

Research Paper

## Typology of the Black Tents Architecture between Iranian Nomad Tribes

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### Abstract

Evidence of the past shows variation in human settlements. Nomadic house the "Black Tent" shows relationship between humans and the natural environment surrounding them. Black Tents are made of natural materials consistent with environmental conditions. This paper discusses nomadic living space of some Iranian tribes located in different regions to show their unique architecture and culture. Rediscovering different architecture to understand this particular modus in nomadic life which need migration between their summer and winter residences. Given the fact that Black tent material is approximate similar, after thorough study in seven tribes in different provinces of Iran, it has been revealed that general ideas concerning the set up and installation of the tents have been the same. However, Black tent shapes and forms are different in those regions. In this regard, documenting how Iranian nomadic tribes arrange their settlement and the methods of using vernacular material by them, seems to be a good way to preserve their architecture. The Black tent is a synergy of nature and human's creative power. Method of data collection include desk studies as well as observation and documentation of indigenous habitat patterns of Iranian nomads by field observations and ethnography.

**Keywords:** Nomads, Black tent, Natural material, Vernacular Architecture, Iran.

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### 1. INTRODUCTION

There is no evidence of how various forms of prehistoric migration emerged. Hypotheses are based on the studies and deduction on the lives of peoples from the early stages of civilization in the world [1].

Primitive humans (families) lived by collecting the roots of the plants and fruits of the forest trees and hunting wild animals. At this stage of the evolution of culture, which is called the hunting season, they moved from place to place as small groups of several families to find food and hunt animals. At the stage of pastoral economics, with domestication of animals, humans proceed to a new way of life. Since then, humans migrated from place to place to provide livestock food and adapt to natural conditions following livestock pastures and grasses [2].

This research is aimed to examine the nomads' lifestyle in its natural context with which they have interacted for centuries in the form of cultural landscape. Iran has different nomadic tribes and they live in different regions of Iran. They have specific geography, culture, customs,

knowledge and architecture. To better understand the architecture of nomads', this study is focused on living in the context of vernacular architecture and interaction with nature in nomads' home (Black tent) in different geographical locations of Iran.

Nomadic life is organized between their two resident spaces, summer and winter residencies. That means their life style has also been adapted with their moving lifestyle. The best example of this adaptation is nomadic home (Black Tent). This tent is built from natural material around them in their territories. Tent fabric comes from goat hair and its wooden columns are from trees that are found in adjacent nature. They know their environment well and try to use the nature in the best ways. Architecture is certainly one important element of space in nomadic life. It is an essential source of information to understand the original spatial concepts in nomadic culture and relation of people to nature.

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## 2. METHODOLOGY

The paper is focused on the living space of the nomadic tribes in Iran: The nomadic home (Black tent). The findings are used to analyze and preserve their unique culture. The study is about Iranian nomadic housing to collect the typology of nomadic architecture.

The purpose of the study was based on applied research. It has been analyzed descriptively. The research method was based on case studies: documentary studies as well as field studies. Data examination has been done through desk studies, authors' observation during onsite visits and documentation of the indigenous habitat patterns of Iranian nomads using field method.

In this study the authors have tried to discuss Iranian plateau and to focus on these specific regions in order to develop a deep understanding of the prevalent style of housing in the nomadic life of Iran. In this regard and to achieve the best typology of Black tents in different geographic locations, seven tribes in different parts of Iran have been chosen. Although, Iran has more nomadic tribes but the selection of these specific seven tribes were the authors choice based on the links and possibility to visit the sites during recent few years.

The comparative research about Iranian nomad housing is an important topic and is being investigated by other scholars nowadays. The knowledge gained up to the present from the vernacular traditions of the world has created a base and great foundation for field research. However, due to the fact that the written resources regarding the area of nomad architecture, especially in Iran, are very limited, most of the data in this paper is the result of architectural findings and the authors' interviews with Iranian nomads. Data includes findings based on surveys and field trips in Iran and taking into account how discovering tradition and culture merge with what is written into the nomadic cultural landscape. One of the most attractive parts of the study was travelling together with the nomads in order to better understand and analyze the nomadic settlements from the point of view of an architect.

## 3. ARCHITECTURE IN NOMADIC LIFE

Aboriginal ways of life are precious and the Nomadic life, intact after centuries is an example of that. migration is the first kind of interaction between human and natural environment. Normally migration is constant movement between two environments. Nomadic life is not only rooted in an economy supported by herding, but also is influenced by natural conditions [3].

Therefore, mobility makes their life simple enough to live in temporary shelters with limited number of furnishing and resulted in the establishment of temporary settlements. These shelters, the Tents have intricate, versatile design and are created for migrating pattern of life. Inherited from ancestors, structure is used for many centuries and represents local vernacular architecture. Black Tents have been recognized as a cultural symbol among Iranian people and the tribes.

As there is no physical stabilization connecting the tribes to their place, a set of cultural symbols, ideas and beliefs act as an anchor for the tribes' identity. The Black Tent is one of them.

The next parts of the research are focused on the introduction of these tribes, elements of their architecture, interior design and general architectural form of Black tents in different geographical points of Iran to achieved typology of Black tents.

## 4. GEOGRAPHICAL LOCATIONS AND TRAILS

It has been estimated that between 200-150 million people in the world still lead a life centred around herding. Iran with an average annual rainfall of less than 250 mm, (about one-third of the world's average rainfall) is considered to be part of the arid and semi-arid regions. Studies show that sustainable land management and exploitation of such areas are cattle-based. Therefore, migrating from cold to tropical regions and vice versa as a model for adapting to climate change and exploitation of natural resources is one of the main causes of the development of a nomadic life that has lasted for several thousand years in Iran [4]. Since Iran is a great country, the 7 tribes selected in different provinces around the country with different climate and topographic situations are:

- 1- Tribe Qashqai in Fars Province
- 2- Tribe Arkovazi in Ilam Province
- 3- Tribe YaromTatli in Hamedan Province
- 4- Tribe Garapapakh in West-Azərbayjan Province
- 5- Tribe Kormanj in Golestan Province
- 6- Tribe Bahlooli in Sistan Province
- 7- Tribe Soleimani in Kerman Province



Fig 1. Location of the seven tribes surveyed in the research [5]

## 5. ARCHITECTURE TYPOLOGY OF BLACK TENTS IN IRAN

In the table, introduced all 7 tribe's Blank tents, to better understand the needs of research about their natural materials and their interior designs. All of them has different shapes but the same material.

