

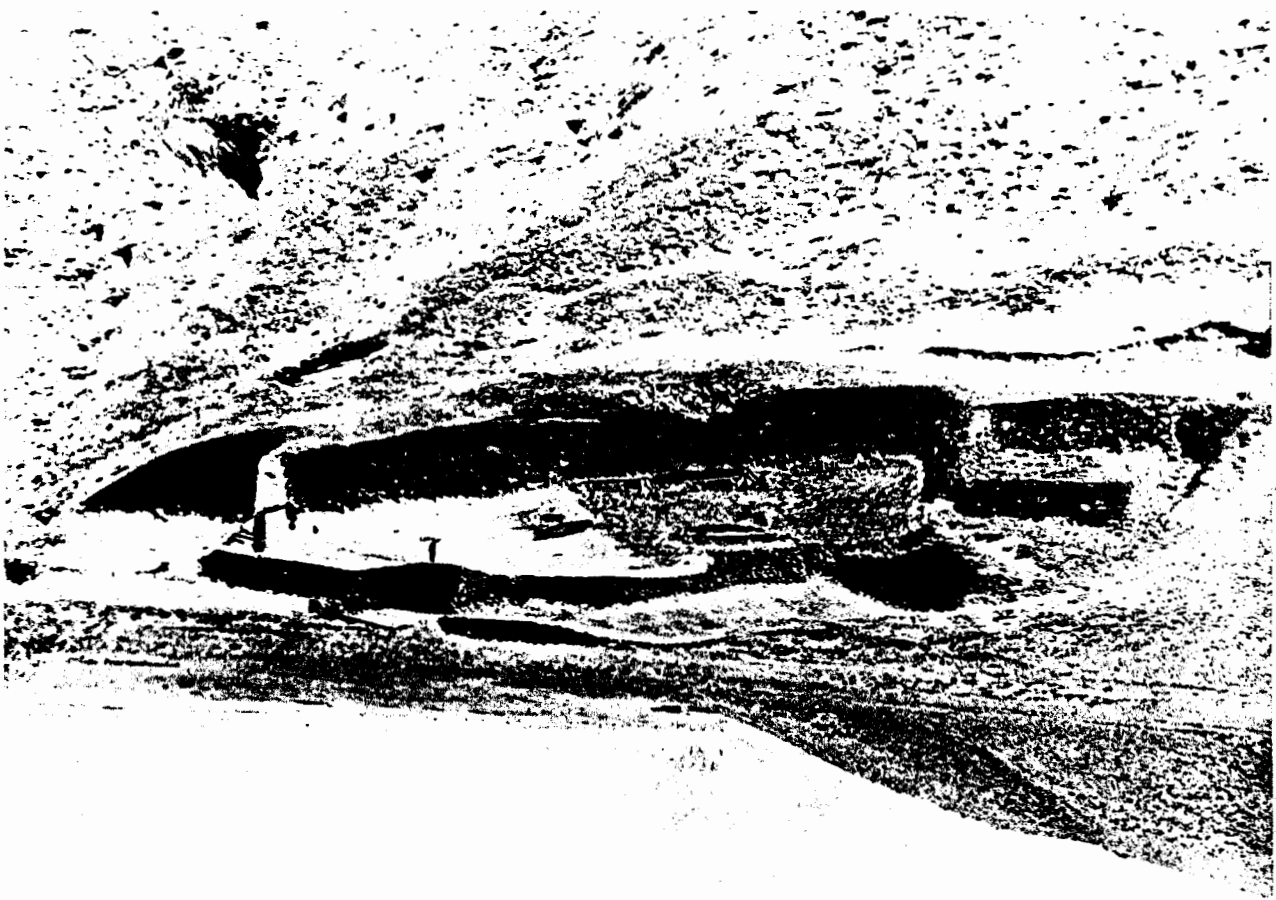
## 9 Kojur

The old city of Kojur was formerly known as Ruyan and was the capital of Rustamdar district. According to Yaqut, Ruyan became the largest city of the mountain regions of Tabaristan, while Amol was the centre of the lowland plains. The old city of Kojur, situated on the foothills three kilometres from the existing town, contained a castle and was fortified. It was rebuilt in 1346 after being destroyed by the Mongol invasion and was again surrounded by fortifications. The shortest route from Tehran to the Caspian passed through Kojur but was impassable for five months of the year.

