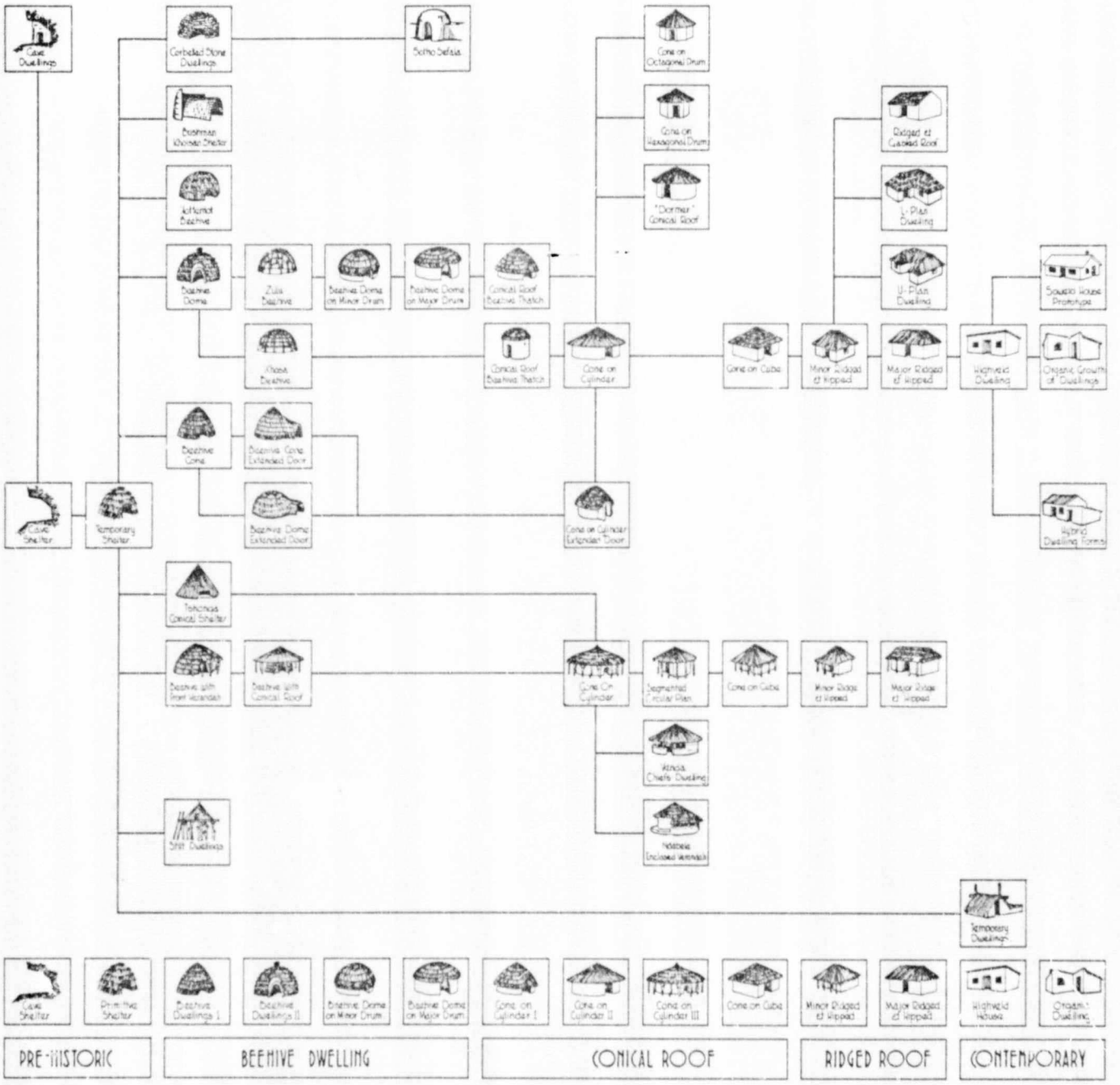
CHAPTER 4: A HISTORICAL DEVELOPMENT

The word "Genealogy" is usually used to imply two things: the passing of time and the genetic relationship, between members of the same family. In the case of this study, the use of such a word is probably misleading and incorrect. For one thing it implies the existence of a direct descendency from one house type to the next and the concept of having papa houses, mamma houses and baby houses is patently absurd. Also many different "generations" of house types may often be found smugly side by side within the same settlement thus negating any "passage of time" that a "genealogy" may wish to suggest.

On the other hand field research has shown that, within the stages of development described in the previous chapter, it is possible to prove that most house types falling within the same stage are patently adaptations of the same basic form and that, taking into consideration structural, technological and constructional factors, we can show that one type signifies an improvement upon another "previous" type. To ignore this kind of relationship within such a study would be to reduce its import entirely and hence it becomes necessary to invent a model which would explain these complex relationships. Also although the element of time is not necessarily intended, research has shown that a number of house types which we know to have existed one hundred, fifty or even twenty years ago are no longer found in the rural vernacular and thus some element of time should be implied in our model.

The model of a "genealogy" springs to mind almost immediately for despite its obvious shortcomings it does explain in fairly simple terms the hierarchical development of the house types involved in this research. What it does not explain is the evolution from the one developmental stage to the next but it is hoped that this will be done in the course of the detailed study itself. Thus perhaps we should do away with the misleading term "genealogy" altogether and call it an "Historical Development".

Figure 20.



Historical development of the rural house form.

Such an historical development should be seen therefore as explaining partly the links that exist between house types, but perhaps more important, serving to outline the growth in building technology, the increased space demands that our rural inhabitants are making of their own dwellings and the increasing sophistication of these demands. Also such a chart can serve as a pointer to the future to those who wish to harness rural architecture as a means of solving our growing housing shortage.

In the previous chapter, the development of the house form was described in terms of broad "stages". In a more detailed sense however, matters were not as simplistic as this outline may lead us to believe. For one thing structure did not evolve from one stage to the next as a matter of course or because any one person or group of people decided it should. Subtle changes were made as the house structure and form responded to environmental, social, economic and technological pressures. Some stages of development would not have occured without certain technological innovations which made change possible.

On the other hand as rural society abandoned its early nomadic life style and became increasingly sedentary, it was only natural that it should abandon the beehive hut, cone or dome, for something more permanent and solid.

A comparative study and analysis of the recorded house forms reveals that most if not all fall within the bounds of nine different and definable categories — all but the first two still being constructed in modern times. However, with the increasing spread of modern materials and greater semi-urban concentrations at least another three are in danger of extinction in all but the remotest of rural areas.

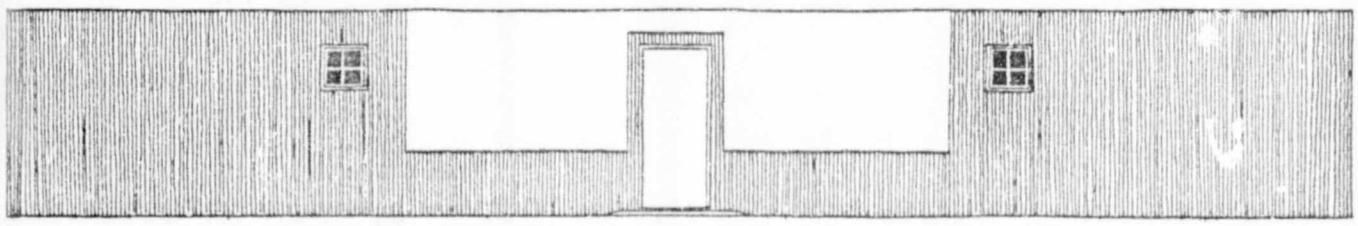


Figure 23.