**Table 1.** Black tent architecture in different tribes of Iran



**Tribe No.1.** Qashqai. Winter Black tent [6]



**Tribe No.1.** Qashqai. Summer Black tent [6]



**Tribe No.2.** Arkovazi (Source: Moghadam)



**Tribe No.3.** YaromTatli (Source: Author)



**Tribe No.4.** Garapakh (Source: Author)



**Tribe No.5.** Kormanj (Source: Author)



**Tribe No.6.** Bahlooli [7]



**Tribe No.7.** Soleimani (Source: Author)

## 6. NATURAL ELEMENTS OF THE BLACK TENT STRUCTURE

Typology of the seven Black Tents of Iranian tribes that live in different geographic situations and adhering to

their idiosyncratic cultures would provide ground scope for the research and also assumptions for protection and conservation of the Black Tents as a vernacular occurrence.

This research had been started from Qashqai tribe in Fars Province (Tribe No. 1), therefore this part of research

has more detailed information and in order to avoid repetition, the information concerning the other provinces will concentrate on the elements that differ from the structures, ways and details of the Qashqai Tribe [8].

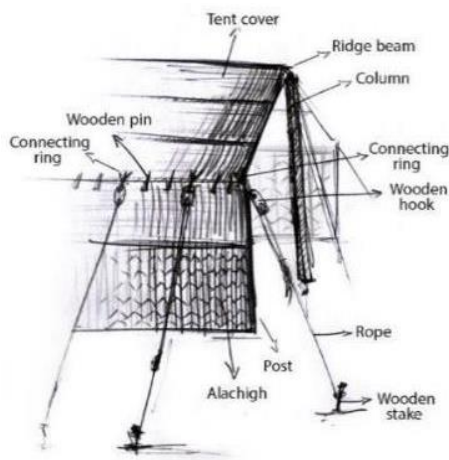


Fig 2. Structure of Black Tent of Qashqai Tribe, Fars Province (Source: Author)

### 6.1. Tribe Qashqai in Fars Province

**Tent cover** consists of two parts: roof/ceiling and wall and both are woven with goat's hair. The method of preparation of the goat hair fabric and tent's wall is the same.

Strips of the tent cover - according to economic situation of families, the tents are 6 to 12 meters long and 3 to 5 meters wide, which means that the area varies from 18 to 60 square meters. Weaving a piece of this size is a hard job; the need for a big workshop for weaving and the weighed cover is hard to transport. Also in the case of weaving large strips it is difficult to weave them tight. After some time, they become loose and their water resistance is insufficient. Therefore, the cover consists of narrow strips about 60 to 80 cm wide, so if it is damaged only one strip must be changed. The new part of the cover is sewn into place with goats' hair yarn.

Walls of Black Tents are rectangles, 6 to 12 m long, and only 1, 5-2, 5 m wide. Like the roof they are made of horizontal strips and connected with the roof with wooden pins. Black tent wall, like a roof, is made of strips of fabric and hangs from the edge of a roof, to which it is pinned. The length of the wall must suffice to cover the perimeter of a tent, with exception of its entrance.

The strips woven for the walls are usually wider because they are not so loaded and do not undergo the same traction and pressure as the roof fabric. Sometimes, when the roof cover is used for some years and is worn out, it is used as a wall.



Fig 3. Narrow strips of Black Tent roof cover are sewn together and while on the roof, the seams are parallel to the ridge of the roof; Qashqai Tribe, Fars Province (Source: Author)

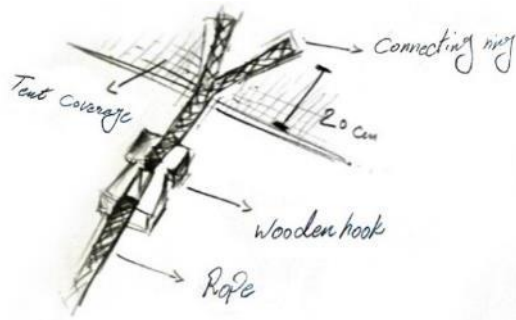
**Wooden pins** connect the tent wall with the roof edge. It is the quickest way to assemble and disassemble two elements of the cover of the tent. The pins are made from tamarisk (*Tamarix L.*) branches, as this timber is light and solid, and accessible in the desert as well as near the rivers. Branches with diameters less than 1 cm and 20 cm long and straight are shaved from bark and sharpened to pierce the fabric easily. The pins are pinned around the edge of roof in 20-25 cm distances. They are not seen from the inside of the tent.



Fig 4. Wooden pin (Source: Author)

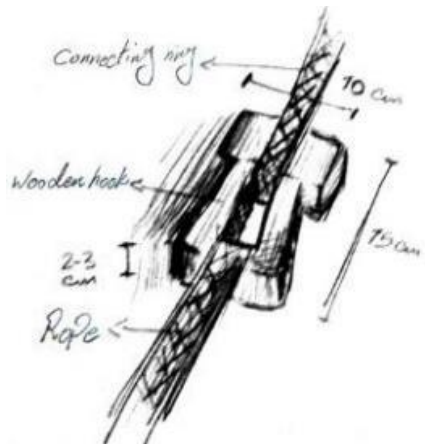
**Connection rings (edge clamps)** are made of goat hair ropes in a way similar to plaits, and are stitched to the edges of tent roof with yarn also made from goat hair, every 60 to 80 cm around the roof. The other end of each clamp is fastened around wooden hooks where the ropes holding the tent in position are knotted. If there are more clamps, the tent is safer in case of strong winds, as the load is distributed more evenly on the surface of the roof. The length of corner clamp is about 20 cm and thickness of the clamp is about 3 cm.

These corner clamps (or connection rings) tear earlier than the other parts of the tents, as a result of tension and a lot of friction due to movements in adverse weather conditions and precipitation. As a result, they should be replaced at least every two years. If the pressure of a tent fabric is too large and the clamp is worn out it can be easily replaced with a new one.