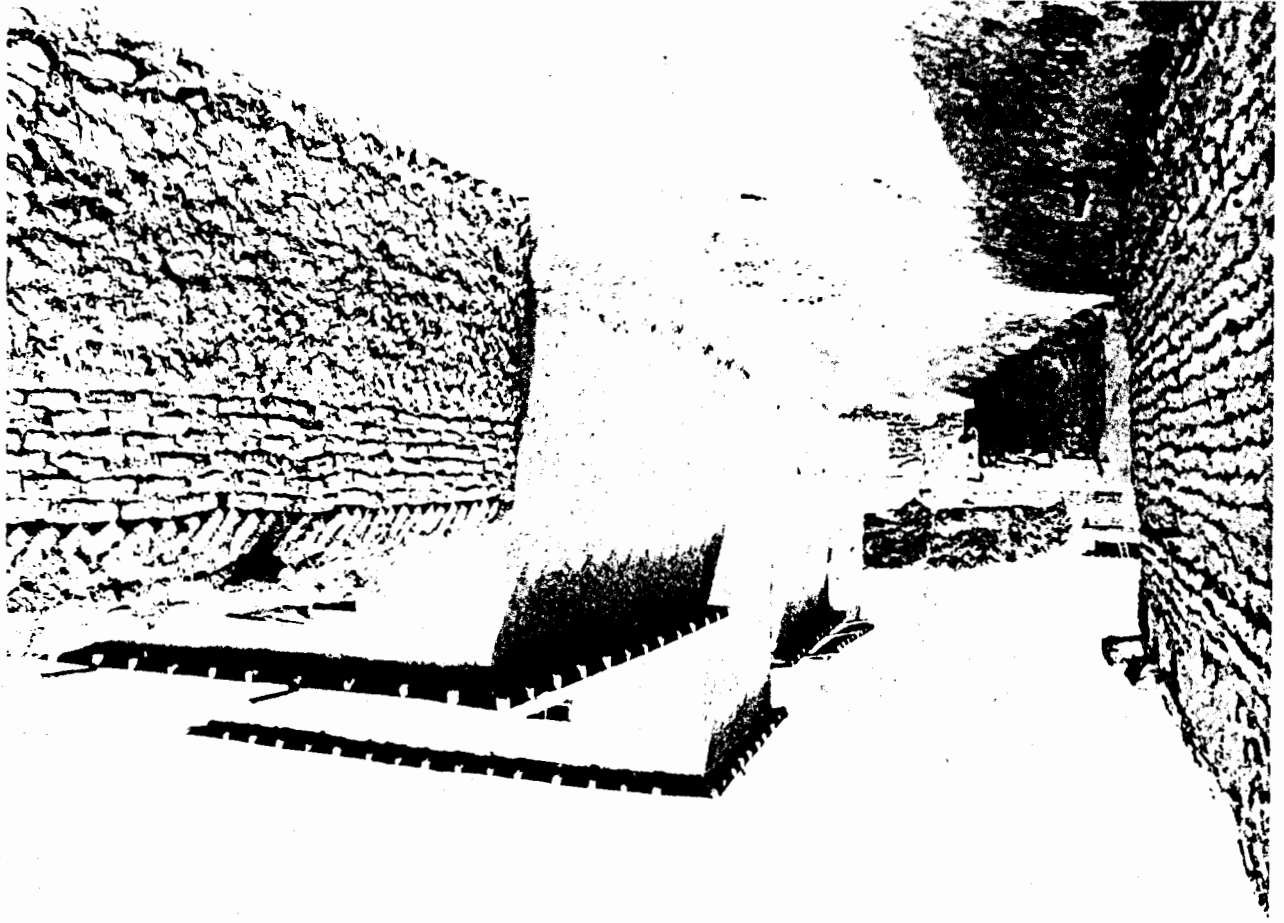
The inhabitants of the present Kojur are Khwajavands and Gilaks and, according to Rabino, do not consider themselves as Mazandaranis. The new town of Kojur does not have a long history and was built by the Khwajavand tribe during the reign of Agha Mohammed Khan Qajar.

The location of Kojur in the drier mountain plateau just south of the forested belt of the northern Alborz slopes, has made possible the use of flat, timber and mud roofs. In Kojur, however, the quality of timber joinery and construction is higher than in most areas using the same technology. Elements such as wall plates and horizontal timber framing are used in many buildings. The walls are constructed with stone or mud brick, and normally plastered with a straw-mud mix. The one and two storey buildings line both sides of relatively narrow winding roads (kouches). The settlement pattern is clustered, unlike most Caspian villages, and the settlement is clearly defined and separated from the wheat fields surrounding it.

A settlement at the edge of the Kofun plain shelters an ex-



Kofun: in the drier central Alborz the settlements are more compactly clustered and the lower level of rainfall permits the use of flat roofs.



## 10 Kodir

Kodir village is part of the Kolrudpey district of Nowshahr shahrestan. This region has a long history of settlement and it is said that Kodir used to be a Zoroastrian village. A pulpit that has been dated 662 A.H. (about 1284 A.D.) and bears the name of the son of Malek Taj Aldolleh, the governor of Ruyan and Rustamdar, has been found in Kodir; and it is claimed that Malek Taj Aldolleh is buried in the village.\* The inhabitants, mostly of the Khwajevand tribe who were brought into the area by Agha Mohammed Khan Qajar to resist local uprising, put the history of their residence in the village at seven generations. Before that, they state, the Malekis occupied the village but they later moved into another region.

The Kodir has a population of 1500 who divide into about 200 households. In the winter months very few families remain in the village. Most families migrate to their winter quarters in the Nowshahr plain (Naranjebon and Vanoush) where they also have land and housing.

In Kodir animal husbandry is the primary economic activity while wheat and barley are cultivated in the valley and along the slopes. Honey is also produced. In their winter quarters along the coastal plain they grow rice.

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\* M. Sotudeh, From Astara to Asterabad, 1349 A.H.



### Built Environment:

Kodir is a high mountain valley settlement and the village is located on both the north and south facing slopes of the valley. The village is divided by a stream that runs through the centre of the valley, with the older settlement situated on the southern slopes. It is a comparatively clustered settlement with many houses being attached in groups of two or three buildings in the form of a short terrace.

There are a variety of house types in Kodir demonstrating most of the house forms in the Caspian region. Both the single room house with a front aivan, containing the two basic elements of human shelter in this region, and its developed form of a two storey building with one or more rooms on each floor, can be seen side by side in the village. There are also the 'L' shaped houses with the corner aivan in one or two storey forms, as well as the expanded or double 'L' plan with its aivan in the centre of the house enclosed by the two long rooms on either side. Just less than half the houses in Kodir are two storey structures.