Walton "African Village" 1956.

CHAPTER 5 PREHISTORY

Prehistoric dwellings in Southern Africa may be said to fall into three major categories:

a. Crude shelter: this will be dealt with more fully in the chapter dealing with the temporary hut.

b. Cave shelters: little if any development of this genre occurred in this country and certainly it has never reached the high levels of adaptation achieved in parts of North America and Europe. What little did occur may be found mostly in the mountainous regions of Lesotho. They are not however considered of major import to this study, being merely a peripheral development of a very localized regional nature.

c. Stone and Iron Age settlements: these are presently the subject of much specialized research by archaeologists who with the aid of radiocarbon dating techniques have been able to identify communities with a wide variety of social and economic patterns extending back in time over more than 1500 years. This study being primarily an architectural one can only hope to have a general awareness of such developments and then only when data uncovered by archaeologists bears directly upon matters architectural.

It is this last category which has a direct bearing upon us as architects and our interest lies in two major developments: the corbelled stone hut and the bilobial dwelling.

The corbelled stone hut

Although white travellers had crossed the Orange River at various times during the eighteenth century, our first written accounts of the areas today known as the Northern Cape and the Orange Free State only date back to the early 1800's. Various mentions are made of ruined stone villages and deserted habitations in the accounts of explorers and missionaries but no real interest was taken in these until 1925 when the first archaeological studies began to be undertaken.

Figure 24 d.

"Rock inscriptions by Bushmen": Holub *(Seven Years in South Africa* 1881).



Arbousset and Daumas "Narrative of an Exploratory Tour" 1846.

What can be established however is that in 1846 Arbousset and Daumas travelling through the present-day northern O.F.S. encountered numerous stone villages, some still inhabited but the vast majority recently abandoned, often with signs of strife. Accounts by other travellers indicate that no stone building tradition existed among the then residents of these structures leading to the conclusion that the building had been done well before the end of the eighteenth century. It is however generally accepted in archaeological circles today that these stone structures were the work

Walton "African Village", 1956.

of the Sotho-Tswana peoples. The work of Walton in Lesotho indicated that stone building was still practiced by the Sotho as late as the 1950's although the house types he recorded are vastly different from the corbelled stone huts presently under discussion.

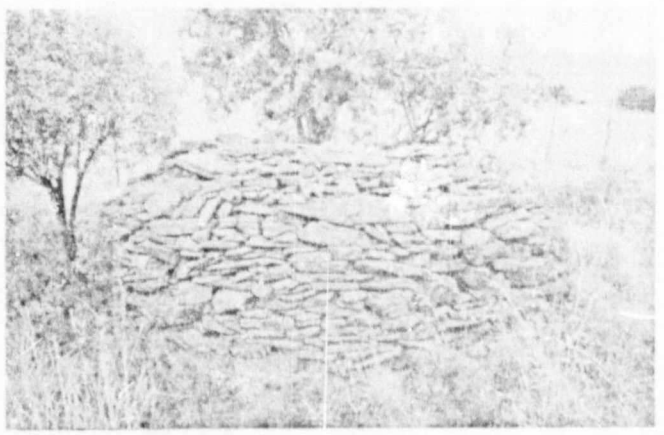
Walton "Early Ghoya Settlement", 1965.

Perhaps in describing the corbelled hut form it would be best to quote directly from one of the pioneer researchers in this field, James Walton, who in his "Early Ghoya Settlement" (1965) said:

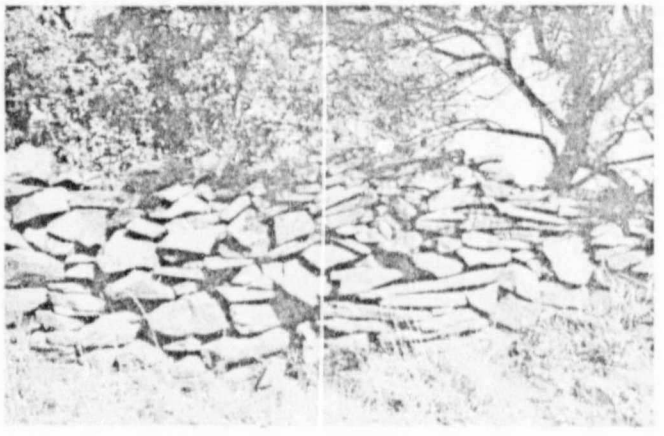
> "The most interesting features of these settlements are the huts themselves, which are corbelled stone beehives built from boulders of spheroidal dolerite or untrimmed blocks of sandstone. Some of these (huts) are very small having an internal diameter of from five to seven feet (1,500 to 2,100



a



b



c

a. Front view of corbelled stone hut: Allemanskraal Dam, O.F.S.
b. Rear view of same.
c. Detail of stone wall enclosures: Allemanskraal Dam, O.F.S.
d. "Corbelled hut in the O.F.S." Thomas Baines (W.B. Lord and Thomas Baines. *Shifts and Expedients of Camp Life, Travel and Exploration* 1876).



d

metres) and an internal height of about four feet (1,200), with the result that many visitors have found it hard to believe that such huts could ever have served as dwellings. The walls curve inwards until an opening, up to eighteen inches (450mm) in diameter, is left at the top and this is closed by a single large flat slab on which a mass of rubble was piled. The entrance is a small opening, not more than two feet high (600 mm) and one foot six inches wide (450 mm), which was closed by a flat stone slab pulled into position from the inside".

Figures 24 a. b. c.

Walton then goes ahead to describe other types of huts whose maximum size does not seem to have exceeded a 2,700 diameter and an 1,800 internal height, this limit being set by the building technology rather than the residents space requirements.

The bilobial dwelling

The bilobial house represents a highly sophisticated concept in household organisation and it takes into account the special relationships which exist between the family's semi-private and private areas and the settlement's common zones. Originally the layout plan took the form of two horn-shaped enclosures (lobes) facing each other with the hut or house being located at the point of conjunction of the two. Access was through the fore-lobe which was usually defined by a low stone and daga kerb which supported a reed or grass screen. This was the semi-public, semi-private space which although visibly accessible, nevertheless constituted a definite territorial statement and entry was probably subject to invitation or social taboos. Beyond this was the dwelling which served as the enclosed private area to the family. The rear court or lobe was accessible either through a doorway at the rear of the hut or through an entry set at its side. The rear lobe was defined by a dry stone wall some 1,500 m in height which being visually inaccessible, provided the family with an external private area. The fore-lobe not only served as an entry point to the bilobial unit but also provided a connection between the communal space of the settlement and the privacy of the family unit.

Michael Taylor (personal communication).

It is a matter of conjecture as to what the actual form was which was taken by earliest bilobial houses. A painting by Campbell early in the 1800's seems to indicate that it consisted of a beehive cone capped by yet another conical roof over it, both sharing the same apex. This conical roof much of the same form as that found on later cone-on-cylinder dwellings was then supported around its perimeter by means of free-standing posts which thus helped to form a wide eaves or verandah about the main house structure. However Burchell in 1812 recorded that the dwellings were in

Campbell "Travels in South Africa" 1813.

Figure 35.