**Fig 5.** Connecting ring of Black Tent. Qashqai Tribe, Fars Province (Source: Author)

**Wooden hook** “belong” to the edge of the roof, as they are hooked on the clamps, that are sewn to fabric edge. The hooks are shaped in such way, that on one side the clamps are attached to them, and on the other ropes that stretch the tent. The wooden hooks differ in shape even within the same tribe, but they are always made of hard and resistant timber, as they must withstand rupture power exerted by a clamp and a rope.



**Fig 6.** Two types of wooden hooks in Qashqai Tribe, Fars Province (Source: Author)

**Ropes** They are made of fleece or goat hair and sometimes with a mixture of both. Each tent needs 20 to 50 ropes between 8 and 10 meters long. The tent ropes are heavily loaded so they must be changed quite often. There is a special node in the middle of the rope to shorten it or make it longer.

**Wooden Stakes** The ropes are attached to the pegs pounded in vertically to the ground. The length of the pegs is about 20 to 40 cm and their diameter is up to 5 cm. They have either appropriate shape or are incised in such way, that a rope bounded to them would not slip off.

In summer the ground is dry and hard, if the pegs are properly mounted, they can hold the tent safely, but in winter, because of rain, soft land and strong winds and storms may pull out the stakes and make the tent fall down. To prevent it the pegs are secured by big rocks around them to stabilize the ground.



**Fig 7.** Ropes of Black Tent. Qashqai Tribe, Fars Province (Source: Author)



**Fig 8.** Wooden Stake (Source: Author)

**Column** a wooden pillar, 2-2.5-meter-high and 8 to 10 cm diameter. Upper ends are indented in dovetail way (V shape) to hold the ridge carrier beam. The height of the columns secures the slopes of the saddled roof and the weight of the tent.

**Posts** encircling the tent, are flat ended as they support edges of the roof.

**Alachigh or Chigh** “ala” is a Turkish word and it means zig-zag in black and white – and this is the colour of this matt. Light colour of debarked branches and twigs contrasts with colour of string made of goat’s hair. The string binds the matts and creates design. Chigh surrounds the wall of the tent making it stronger, guards against wind and dust and makes tents beautiful. Making chigh is one of the crafts of nomadic people and their design differs from tribe to tribe. Alachigh consists of two identical pieces of 1.5-meter width and between 6 and 10 meters long. It is woven with branches and twigs and stands on the ground. When it is rainy or extremely cold it can move to the entrance of a tent and used as a wind shelter. The Alachigh is fastened in its position along the wall, by wooden pillars about 1.5-meter-high, pounded into the ground.



**Fig 9.** Alachigh of Black Tent of Qashqai Tribe, Fars Province (Source: Author)

## 6.2. Tribe Arkovazi in Ilam Province

**Tent cover** of Arkovazi Tribe consists of two elements: roof and wall are both of them made with goat’s hair and the method of preparation and the texture of both is the same. The way they are woven and assembled is the same like in Qashqai Tribe in Fars Province. Usually the cover of the roof of the Black Tent Arkovazi Tribe consists of 12 narrow strips 80 to 100 cm wide. These tents are narrower than the Qashqai Tribe tents (Tribe No.1) and they form the rectangles 12 to 10 m long and 2 to 4 meters wide and their size is connected to the economic situation of the them.



**Fig 10.** The purchased black tent by Edelberg. Part of ethnography of Mosgard museum. 1964<sup>1</sup>[9]



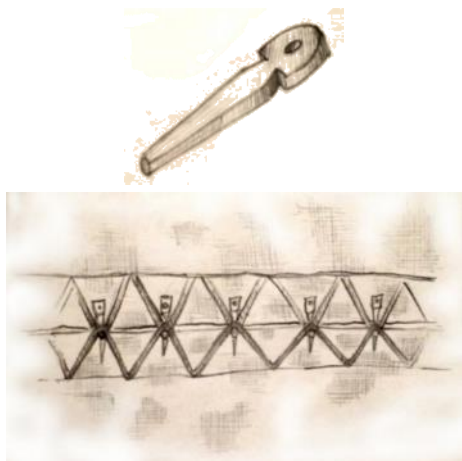
**Fig 11.** The Stone wall around of the tent (Source: Moghadam)

**Black tent roof** consists of two parts that connect to each other in the middle of the ceiling roof, thus at the edge of these two parts, a narrow strip of goat hair is stitched to the roof that has some delicate strap or hook. Each hook passes through the other hook by a small wood.



**Fig 12.** Wooden pin (Source: Author)

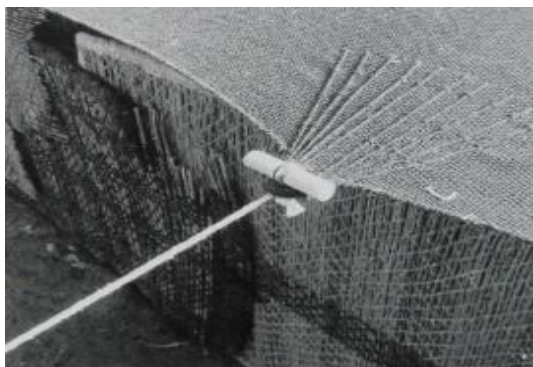
<sup>1</sup> He prepared the Black tent of the Ilam province for ethnography of Mosgard museum, Denmark in 1964 [9]



**Fig 13.** Connection of two parts of the roof with delicate strap or hook and wooden pin (Source: Author)

**Pins** that connect the two parts of tent's roof together. each pin is about 25 cm long. As indicated above, they keep in place the sewn hooks overlap on both sides of the roof. This is a very quick way to assemble and dismount the tent roof. This detail is typical of Arkovazi Tribe.

**Connection rings (edge clamps)** is made of goat hair. All around the tent roof, every 80 to 100 cm is the connection points of the ring. The more number of these rings, the less is the pressure on tents which leads to a more stable tent.