Older houses are constructed with log walls, while due to restrictions on cutting trees, the recent buildings have stone walls laid in layers of mud with horizontal timber reinforcing. Other than a few sheet metal roofs the remaining village houses are covered by wooden shingles. Windows are relatively large (about  $1\text{m}^2$ ), but on two storey buildings the ground floor tends to have few or no windows. The aivans are walled off on the northern and western sides in order to protect the house against the prevailing winds and rain.



The village of Kodir, situated in a high mountain valley, exhibits a variety of house forms which are roofed by wooden shingles held down with stones.





Some of the houses in Kodir demonstrate highly developed timber joinery and lattice work.



The house illustrated belongs to one of the main land owners of Kodir.

### Kodir House 10.1

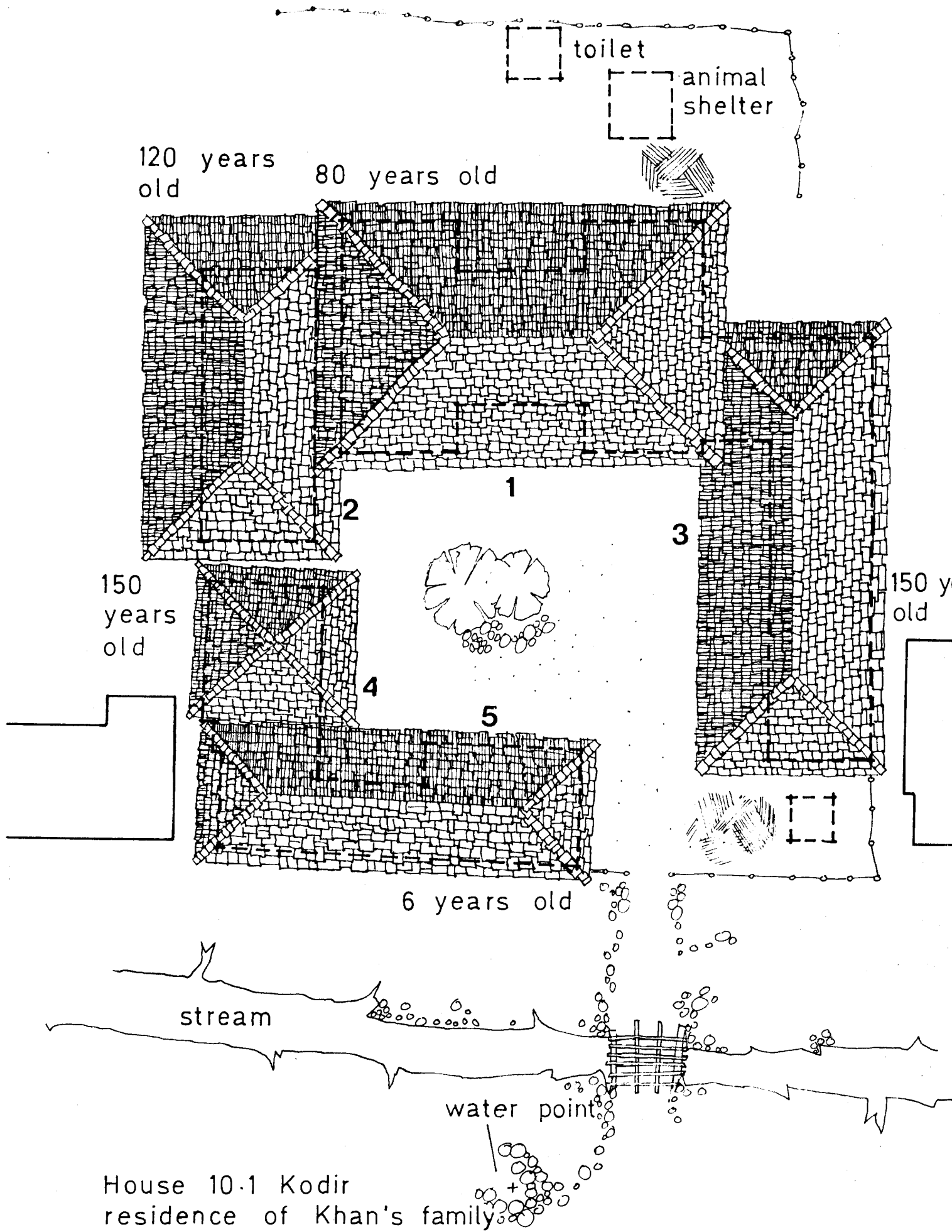
Houses are basically of the front verandah/balcony type, varying between one and two storeys. The cluster of buildings shown here belonged to a wealthy family and the main house is not entirely typical of Kodir, having a two tier central aivan at both the back and the front of the house. The rest of the buildings in the cluster have verandahs. The roofs are all hipped in form, covered with wooden shingles supported by a timber truss framework. The joinery is of a high quality, with carving on exposed timbers. Buildings one, two and three have walls of stone and mud mortar with horizontal timber bracing. Walls are plastered with mud. Buildings four and five are of log construction, also plastered.

Upper floors are of timber.

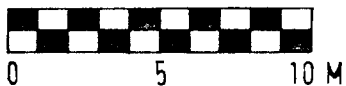
The cluster forms a courtyard. Most openings face onto this courtyard.

There are three households living here, consisting of eighteen people. In winter they all move to the Nowshahr area, and their occupation is divided into rice growing on the coastal plain and wheat and barley growing at Kodir.