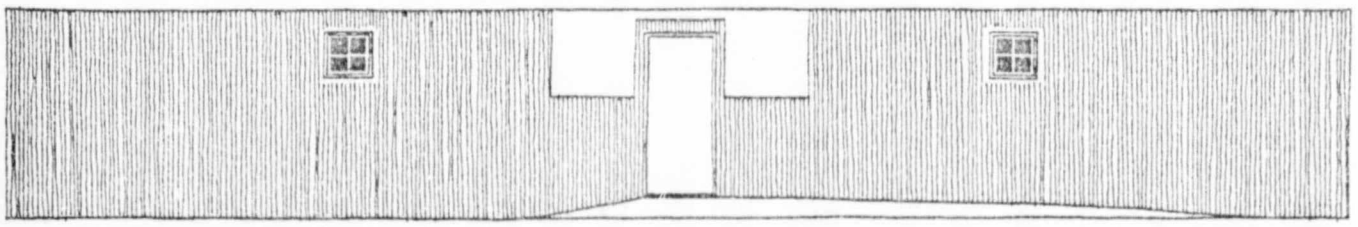
Burchell "Travels in the Interior of Southern Africa" 1822.

the form of a cone-on-cylinder with the eaves being extended all round to create a verandah. As very little other pictorial or written records have come down to us from these early days its seems unlikely that this matter will every be satisfactorily resolved.

The spiral settlements associated with this type of dwelling will be discussed in a later chapter. However bilobial organization of living space has been recorded in conjunction with various different house types right down to present day rural society.

Although the bilobial dwelling is usually associated with the Tswana peoples, this house type seems to have reached its highest point of development amongst the Ndebele who have refined the territorial statement to a point where up to seven different layers have been recorded external to the house alone. This has been done by means of low daga kerbs and boundary walls which increase in height as the settlement communal area is left behind and the household semi-private and private zones are approached. The house itself can have one or two separate private areas and the rear courtyard is approached from the side of the house. Sometimes this can lead to further courtyards some of which are utilised as animal enclosures and others in their turn serve subsidiary dwelling units associated to the main unit.

The major difference which can be said to exist between the Tswana and the Ndebele bilobial is that while the former sets out to outline a territorial imperative, the latter clearly sets out to impress. It is a matter of debate how the Ndebele have come to adopt a spacial living arrangement so typical of another people when they are generally accepted by anthropologists as being an Nguni group who immigrated into the Transvaal as late as the Difaqane years of the last century. One theory which may be put forward is that as is the case of many other immigrant examples, they may have sought to blend in with their Tswana neighbours as speedily as possible and thus have over-compensated in adopting a hierarchy of living spaces which are typically non-Nguni. Again this is a question which is unlikely to ever be fully resolved.



CHAPTER 6: THE TEMPORARY HUT

The temporary hut has played a very real and important role in vernacular architecture's repertoire of house types beginning in prehistoric times when African man followed the giant game herds and subsisted on a hunting economy through to the present day with its more sedentary rural agrarian society.

Because it is in the nature of a temporary hut to be — well, temporary, we can only surmise as to the form taken by the early shelters of African man. A comparison that does spring to mind is that of the Hlubi herdsmen and boys who, being entrusted with their settlement's cattle, are forced to lead a nomadic life, always keeping on the move following the seasonal rains and availability of fresh grazing. Like the nomadic hunter before them they too have to follow the demands of a herd and thus are unlikely to be able to remain in any one particular place for more than a few weeks at a time. The Hlubi shelter consists of little more than a few branches and saplings set in a circle and bent to a central apex. A coating of mud and cow dung is then applied to finish the structure. It is not unreasonable to believe that the nomadic hunter of yore may have build his home in a similar fashion. Similar structures have been recorded amongst the Bushmen (circa 1825) and by Walton amongst the Sotho in or about the 1950's.

Peter Johnson (personal communication).

Walton "African Village" 1956.

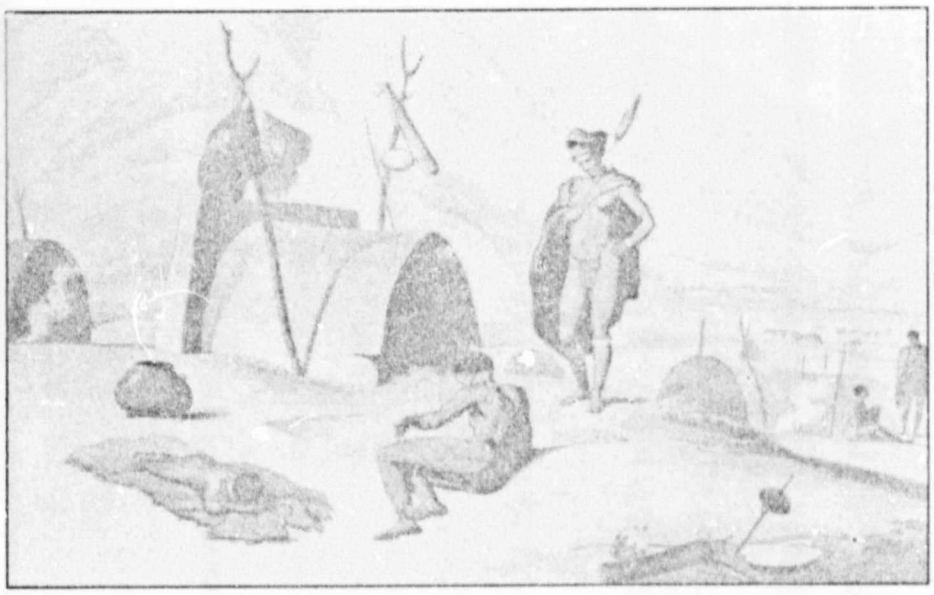
Another form of temporary structure but of somewhat better construction and indicative of a more organized society was recorded during the last century amongst the Bushmen by such varied sources as Backhouse (1839) and his contemporary, Samuel Daniell. These shelters consisted of Khoisan matting which was presumably endowed with a certain amount of stiffness and was arched between two posts set into the ground, thus providing what can only be described as an open-ended tunnel. According to Daniell's record, another similar mat was then stood in a half-arch as an alcove at one end of the tunnel, thus providing the shelter with a certain amount of privacy and shielding it fr n the elements. Backhouse's record shows that these "alcoves" need not be erected at the rear of the shelter but stood alone and were tilted at a slight angle forward. The Khoisan

Backhouse "A narrative of a visit to the Mauritius and South Africa" 1844.

Danieil "African Scenery and Animals" 1820.

Figure 28.

Barrow "Travels in the Wilds of Africa 1834-1836".1971.



"Bosjesmans frying Locusts": Samuel Daniell *(Airican Scenery and Animals 1804-1805,* 1820).