**Fig 14.** Method of connection. [9]



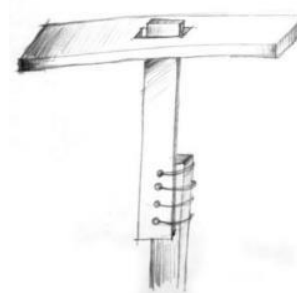
**Fig 15.** Corner clamp (Connection ring) (Source: Moghadam)

**Column** 2 to 2.5-meter-high and 8 to 10 cm in diameter. Quality of timber must be high, without knots, as they bear big loads. Arkovazi people, similarly as the other

tribes use material that is accessible: young poplar and spruce trees. They construct the column with the two pieces of timber joined by rope, which is threaded through the holes in both parts of the column. The lower, long part of it is a trunk, the top one is short and rectangular in section. The ridge of the tent is supported by wooden, rectangular ridge beams seated atop the upper part of the columns by means of adjusted incisions. These details contribute to bigger flexibility of the column itself and bigger resistance to wind of the whole tent. Arkovazi Tribe tents have 3 to 7 columns lined in the centre of the layout, and the number depends on the size of a tent.



**Fig 16.** The central column of Arkovazi tent and ridge beam seated on the top of it. The construction covered with the roof fabric (Source: Author)



**Fig 17.** Sketch of the construction supporting the ridge of the Arkovazi tent: column, its plank extension and ridge beam supporting the fabric. Drawing by author

**Post** surrounding the tent and supporting the walls, they are of the same strong material as the columns but shorter, to allow for the slope of roof. They are fork-ended on the top to secure ropes that ground the tent.



**Fig 18.** Forked ending of a post with supporting ropes stretching the roof sheet (Source: Author)



Fig 19. Columns around the tent. (Source: Moghadam)

**ChIgh or ChIt** Arkovazi Tribe chigh consists of thin twigs and reeds that are woven together with coloured wool yarn. Chigh is used as an additional, solid wall, standing on the ground and protecting the inside from wind and dust. If it is colourful, with intricate design and divides the parts of the tent as well as adding to the beauty of the interior. Usually the size of the chigh is 1.5 meters by 6 to 10 meters.



Fig 20. Method of propering of the Chigh (Source: Author)



Fig 21. View of prepared Arkovazi chigh for bride's tent design (Source: Author)

### 6.3. Yarom Tatli Tribe in Hamedan Province

**Tent cover** is made of goat's hair, similarly as the Black Tents of Qashqai Tribe in Fars Province. Usually YaromTatli Black Tent roof consists of 10 narrow strips of fabric, each up to 1 meter wide. Its square area is between 10 to 12 long and 10 meters wide.

**Black tent roof** in YaromTatli Tribe, like Arkovazi's consists of two parts stitched together. The method of

joining these two parts of the roof is a bit different between the two tribes. As it is clear on the photo, the edges of both parts have two sewn tapes. The rope which is between those tapes, joins both parts of the roof together. This rope moves from one side of the roof to other side. Differences between these two tribe roof structures is in the way connection is used between two sides of the roof. In the tent of Arkovazi, they use wooden pin as joint and in the tent of YaromTatli, they use rope.



Fig 22. Yarom Tatli Tribe. Method of connecting two parts of the roof (Source: Author)

**Columns**, as in the previous cases are wooden planks 2 to 2.5-meter-long, 8 to 10 cm in diameter, uniform, without knots. In YaramTatli Tribe it is usually a pine tree, due to the area of their highland trail. Each tent has 3 to 5 columns in the centre, according to its dimensions. The ridge beams (carrier beams), with a hole/socket in the centre provide a lock for a tip of the column. The columns and the beams are called 'black wood' or (Qaraaqajeh) in the lanuage of the nomad's tribe of YaramTatli.



Fig 23. Yarom Tatli Tribe. The central column of the tent and its pass from the carrier beam, to slope the tent (Source: Author)

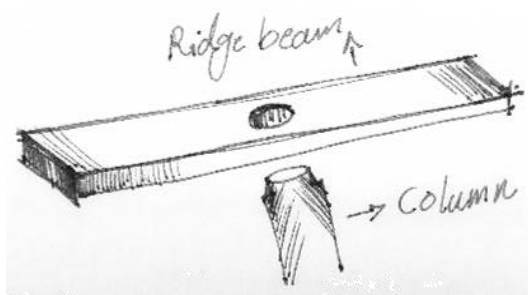


Fig 24. Detail of ridge beam (carrier beams) and column (Source: Author)



#### 6.4. Tribe Garapapakh in West Azarbaijan Province

**Tent cover** of Garapapakh Tribe is aforementioned in other tribes, in the same way as in the other Iranian nomads' tents. Usually the tents' covers are made by sewing together 8 to 10 narrow strips of fabric, maximum 1 meter wide. Garapapakh Tribe tents are between 10 and 12 long and narrow and only 3 to 4 meters wide. The strips of fabric used for the roofs are accordingly long.

**Column**, the middle columns are 2.5 to 3-meter-long and their diameter is about 8 to 10 cm. They are made of smooth and straight trunks provided by young walnut and sycamore trees. The columns have groove incision on the top, named "Hacha" on which supporting and stretching ropes are hooked.



**Fig 25.** Garapapakh Tribe. The columns are forked at the top and keep a stretching rope attached. The incision on the top of the column keeps the loop sewn on the top of the fabric (Source: Author)

#### 6.5. Tribe Kormanj in Golestan Province

The tents of Kormanj Tribe are large. their internal space is usually more than 9 by 4 meters. The tent cover is a one-piece fabric and it hangs down to the ground at the back of it. In summer the front remains open, but in winter strips of the fabric could be added by stitching them to the cover of the roof. Usually the cover consists of several strips of fabric sewn together, the stripes are not more than

1 meter wide. Holes are made along the seam of these strips to hold the columns. the holes are secured with piece of fabric or small pillow which relieves the strain of columns in the pass of time and prevents the rupture of the roof's fabric. Also it protects water leakage to the inside of the tent.