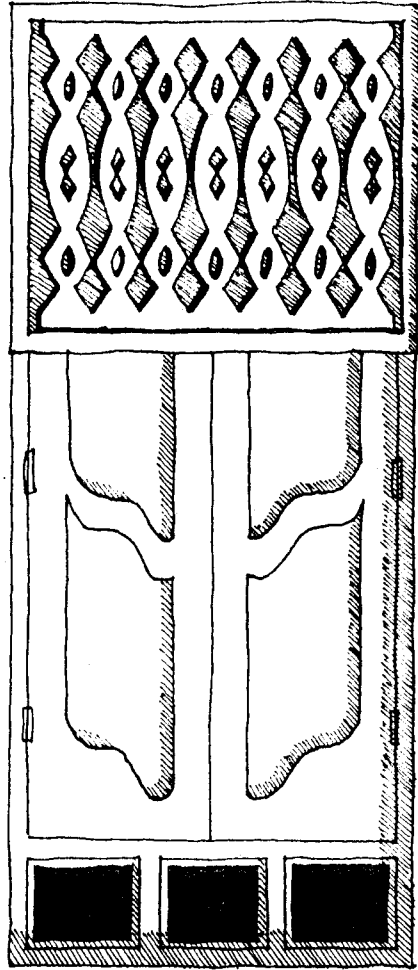
The climate is cold in winter, temperate in summer, with high humidity and an annual average rainfall of 1000mm.