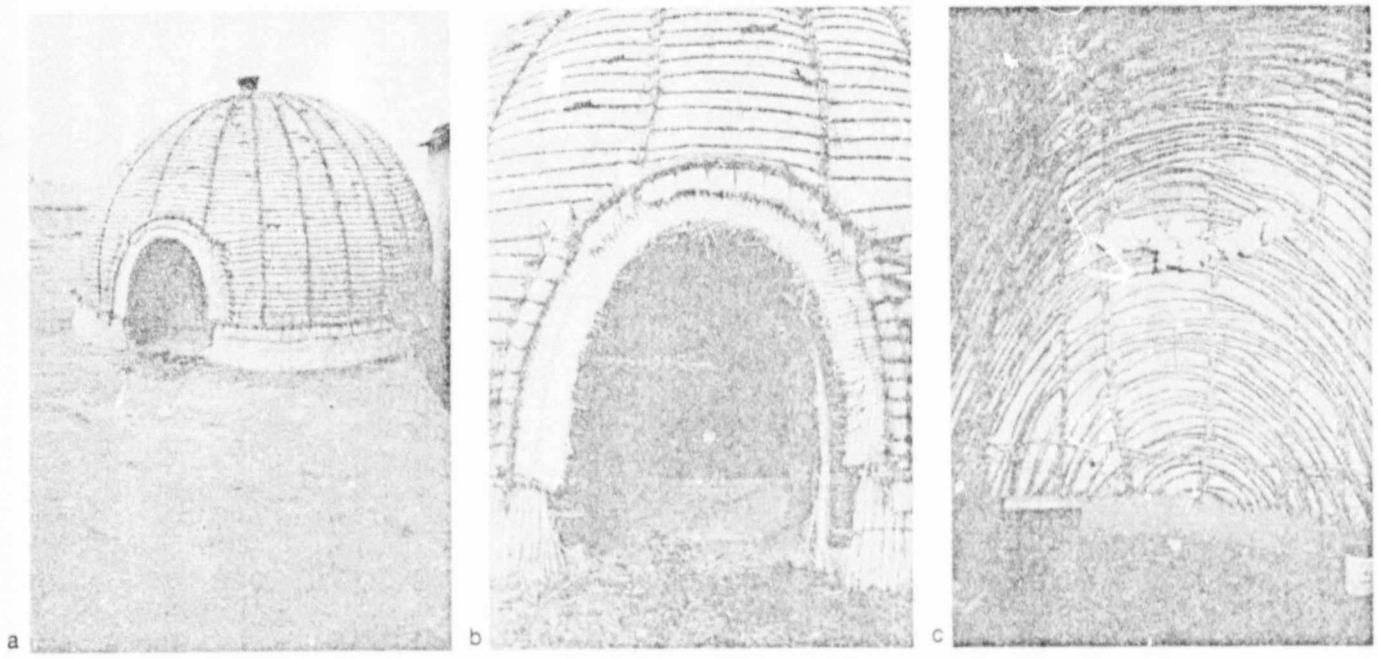
matting shelter could be rolled up the next morning and erected that night at the site of the next bivouac.

The temporary structures of the Bushmen are related, in a way, to those of the Hottentots in that the latter's were also fully demountable and could be erected at night after a day's trek. However their beehive form places them in a category in their own right and will therefore be dealt with in subsequent chapters.

Temporary structures however are not the exclusive domain of nomadic societies. Even where a group has achieved a relatively stable and sedentary existence with an economy which is orientated towards agriculture, we find that the temporary hut either still is or was used until comparatively recent times. Such structures are usually associated with the taboos and customs of rural society and as such are linked with such transitionary stages of life as initiation, courtship and death.

Special initiation lodges are known to be built among at least two of Southern Africa's groups: the Xhosa and the Venda. Although research towards this study has not as yet yielded first hand evidence of the form taken by the Xhosa initiation lodge, published pictorial records by other sources tends to indicate that the building is in the form of the traditional Xhosa beehive dome, a house type which does not seem to have commonly been built in the Transkei for a number of years.

Duggan-Cronin, "The Bantu Tribes of South Africa — The Xhosa and Thembu" 1939.



a. Zulu courting hut: Bergville district.
b. Detail of doorway.
c. View of interior.

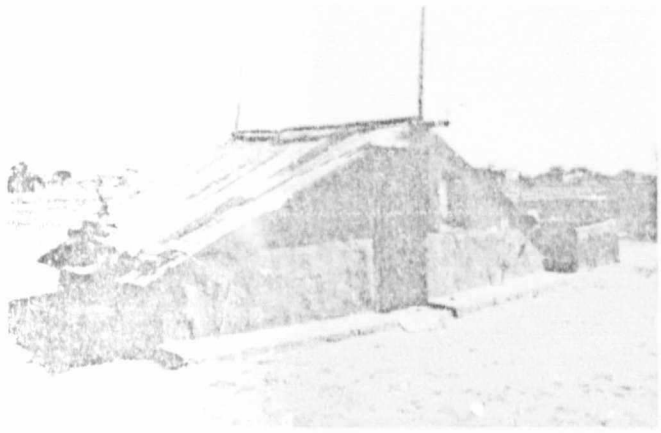
Figures 29 a. b. c.

Amongst the Venda however there seems to be little difference between the form of the initiation lodge and that of ordinary houses, save in the case of one vital detail: the lodge has two doors, one at either end, instead of the customary one. The reason for this is one of ritual for whilst during the period of training the young initiate is expected to use the one door only, at his graduation as a young adult he will leave by the second door, thus symbolizing transition into adult life. In both Xhosa and Venda cases, the lodges are burnt to the ground once their function has been fulfilled and are rebuilt afresh when a new batch of youths requiring initiation comes of age.

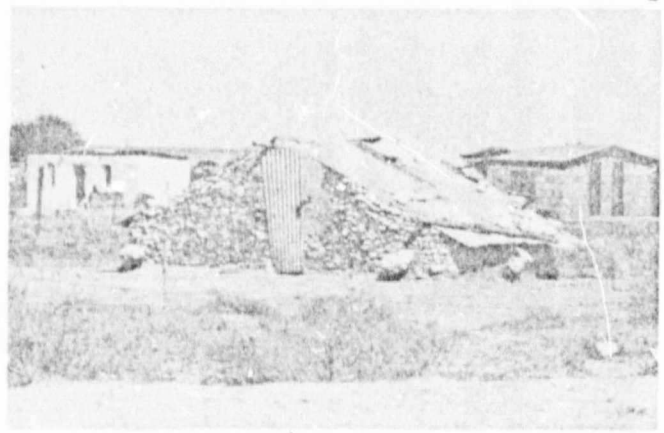
The rites and taboos of courtship vary greatly from group to group in Southern Africa. In some cases premarital sexual contact between young adults is strictly prohibited whilst in some others it is accepted and actually facilitated. The Zulu can probably be said to fall into this latter group although they have developed a strict code of conduct which does not allow for the sexual act to be consummated. They do however allow for courting couples to spend the night together and facilitate this by building a special house or hut which is then set aside for the special use. One such house was recorded in the Bergville district of KwaZulu. It was an almost perfect miniature of the traditional beehive dome being only some 3,300 m

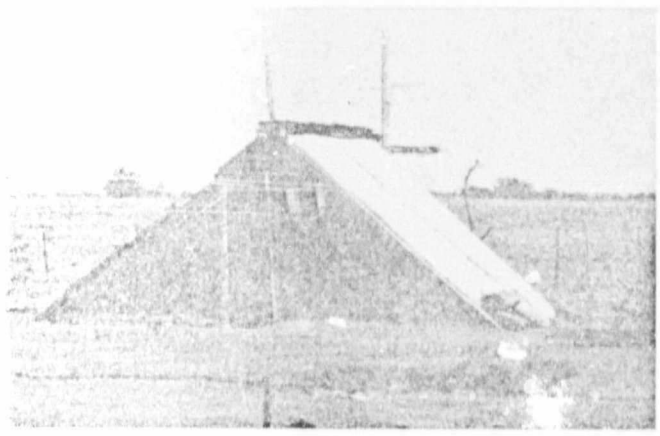
a. Temporary dwelling with open-air kitchen to one side: Montshiwa, Bophuthatswana.
b. Temporary dwelling: Montshiwa, Bophuthatswana.
c. Temporary dwelling: road Montshiwa to Disaneng, Bophuthatswana.
d. Temporary dwelling: Morokweng, Bophuthatswana.