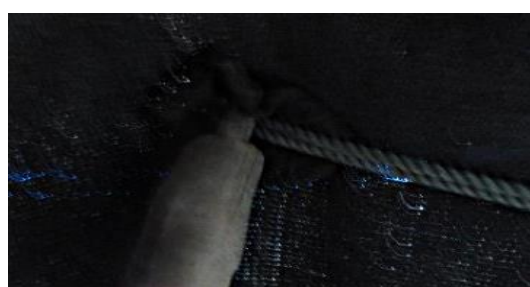


**Fig 26.** Kormanj Tribe. The stripes of the tent cover (Source: Author)



**Fig 27.** Kormanj Tribe. The outside of the roof holes, where the tips of columns stick out (Source: Author)

**Column**, a wooden pole, 2 to 2.5-meter-long and 8 to 10 cm in diameter is smooth and straight and usually is provided by tree trunks. The columns have sharp tips to keep the fabric. Other columns or posts round of tent are the same of middle columns in material but shorter than them to setting slope of the tent easily.



**Fig 28.** Inside the tent and the placement of columns. Small pillow or pieces of fabric are located between roof cover and column (Source: Author)

### 6.6. Tribe Bahlooli in Sistan Province



**Fig 29.** Bahlooli Tribe. Spiral rope between pins and columns (Source: Author)

**Tent cover** details are described in Qashqai Tribe No.1 from Fars Province. Usually the tent consists of 3 to 5 strips with width of maximum 1 meter in roof parts and it is popular by name of 3 or 5 Pelas tent (Pelas means piece). This kind of tent consists of 3 to 4 strips in tent walls.

**Ropes** are made of goat hair. They are long enough to join and tighten in a zig-zag way in all the tops of columns and the pins on the ground along two parallel walls into one structure.

**Column,** Bahlooli Tribe columns are also made of high quality trunks of young trees 2.5 to 3 meters long and 8 to 10 cm in diameter. Usually the trunks of poplar or a nutmeg tree are used. Each tent has 3-5 columns in the centre of the tent. Tent's posts are of the same quality as the central columns when timber is concerned, but shorter, to set the slope of the roof. They have forked tips allowing a hook of a tent cover and stretching ropes to be safely placed.



**Fig 30.** Bahlooli Tribe. View of a Black Tent cover and position of its columns (Source: Author)



**Fig 31.** Bahlooli Tribe. One of the posts around the tent (Source: Author)



**Fig 32.** Soleimani Tribe. Four parts of the tent's roof cover are joined by the metal pins (Source: Author)

### 6.7. Tribe Soleimani in Kerman Province

**Tent cover** fabric is similar to the other tents of the other Iranian nomads. The cover of roof consists of four strips fabric, thrown over the ridge and joined by metal pins.

**Metal pins** are shaped as needles for better use while mounting and dismounting the tent. While connecting adjoining strips of fabric, a rope is threaded through their hooks, and because of this, by one pull of it, strips of fabric are separated. They can be rolled for travel very quickly.



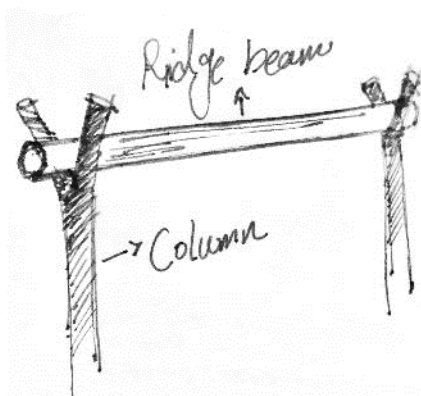
**Fig 33.** Soleimani Tribe. Metal pin with a hook for threading the rope (Source: Author)



**Fig 34.** Method of connection of the two strips of fabric by metal pins

**Columns** in Soleimani Tribe are taller than most tents of other Iranian tribes, as they reach 3-meter height, with 8 to 10 cm diameter, due to the quality of trees accessible on their trail. Timber of young willows and poplars are without knots and homogeneous. Their tips are either naturally forked (trunk-bough junction) or get dovetail incision to secure a ridge beam resting on them. The local name for the column is Kalak. The ridge beam placed on the top of forked tip of column, that adds to the efficiency of knots, is called Tir.

**Posts** that are encircling the tents are similar to the columns but shorter, to the roof sloping. All of them have dovetail incision on the tip to secure knots of the ropes.

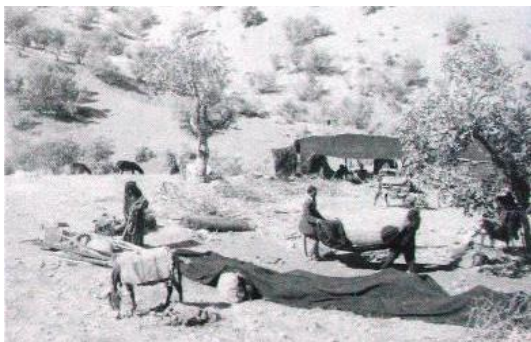


**Fig 35.** Soleimani Tribe. columns with forked tip form and location of the ridge beam on its (Source: Author)

## 7. ASSEMBLED OF THE BLACK TENTS SETUP

This part of research is based on field studies held by the author in 2012 in the Qashqai Tribe in Fars Province, research on other chosen tribes in the other provinces have been conducted by Lennart Edelberg from the 1964 of the tribes from Jalalvand, Baland and Osmanwand in the Hulilan plain of Ilam province. The results confirm that the methods of assembling, disassembling and packing the tents for journey has not changed. All the findings show that the method of setting up these tents are the same.

Activities performed while unpacking the tent are as follows: cleaning the place that is suitable for the tent. Then woven roof cover is spread on the ground. In some households, the columns are placed under the cover on the floor.



**Fig 36.** Preparing for a tent assembly. [9]

Taking into consideration the length and width of the tent, wooden pegs have to be hammered in the ground. The

tent walls and these pegs distance is about 3 meters. Ropes, which stretch from the roof and support posts along the walls must be tied around the pegs.



**Fig 37.** Wooden pin. [9]



**Fig 38.** Pins and ropes surround a tent (Source: Author)

Wooden hooks are attached to corner posts of tents. They are forked tip at the top and are the connection to rope of the tent.



**Fig 39.** Connection of tent corner to the wooden hook (Source: Author)

The central columns on both ends are placed under the fabric of the roof and then lifted into their slanting position. Then the ridge, or the edge of a tent is lifted and fastened.