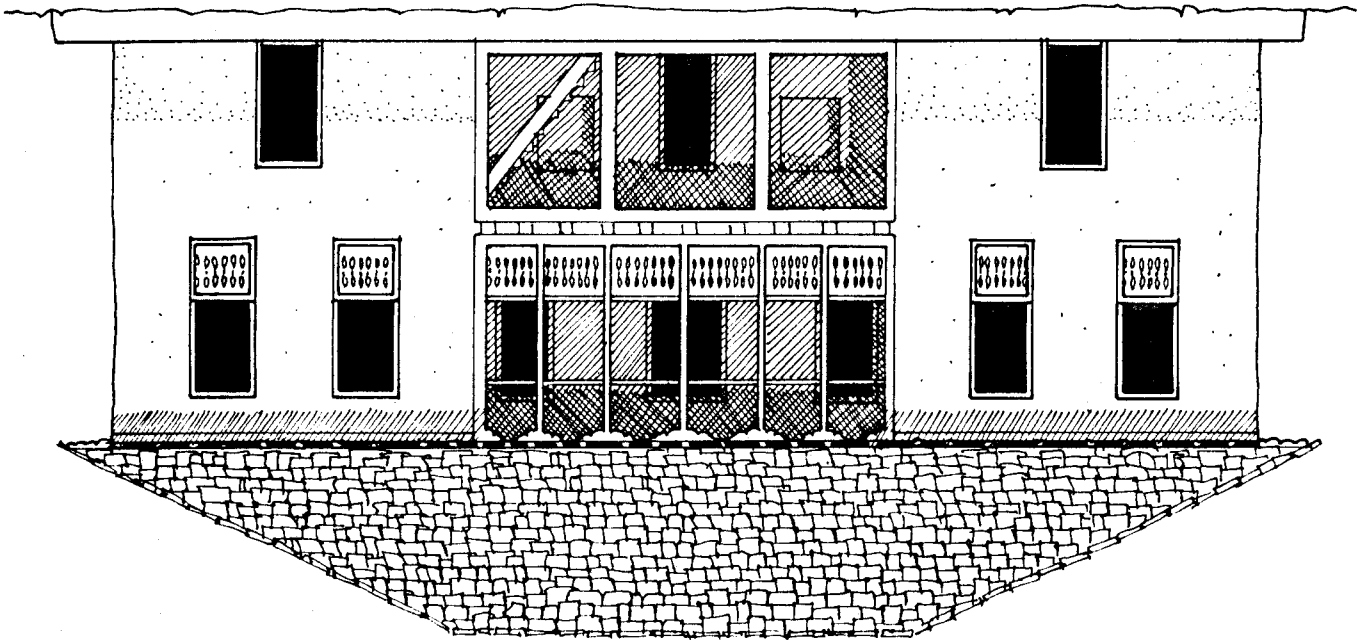
Scale



Window Detail



Elevation

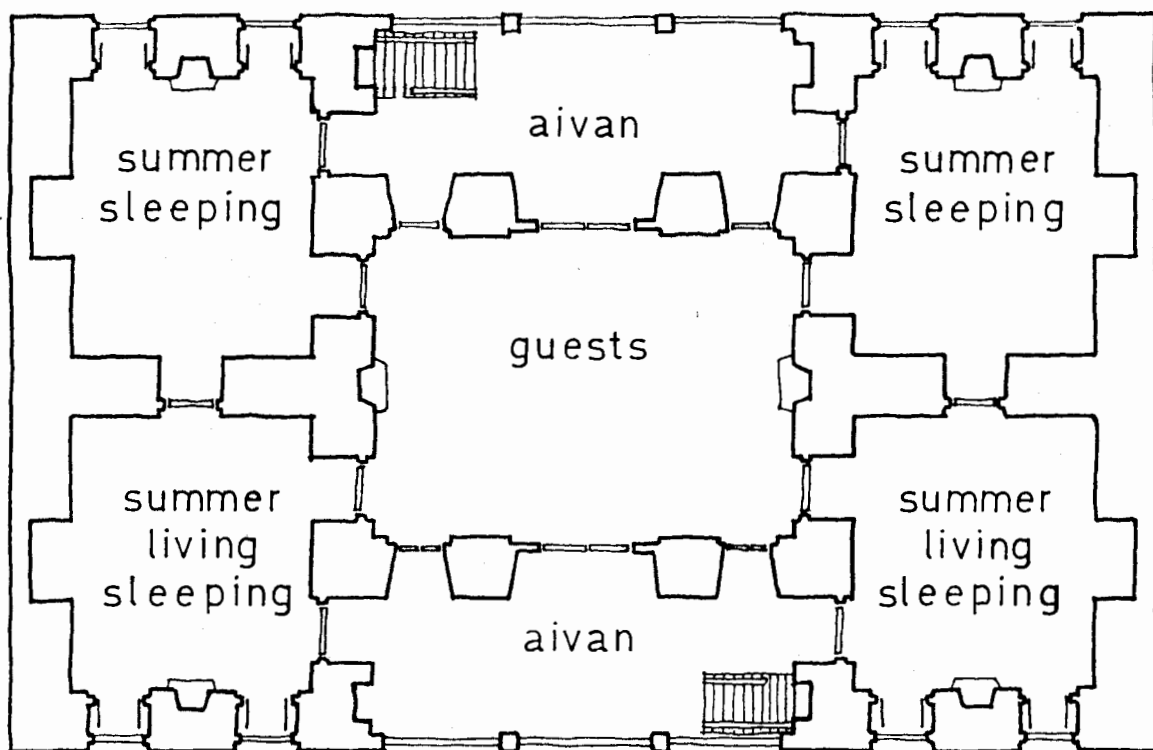


80 Year Old Section

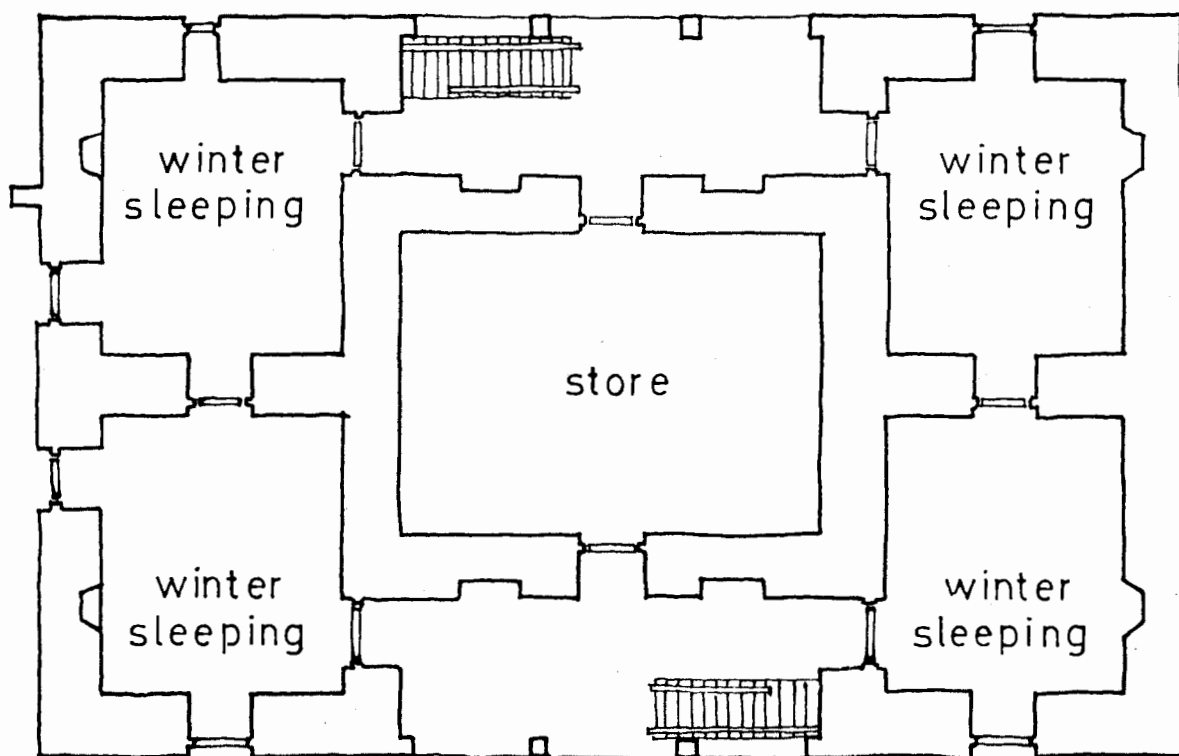
B5d5

House 10.1 Kodir

House 10.1 Kodir  