a

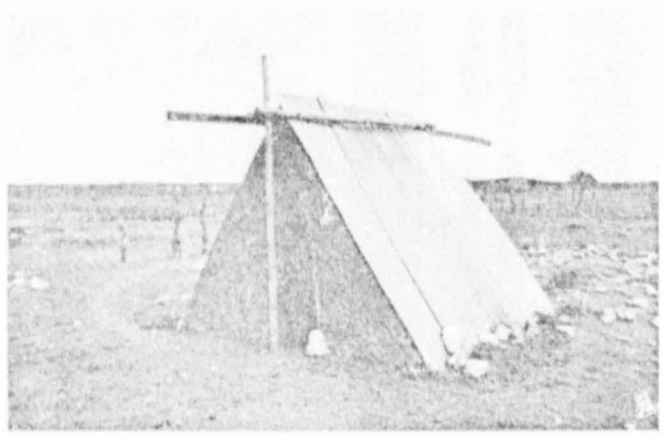


b





c



d

in diameter instead of the usual 5,000 m to 6,000 m and having no central cooking hearth nor the usual twin posts which carry the structure's supporting trellis. Significantly it was sited on the outskirts of a settlement grouping of some fifteen house units, none of the others being in the traditional beehive form.

Rural society generally also has a large number of taboos associated with death. In the course of field research towards this study, evidence of such taboos has emerged in such disparate areas as the Ciskei, Transkei and Bophuthatswana, all in the form of deserted, abandoned and crumbling ruins of houses whose owners died within their walls. Although no special brief has been made in the study of a subject which quite clearly is more within the province of anthropologists than of architects, it is relevant to note that amongst the Bushmen a complete settlement may be abandoned because a death has taken place whilst the Hottentots are known to have erected special temporary huts to accommodate their dying to prevent their death from contaminating a valuable house unit. Where the ill subsequently recovered their health, they were then moved back into their own houses.

Fourie "The Bushmen of S.W.A." and Vedder "The Nama" both "The Native Tribes of S.W.A." 1928. Cape Times.

The temporary hut has also emerged in recent times as a structure whose very existence has been necessitated by economic factors. Such structures have been recorded largely in the areas of the Northern Cape to the north and west of Mafikeng although one very similar type was recorded in eastern Lebowa, some 650 km away. They are essentially lean-to buildings consisting of two major timber supports approximately 4,000 m apart bridged by a timber beam at a height of some 2,000 m. Sheets of IBR are then leant against this timber frame from either side and the structure is braced by the two end-walls, one of which includes a doorway opening.

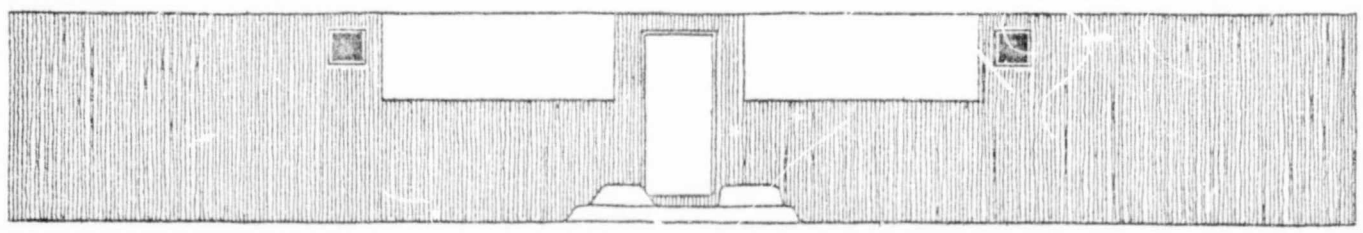
Figures 30 a. b. c. d.

This results in a house form which is triangular in its front and rear elevations. The functions of such a temporary hut can be many. In one example recorded the owner was a young man who wished to break away from his parents' home and create a household of his own. Unfortunately he worked in Kimberley and had little time to build himself a more substantial home. In another example, a young Tswana man had inherited his father's house in which he now resided. His young bride lived in such a temporary hut while she waited for her husband to build her her own separate house. In yet a third example, a young married couple lived together in a temporary hut whilst they both built a more substantial home alongside it and saved up for such luxuries as steel window frames and a timber door. In each case the intention was to ultimately demolish the temporary structure and cannibalize its more valuable materials.



HOE DE HOTTENTOTTEN HAAR HUYSEN BOUWEN.

"How the Hottentots build their homes": Peter Kolbe (*Beschryving van de Kaap de Goede Hoop* 1727).



Peter Kolbe "Beschryving van de Kaap de Goede Hoop" 1727.

Figure 32.

CHAPTER 7: THE BEEHIVE HUT

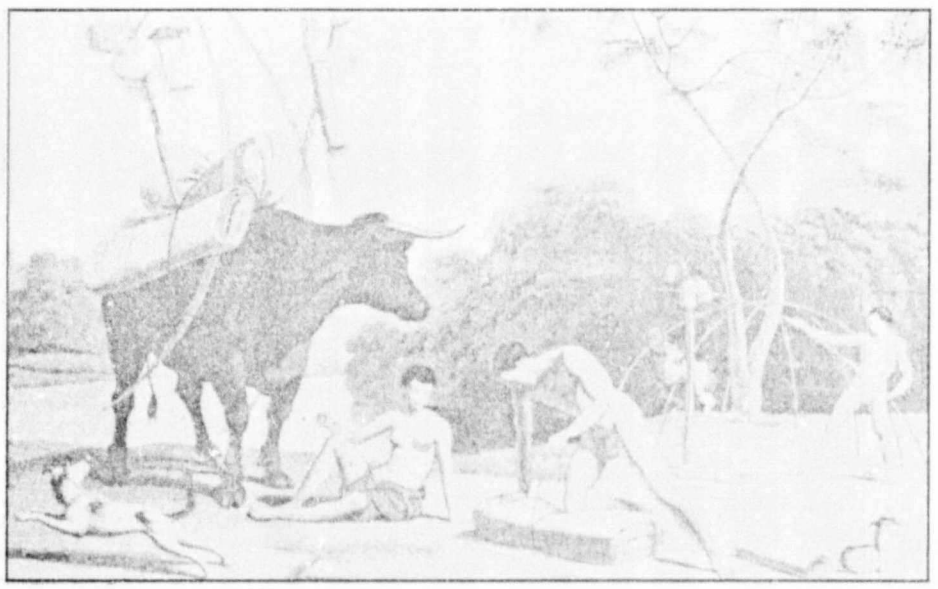
Pictorial records and travellers' accounts dating back to the earliest years of white settlement in the Cape lead us to believe that the majority of the peoples of Southern Africa, during the latter half of the seventeenth century, built and lived in beehive-shaped dwellings. It does however seem that the basic beehive form was subject to environmental and socio-economic variations which differed from group to group.