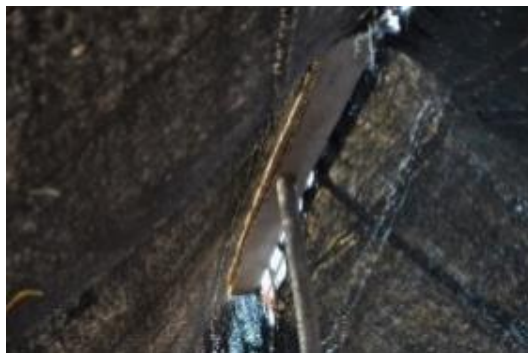
**Fig 40.** Standing position of corner columns (Source: Author)



**Fig 44.** Lifting the middle column with the ridge beam (Source: Author)



**Fig 41.** Qashqai Tribe in Fars Province. Pitching the roof by lifting end columns (Source: Author)



**Fig 45.** Middle column with a ridge beam (Source: Author)



**Fig 42.** The end corner columns are lifted. [9]

The central columns at the two ends of the tent are raised as the first ones by the method explained above, and the tent is almost ready. The central columns of the interior of the tent are placed under the fabric with a short ridge beams on the top of them and the fabric of a roof is lifted.



**Fig 43.** Pulling up the end and the middle column which carries a ridge beam (Source: Author)

Depending on the situation and the tribe, sometimes a pit is dug as the basis of the column and sometimes it is placed right on the ground.

In the case of some tents, the only way is to grub a small pit in the ground and lay the columns in it, and in some to rest the columns on the ground. After the tent is stabilized, the posts on both sides of a tent are arranged in a form of a cross to stiffen the structure. This form differs in the regions.



**Fig 46.** Digging the end column into the ground (Source: Author)



**Fig 47.** The posts are arranged along the walls of the tent in a criss-crossed way (bracings) (Source: Author)

Then the outer ropes which were loose have to be tightened by pulling up the rope knots, which stabilizes the midline of the cover.



**Fig 48.** Setting ropes. [9]

In the next step, the tent walls are connected with the edge of the roof with thin wooden slits (pins). The pin is pierced through the edge of tent cover, then pierced through the edge of wall fabric and rotated by the hand, and inserted into the fabric of the cover from below.



**Fig 49.** Wall and roof of the tent are connected by wooden pins (Source: Author)



**Fig 50.** Piercing the cover with thin pins in roughly 20 cm distances to brace the edge (Source: Author)

When the walls and the roof are connected, the Chigh roll is unrolled to secure the wall. The posts, which are woven into it in regular distances are hammered into ground. Chigh is unrolled around the whole length of the wall of a tent, with exception of the entrance. The other way of securing the side wall of the tent is to ram into ground many thin branches, that would prevent the wind moving the wall.



**Fig 51.** Ramming/pounding into the ground thin branches and unwinding Chigh to support the wall (Source: Author)



**Fig 52.** This Black tent was assembled by the author and members of Qashqai Tribe

## **8. FUNCTIONAL ANALYSIS (INTERIORS) OF BLACK TENTS**

Every residence is a cultural configuration shaped by the activities of the residents and their culture. Home spaces, therefore are based on such behavioural models. In other words, all activities and behaviours have their own privacies and therefore, every space has its own privacy too [10].

Nomadic people created flexible interiors which are divided by decorations and elements of furnishing, making the functional layouts of the tents, similar to a house. Partitions are built with bags, saddlebags, bedding and other belongings not needed in the moment. This kind of separation, without interior walls, gives simplicity and fluidity to the internal space of tents.

The Nomads tents often have the nonphysical separation of private and reception area. the area belonging to women is generally separated from the area of men and guests, but without any partition. In certain Bakhtiari tents, the interior areas are given specific names: Lajenoon or Kayvanoo is the women's area, and Lamerdoon is the section used by men and guests. The location of those areas differs based on the kind of tent and the exact location of the entrance. The entrance of Dawar of the Bakhtiari people is on the short side of the tent: the women's area is towards the rear, while the area close to the entrance is reserved for the men and male guests [11].

In another type of Dawar in the Ilam region, in the west and south-west of Iran, the entrance is positioned on the long side. Here the left side is devoted to the women's area and the right side belongs to the guests and men's activities [12]. In all cases the women's area which is used for such activities as cooking and children's playing, is covered with felt, while the guests' area has small carpets.

Examples of other dwelling common in certain regions of Iran are the tents used by Kurds in the north-west and those of the Papis in the Luristan region in the west of the country [13].

The Ilam region in the south-west of Iran, provides an interesting example of the complete separation of private and reception areas, an arrangement more normally associated with the urban houses. While the 'living' tent, the Dawar, may be used for short meetings, the main reception in this case takes place in a special tent, called the Diwa Khan, which is shared by all members of the tribe. This tent, which is larger than the others, has an interior arrangement based on the partitioning of women's and men's areas. [12] The entrance of the tent is on the long side, with the men's area to the right and the women's to the left. In the centre are the hearth and a place for putting the carpets and other materials. The three areas are divided from one another by straw curtains or partitions calls Chit or Chigh [10].

In winter and summer, in Fars Province, Qashqai nomad's Black tent has a different plan, construction and arrangement, decorations and position of entrance door, but materials used for construction in summer and winter are the same. In summer the construction is more open, higher and spacious as the furnishings are arranged in a

different way. Summer weather conditions allow for more freedom and contact with the environment [14].

The place for cooking – a small kitchen is arranged inside of the tent, near to the entrance, this small kitchen has a granary and in other side of the tent is sleeping spaces. In summer time, kitchens are moved outside the tents.



**Fig 53.** Summer Tent decorated in Qashqai Tribe, Fars Province (Source: Author)



**Fig 54.** Winter Black Tent. Qashqai Tribe, Fars Province (Source: Author)

The other tribes built the same structure of a tent with the same elements in winter and summer but the plan of the tent and furnishings are arranged in a different ways between these tribes. There are, however, exceptions, when the tribe lives in permanent winter houses – as it is mentioned further.

Internal organization and decorations of the black tent differ according to the status of the family. Tents have two main parts, for man and woman. Within the tents, in special men's part there is a space prepared for guests and appropriately kept. of course inside of the tent has not a divider wall for different functions but nomad people have unwritten rule to separate their interior space, as it is clear on table 2.