80 Year old section

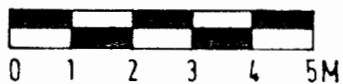


Upper Floor Plan



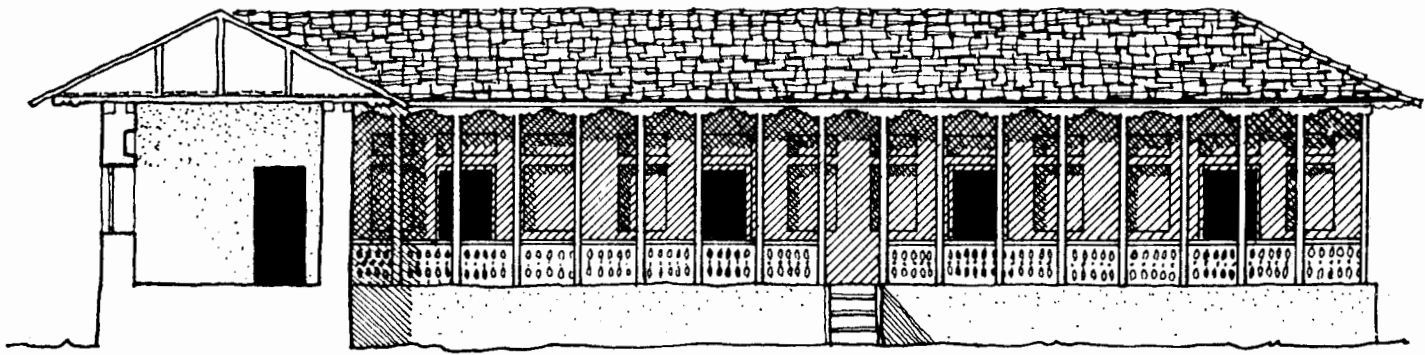
Ground Floor Plan

Scale

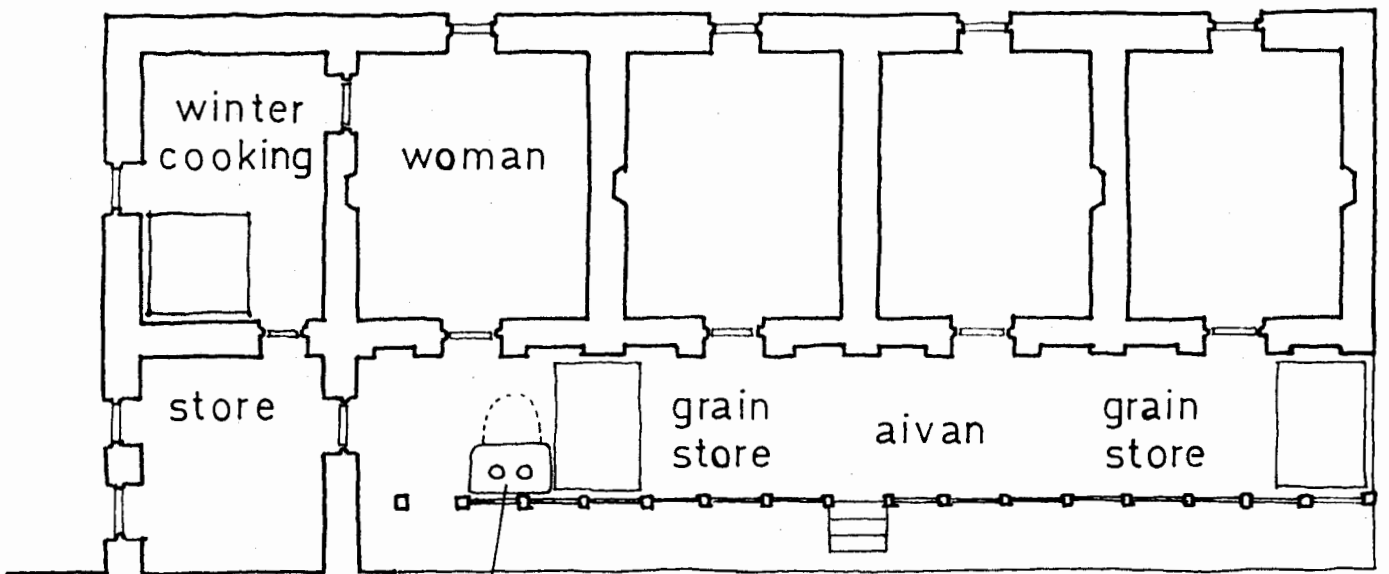


House 10.1 Kodir  