The Hottentots

Perhaps the earliest full recordings of Hottentot beehive house forms and building methods were made by Peter Kolbe, a Dutch traveller to the Cape during the first quarter of the eighteenth century. In his book "Descriptions from the Cape of Good Hope", first published in 1727, he devotes one full chapter to an account of how Hottentons laid out their settlements and built their homes.

The Hottentot beehive hut seemed to be built with two objectives in mind: to provide a sound shelter from the elements and, in view of the nomadic nature of Hottentot society, to be easily dismountable and portable. They apparently consisted of a light sapling framework, the uprights being planted into the ground in a circle of some 4,200 m diameter and brought radially to a central crown, with horizontal bracing running parallel to the ground in hoops of diminishing size as they advanced upwards towards the apex. The crossing point between horizontal and vertical structural members was bound with either woven grass ropes or, more likely, with leather thongs which would be reusable. The whole frame was then covered over with grass or perhaps reed mats closely woven to increase their waterproofing capacity. Skins also seem to have been used, probably as skirtings.

Although no records are known to have been made on this particular point, we are left to wonder as to the availability or, conversely, the scarcity of suitable materials to the Hottentot house builder. Because of its concepts



"Korah Hottentots preparing to move": Samuel Danieil (*African Scenery and Animals 1804-1805*, 1820).

Figure 34.

of portability and re-usability, the Hottentot dwelling is believed to have been unique amongst the peoples of Southern Africa, but the nomadic nature of Hottentot society is not in itself enough reason to justify the development of so sophisticated a house form. The Bushmen were equally if not more nomadic in their life-style yet they are known to have built both portable and temporary huts — the latter being easily abandoned through any number of different reasons. Thus perhaps we can only conclude that either the Hottentots were more fastidious in setting their housing standards, or that indeed their wanderings over the Cape would lead them into areas where building materials were scarce.

Today the Hottentot nation has become somewhat diminished in numbers and has survived as what ethnographers call the Nama, their main settlement areas being the Namaqualand through into southern Namibia. Their original house forms have largely been abandoned although a few are believed to have been built in modern times, albeit in a much changed and bastardised form.

The Tswana

Evidence of the Tswana ever having built houses in the form of a beehive is sketchy and open to much speculation. Certainly the records of such travellers as Burchell in or about 1812 indicates that they had by then made the full transition to a cone-on-cylinder house form. The main evidence

Burchell "Travels in the Interior of Southern Africa" 1822.



"A Boosh-Wannah Hut": Samuel Daniell *(African Scenery and Animals 1804-1805*, 1820).

that the beehive had ever been used by them lies along two main lines: pictorial and archaeological.

Michael Taylor of the Archaeological Department, University of the Witwatersrand, has conducted a dig at a stone age settlement sited just north of Parys called Buffelshoek 471 IQ, which has been radio-carbon dated back to approximately 1750 A.D. There, amongst others, he excavated a bilobial-type hut which, in reconstruction, could be interpreted as having been built in the form of a beehive cone. The dwelling was circular in plan and showed evidence of having had a shallow verandah to the front which was roofed over and paved with pot shards. The hut had been fired and wall fragments showed evidence of having consisted of a timber frame which had then, in part at least, been plastered over with mud. However not enough baked wall fragments were found to justify the supposition that the house was of the cone-on-cylinder form recorded by Burchell some sixty years later among the same people. Thus archaeological evidence in support of this theory is largely based on its lack rather than its positive existence.

Michael Taylor (personal communication).

Figure 35. More important however is a watercolour drawing executed by Daniell early in the nineteenth century of what he called a "Boosh-Wannah Hut", or a "Tlapin Homestead". This distinctly shows a cone-on-cylinder verandah house of the type that was and still is built today in areas of the Northern Cape and western Transvaal inhabited by the Tswana. This

particular example differs from all others however in that the internal cylinder which differentiates between the interior and the external verandah is not a cylinder at all but its walls definitely slope inwards to give a conical dome which shares its apex with the main conical roof supported by the verandah posts. It is difficult to say with any certainty and without further evidence whether this dwelling was typical of its time; whether it represents a transitionary stage in Tswana house form development between the beehive cone and the cone-on-cylinder; or whether it was just the result of an artist's faulty technique, bad draftmanship or simply a poor memory. Even accepting it to be a true representation of what was soon to become an extinct house form, we can even then only surmise as to what development the house form took. Did it for example begin as a "temporary" beehive cone which then was to serve as the basis for later growth as, at first, a verandah supporting a conical roof was added, and then later, as the dwelling gained in permanence and hence in substance, the beehive cone below the conical roof was replaced by the cylindrical drum we know from records and from present field research? Or was this how all houses were once built, a beehive cone below a conical roof supported by an independent structure?

Current field research shows that generally Tswanas building a verandah house today, would first erect the conical roof supported by the verandah posts and then, later, build either a full drum, a segmented drum or a cube, internal to and independent of the main timber structure. In such a case, the beehive cone depicted by Daniell would be little better than a temporary hut built in expectation of improving the dwelling at a later stage. Unfortunately any one of these three alternatives is feasible and judgement must await the discovery of further documentary evidence.

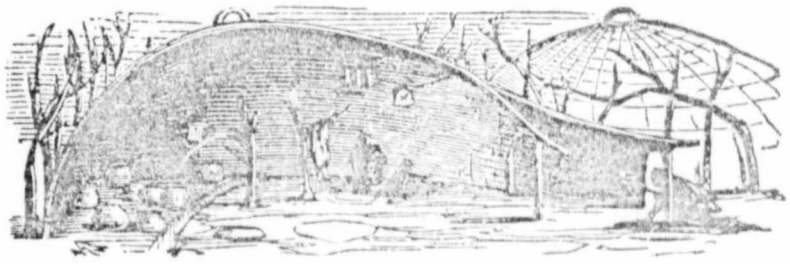
The Sotho

The pictorial and written accounts of such eighteenth century travellers as Barrow, Casalis and Backhouse are all in accord in their descriptions of the Sotho beehive structures of the time. Through them a composite picture emerges of a house form "something like sections of sparrow-pots" (Backhouse) — a beehive dome structure with an extended tunnel entrance about half a meter in height. Construction was of a sapling framework covered over with grass or reed thatchwork and well plastered with daga (mud and cow-dung mixture). Backhouse, whose description this is, does not specify just how far the daga plastering extends, whether it covered the entire structure or perhaps only the lower skirtings of the hut as Walton's records might suggest. Modern field research among the Zulu would support the latter possibility. Casalis also states that these were often decorated, presumably referring to the plastered areas of the hut.

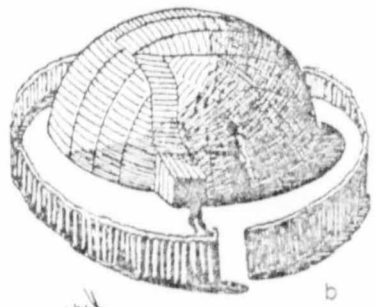
Backhouse "A narrative of a visit to the Mauritius and South Africa" 1844.

Figure 37 a.