In the tents dining, lodging, kitchen and warehouse are situated in their lower parts. Their location and arrangement is stable and each part of the tent is a place for a particular furnishing and function. This differs between the families, according to their class and culture level but there are some general principles common for all tents.

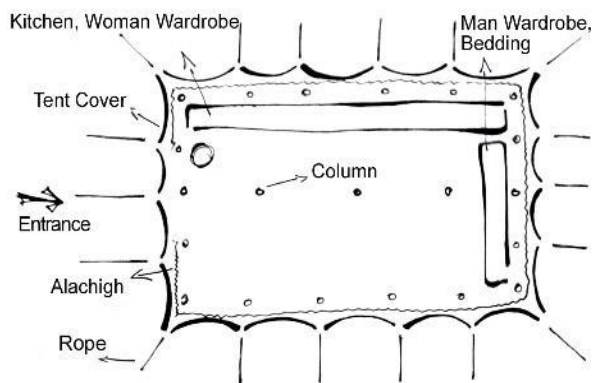
In a rectangular tent, the summer entrance will be placed in a longer wall, while in winter it will be moved to the shorter wall.

Poor people's tents have smaller dimensions and their space interior is organized with the essential housekeeping appliances. The people who have lower social status, have fewer facilities and comfort for themselves and also for the hospitality functions. Their discipline inside tents is much lower. In khan's (Head of tribe) families who have a higher social situation, their tents have diversified living facilities. Rich families are able to accommodate guests in

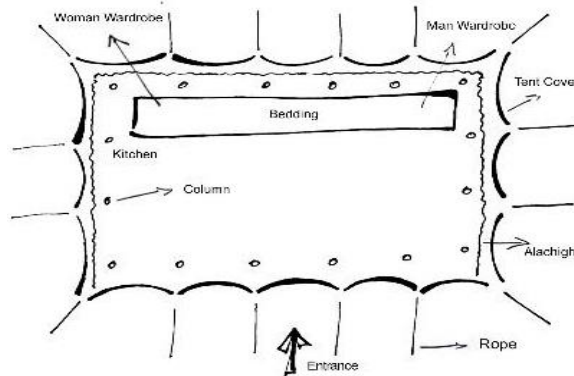
large numbers by using their numerous amenities, so guests are common in this type of a family [6].

The following drawings were initial part of the survey, they were prepared by the author and helped the assessment of initial differences between types of structures, with reference to the volumes of these tents. They also helped to analyse arrangement of interiors in different parts of Iran.

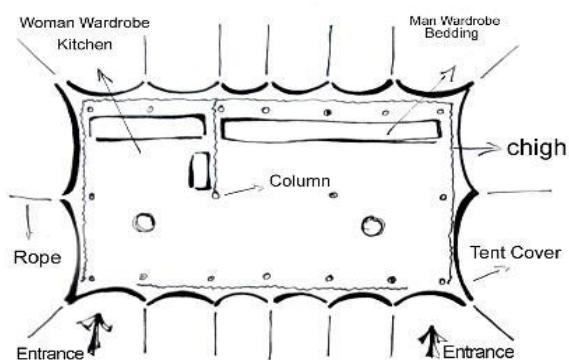
**Table 2.** Plan drawings of Black Tents and equipment they contain (Source: Author)



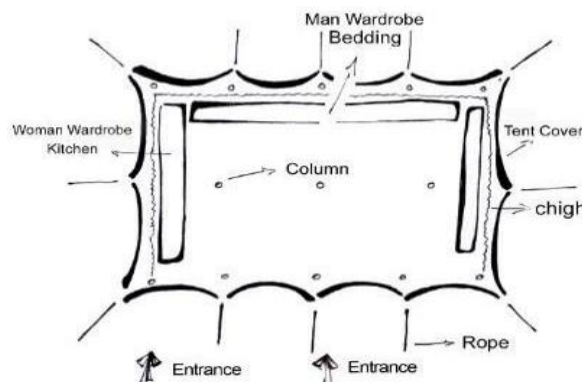
Winter Black Tent plan of Fars Province. 3-5m wide/ 6-12 m long



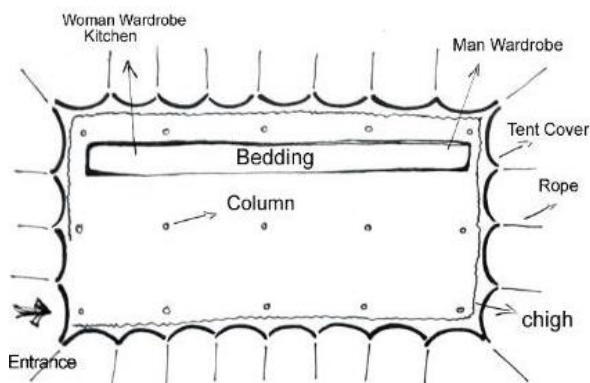
Summer Black Tent plan of Fars Province. 3-5m wide/ 6-12 m long



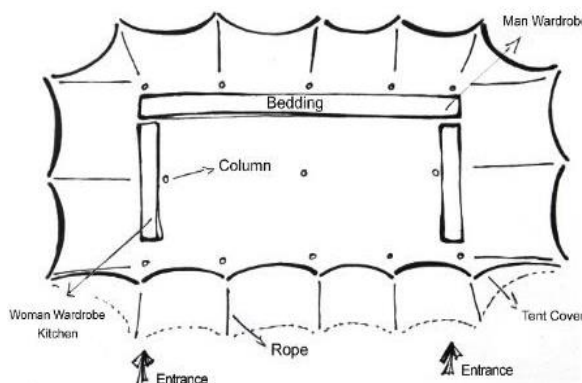
Plan of Ilam Province tent. 2-4 m wide/ 10-12 m long



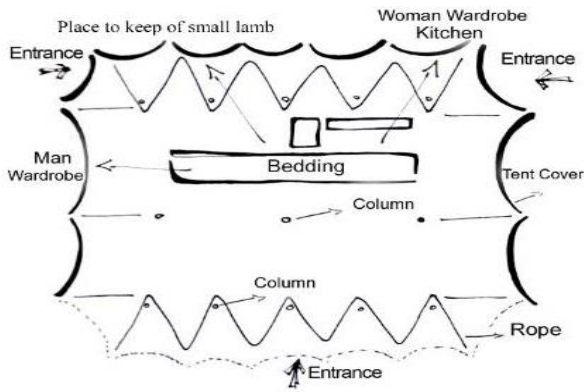
Plan of Hamedan Province tent. 10 m wide/ 10-12 m long