150 Year Old Section

C5s



Elevation

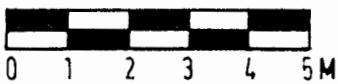


Plan

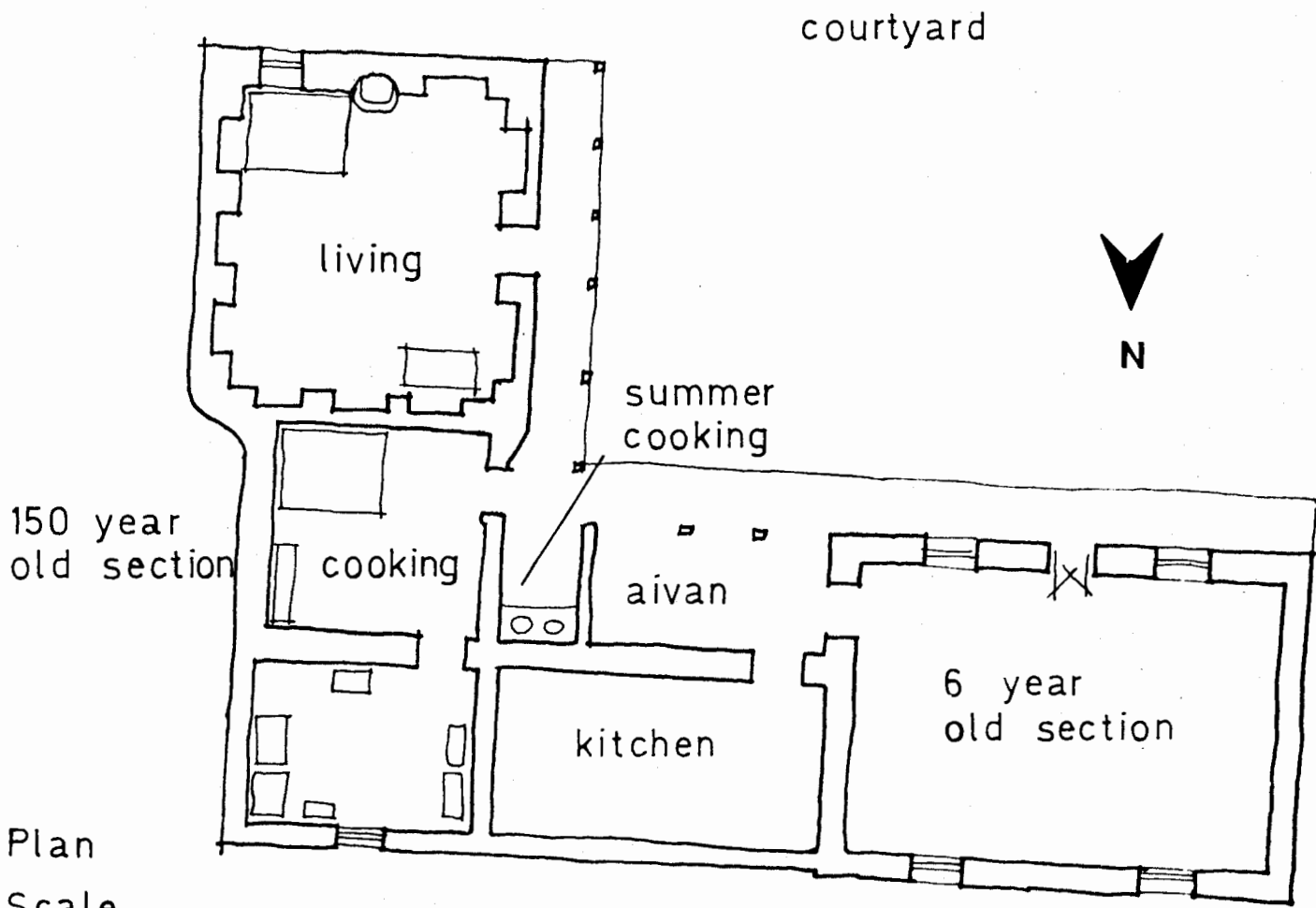
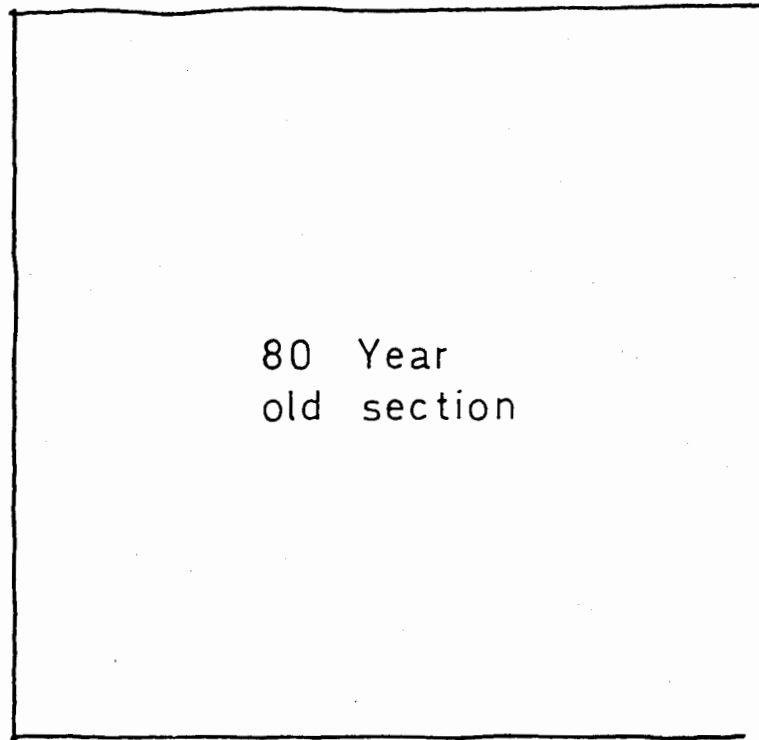
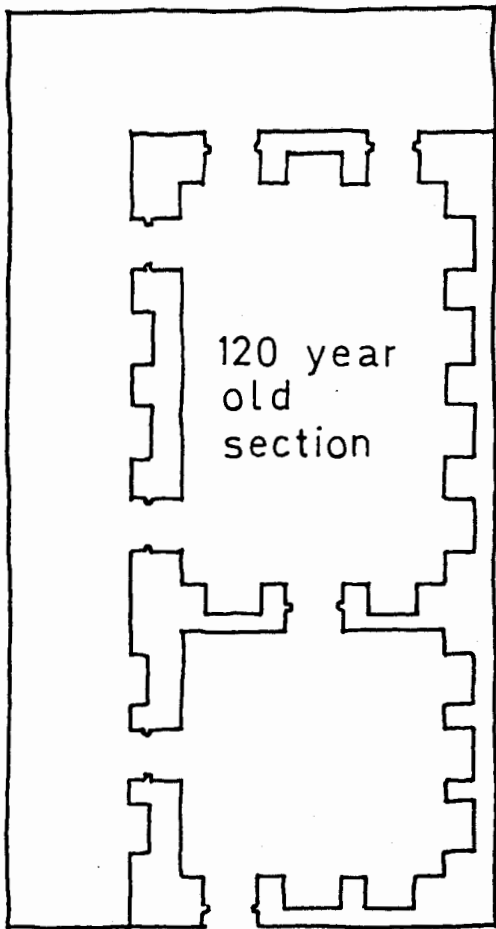
summer cooking