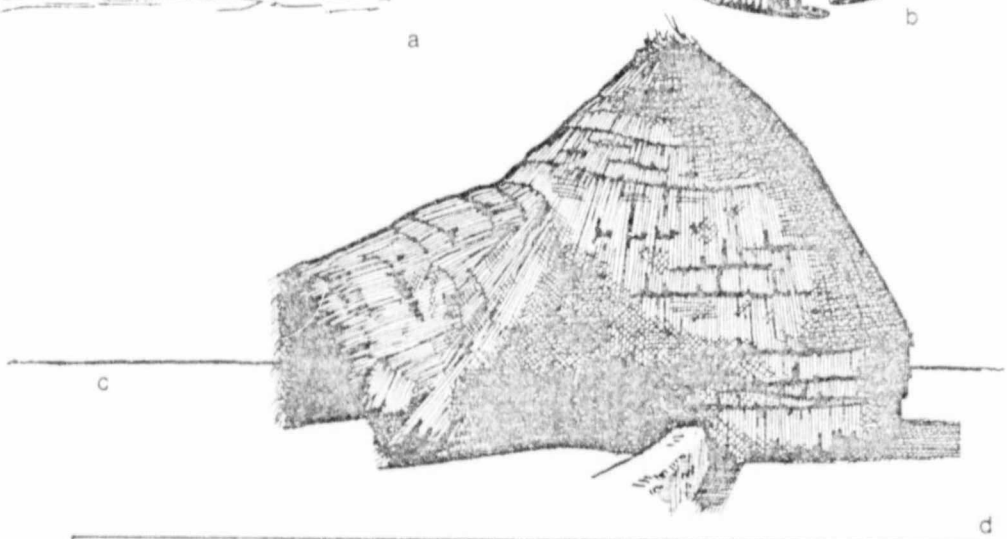
Casalis "The Basuto" 1861.



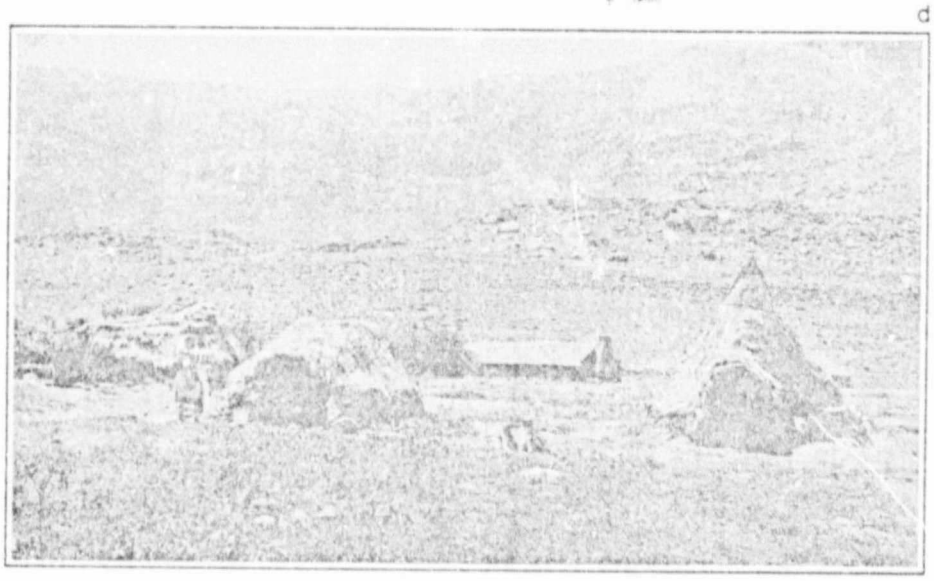
a



b



c



d

a. "Section of a Basotho Hut": Eugene Casalis (*The Basutos* 1861).
b. "Tamaha Hut": John Campbell (*Travels in South Africa* 1815).
c. Sotho beehive cone with extended doorway: after a photograph by James Walton.
d. "Native huts, Lady Grey": Postcard, circa 1910.

Historical records of their distribution are also significant, this house-form having been recorded in settlements of the Taung, the Tloka and Moshoeshoe's people at Thaba Bosiu and Morija, the three major political divisions in this region, whilst, in marked contrast, the homes of the Rolong, a comparatively recent Tswana refugee group who fled from north of the Vaal River during the Difaqane years, were recorded by Backhouse in 1844 at Bethulie and Thaba'Nchu as being cone-on-cylinder house forms.

Backhouse "A narrative of a visit to the Mauritius and South Africa" 1844.

Judging by pictorial evidence from the early years of this century through to Walton's research in the 1950's it appears that two major house types evolved from this early basic form, differing only in their respective treatment of the crown or apex of the roof. The sapling framework was brough radically to a central crown where it was bound. Horizontal hoops parallel to the ground were then used to brace the structure. The entrance tunnel was formed by a series of arches which extended the hut into the "sparrow-pot" form described by Backhouse.

Walton "African Village" 1956.

Figure 39 a.

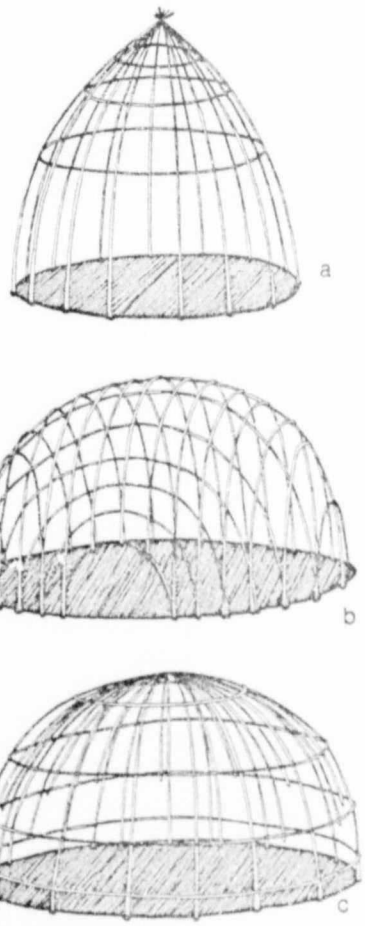
A masonry wall was then built peripheral to and outside of the sapling framework, the gap often being filled with brushwood. Finally the whole was thatched, the cladding being allowed to fall over the external wall and even reach the ground. Walton gives the reason for this stone wall as arising from a need to exclude surface water run-off and animals out of the hut, but it seems that its use would also improve thermal capacity and structural strength.

Figure 37 c.

The differentiation in house types arose in the rendition of the roof apex. In the first and probably less sophisticated example, the framework was brought over to give a beehive dome shape similar to the early "sparrow-pot". The second and more widely recorded type brought the sapling framework to a sharp apex we can describe as a beehive cone, this structure probably being more suited to the seasonal winter snowfalls common to the region.

Figure 37 d.

Although no factual records of the requency of occurrence of this house form into the twentieth century have been found, pictorial evidence would indicate that the beehive dome with extended doorway was still found during the early 1900's, that by the 1920's it becomes relatively scarcer and in the 1950's it is no longer recorded. Certainly, if Walton recorded one, he makes no mention of it, nor do any feature in his book. On the other hand it appears that the beehive cone with extended doorway becomes more predominant with time and while some were recorded in the early 1900's they seem to have entirely supplanted the hemispherical type by the time Walton conducted his field work.



a. Sotho beehive hut framework: after Walton.
b. Zulu/Swazi beehive hut framework.
c. Xhosa beehive hut framework: after Walton.

Figure 42.

Current field research has been unable to determine whether the beehive with extended doorway survives to the present day. Certainly none were recorded in QwaQwa, in the Orange Free State or in the Herschel and Lady Gray districts where they had previously been built, and other difficulties have made travel in Lesotho impossible. Walton writing in 1956 states that it was still being built in his time as a cooking hut which indicates that even then it was being supplanted by other house forms in providing living space and that going by the Xhosa, Swazi and Zulu examples, it was not likely to survive long in today's society.