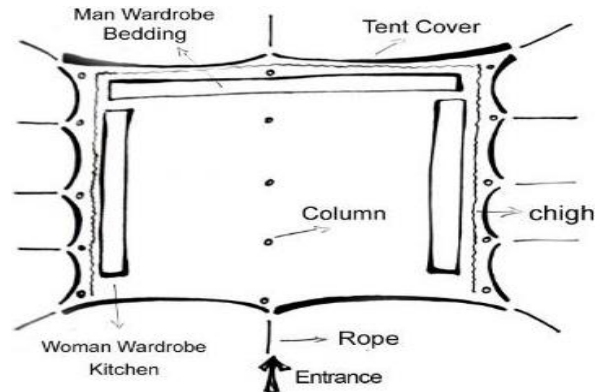
Plan of West Azerbaijan Province tent. 3-4 m wide/ 10-12 m long



Plan of Golestan Province tent. 4 m wide/ 9 m long



Plan of Sistan Province tent. 3-5 m wide/ 7-9 m long





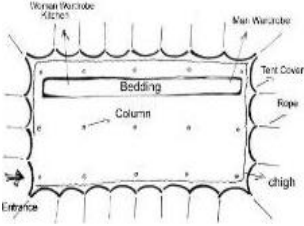
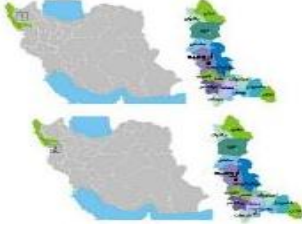


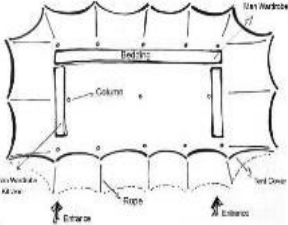


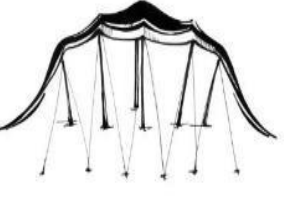
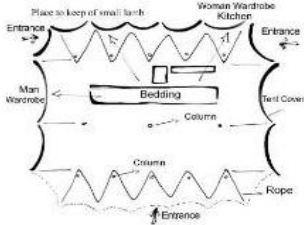



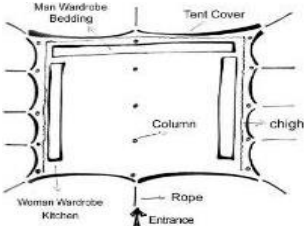

Plan of Kerman Province tent. 4 m wide/ 5 m long

## 9. CONCLUSION

**Table 3.** Black Tents Architecture Typology (Source: Author)

Photo	Skatch	PLAN	Map of location on summer and winter
<b>1 A- Tribe Qashqai in Fars Province, Summer Black tent</b>			
<b>1 B- Tribe Qashqai in Fars Province, Winter Black tent</b>			
<b>2- Tribe Arkovazi in Ilam Province</b>			
<b>3- Tribe YaromTatli in Hamedan Province</b>			



Photo	Skatch	PLan	Map of location on summer and winter
			
<b>4- Tribe Garapapakh in Azarbayjan Province</b>			
			
<b>5- Tribe Kormanj in Golestan Province</b>			
			
<b>6- Tribe Bahlooli in Sistan Province</b>			
			
<b>7- Tribe Soleimani in Kerman Province</b>			

Diversified Iranian climate led to a variety of types of architecture throughout the country and it also affects the structure of Iranian nomadic homes. Coexistence and interaction with the environment and continuous effort to adapt to the climatic and geographic conditions of each region led to the formation of unique methods of survival, unique migration systems and exploitation of environmental resources.

This vernacular pattern is strongly adjusted to rough and unpredictable nomad's life. It is a manifestation of native and local talents. It also includes accurate aim and strategy for different locations.

Architecture of the Black Tents is intricate and diversified, although it seems to be very simple. It shows the interaction of nomad technical skills with nature. All materials belong to their natural environment and for most tribes, these natural materials are almost the same and in some cases have different shape and design. According to

the studies, the method of setting up the tents have been the same, but we have witnessed the diversity of architecture style and typology of Black tent shape with the same materials, methods of preparing and assembling in different climatic situations are different. So the culture has important role in this variety. On the table 3. Typology of the Black tents is understandable with differences and common elements and designs.

Research clearly shows that black tent is an all-season settlement. In this structure, natural materials are used and displayed the vernacular technology and the value innovation. In addition, static strength and durability of the tent is enormous. The original cover is woven by the nomad women. Women are active and participants in organizing and collecting black tents. Separation of the house spaces for various functions by even movable walls and partitions limits the overview of the whole. In Black

Tents the separation is achieved without walls, therefore beautiful, simple and fluid internal space emerges.

However, in this adaptability and changing of natural landscape in different provinces and different tribes, knowledge of people is very important, similar and effective. As noted above, in this study, black tents were studied as part of the creative life of nomadic indigenous.

Some part of tribe's life was mentioned in this study. All potentials have not been considered yet. Over time, tribes have to leave of all this beauty that was connected with changes in environment. Unfortunately, this is a growing problem and indifference to this culture is very wrong.

Knowledge management, sustainable preservation and interpretation of cultural landscape in this special biologiclife can help improve the quality of life. Unfortunately, lack of support from relevant agencies will gradually lead to a sedentary tribe which will cause endangered cultures, including the loss of migration routes and housing (black tent), etc.

In this regard, researchers are trying to receive a full understanding of the all potentials of the existing technology and knowledge of vernacular people which has a centuries-old tradition with all knowledge and guidelines for the management. The goal is conservation and transmission for posterity.

Following this study and in order to maintain and conserve this structure as the first human shelter after cavemen, The Black tent of Qashqai tribe was successfully registered in September of 2000 by Najmeh Hassas in the Iranian national heritage index, the topic of its document was: How to build and how to set up and install a Qashqai black tent's.

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