The Nguni beehive dome

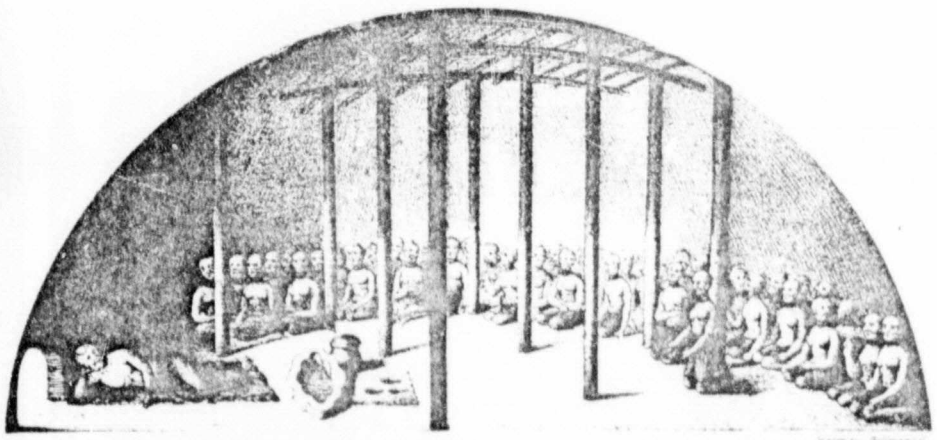
This is a house type which although widespread in KwaZulu, Swaziland and Transkei up to the early years of this century, is today only found in some parts of KwaZulu and Swazi and even then very seldom in its purest form.

Traditionally the Zulu beehive dome consists of a series of saplings planted in a circle into the ground, and bent into arches spanning from the one side of the circle to the other beginning with the great arch at the diameter of the circle and diminishing in size as the circle reaches its two extremities. A further and more closely-spaced set of saplings is arched over this first dome at right-angles to it, the two being bound together by means of woven grass ropes at every point where the second frame crosses over the first. The resultant structure may then be cladded in any one of the following techniques:

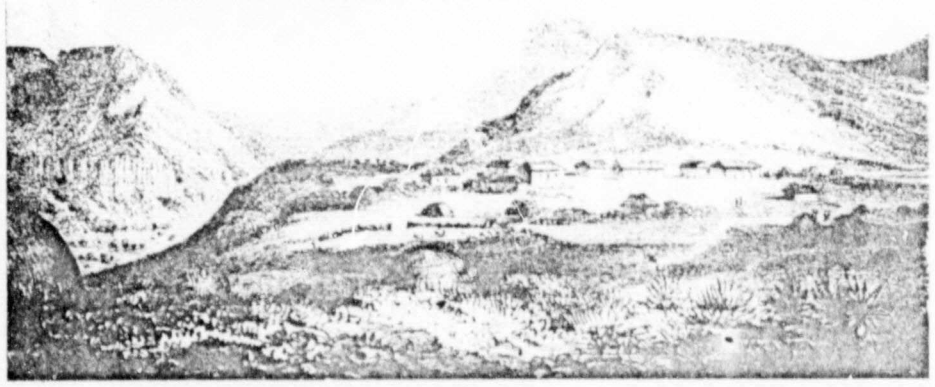
- Grass mats are placed over the crown of the hut in varying layers and bound onto the framework. The whole is then thatched over with grass which is sewn onto the frame by means of woven grass ropes which, once the task is completed, give the appearance of a gigantic hair net.
- Grass thatch is sewn onto the frame in the same manner as above but the mats are then placed over the water-sensitive crown externally.
- The frame is thatched in the usual manner but no matting is used to waterproof the crown either internally or externally. Instead the woven grass ropes which overlay the thatch are brought radially to the central crown where they are fashioned into an ornate and decorative knot known as the "ingqongwana".

Internally the framework is supported by, usually, two posts which in their turn carry a trellis taking the major part of the hut load. However as many as four posts have been recorded currently and historical and pictorial records show that as many as nine or sixteen supports could at times be

Figure 40 a.



a



b

c

a. "Dingarn's house": Gardiner (*Narrative of a Journey to the Zoolu Country* 1836).
b. "Bunting Wesleyan Mission Station": Gardiner (*Narrative of a Journey to the Zoolu Country* 1836).
c. "Natives building a hut": Postcard, circa 1910.

used in the larger hut examples. These however do not seem to be built today. The hut is usually finished by forming a low earth kerb which runs the internal perimeter of the hut, the thatching being allowed to reach the ground outside.

Figures 44 a. b. c. d.

It is however in the finishing of the skirting and the kerb that developmental variations begin to occur as, at first it gains in substance and in height and later begins to fulfil a structural role. These are the first steps towards raising the dome onto a cylinder which ultimately culminates with the beehive dome evolving into a conical roof. As the kerb is raised, so too is the thatching, it no longer having a framework to tie against. The low earth wall is thus exposed to the elements and while it is often found thus, in some of the better finished examples a grass mat is tucked in beneath the thatch eaves and run about the external wall perimeter, thus affording it protection from rain and surface water run-off.

The doorway is one of the key aspects of the beehive dome. It will be evident from the enclosed sketches that the cross-arched framework is only able to accept a doorway of limited size, usually that of the smallest arch. Any increases in the door size will inevitably weaken the structure and hence reduce the efficiency of the hut. Similarly this house form is unable to provide window openings and all light and ventilation must come from the doorway. Smoke from the cooking hut is allowed to percolate through the thatch.

Various traditional and cultural elements also pertain to the hut form in Zulu society. Specially provided medicine is usually interred below the entrance arch or embedded in the thatch over it to ensure that enemies of the house may not pass within. A low doorway passage also served a defensive function by ensuring that anyone entering the hut would render his back vulnerable to the defenders within. Conversely however, should the hut be set alight, as it often was, anyone attempting to escape would be highly vulnerable to attackers without. To exit back first from a hut is considered a sign of distrust of the owner and is taken to be a slight.

Berglund "Zulu Ideas and Symbolism" 1972.

The planning of the central cooking hearth and the two support posts is such that the circular room is divided into two, the half on the left being the wife's and on the right the husband's. A raised earth shelf to the rear of the hut and opposite the doorway, called the "umsamo", serves as storage space for household and cooking utensils.

The structure of the Swazi beehive is not believed to vary substantially from that of the Zulu except perhaps in the fact that the second sapling dome set at right angles to the first is not as closely set and as compact as in its Zulu counterpart.

Author Frescura Franco
Name of thesis The Development Of Rural Vernacular Architecture In Southern Africa. 1980

PUBLISHER:
University of the Witwatersrand, Johannesburg
©2013

LEGAL NOTICES:

Copyright Notice: All materials on the University of the Witwatersrand, Johannesburg Library website are protected by South African copyright law and may not be distributed, transmitted, displayed, or otherwise published in any format, without the prior written permission of the copyright owner.

Disclaimer and Terms of Use: Provided that you maintain all copyright and other notices contained therein, you may download material (one machine readable copy and one print copy per page) for your personal and/or educational non-commercial use only.

The University of the Witwatersrand, Johannesburg, is not responsible for any errors or omissions and excludes any and all liability for any errors in or omissions from the information on the Library website.