Scale

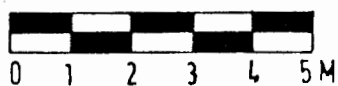


House 10.1 Kodir

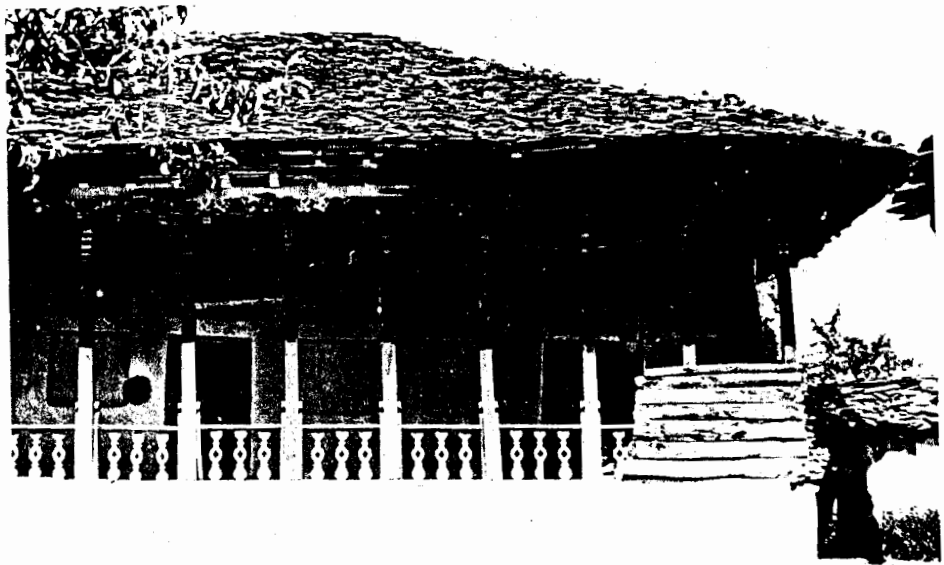


Plan

Scale

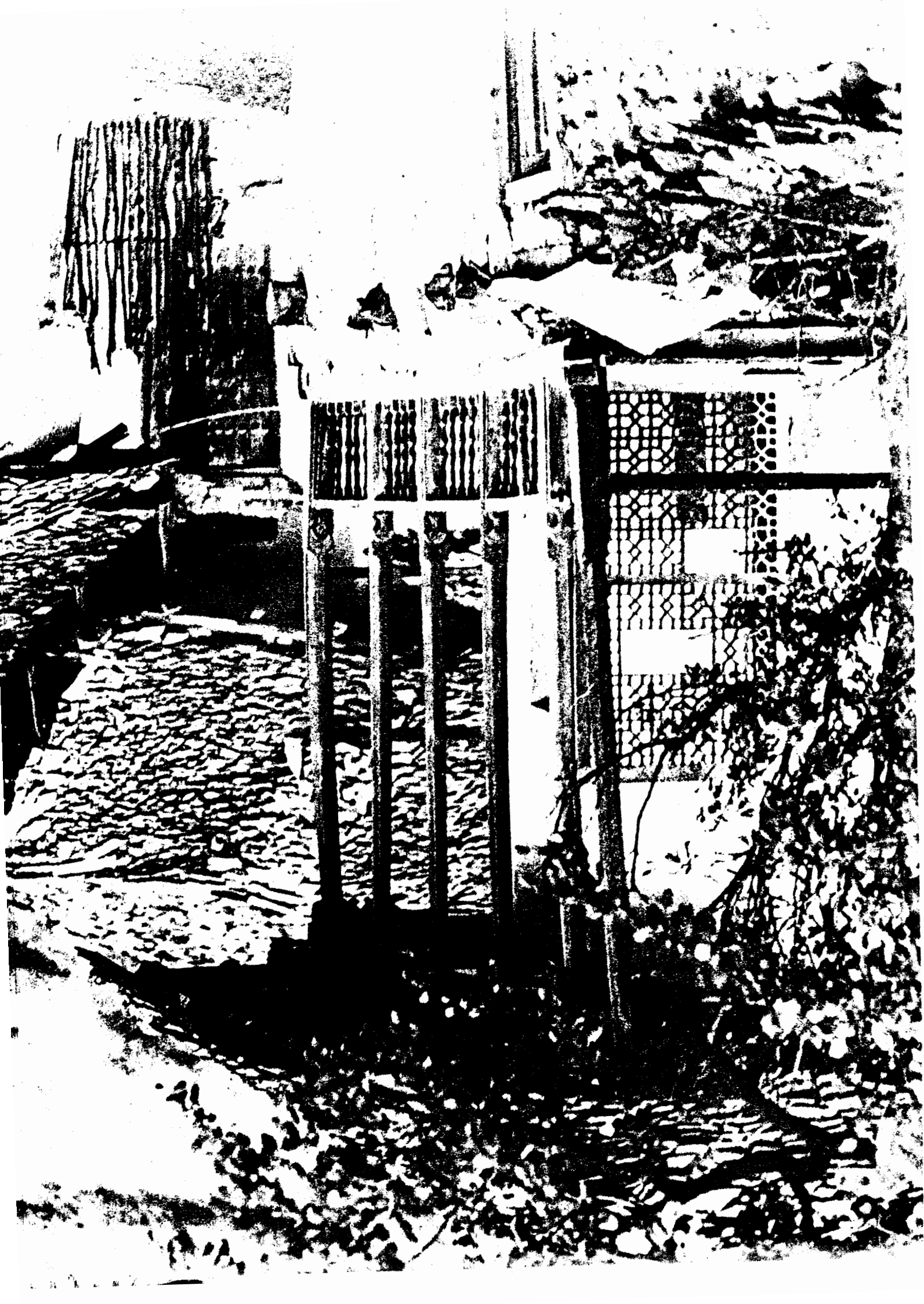


A 150 year old house in Kodir displays excellent timber joinery work.



Kodir village, a view of the newer section of the village.





## Sari

The district of Sari is one of the most productive areas of Mazandaran, where rice, cotton and sugar-cane are grown. The land is watered by the Tajan river and the boundaries of the district are defined by the Neka river on the east and the Talar on the west. Savadkuh and Hezarjarib form the southern boundaries of Sari, while the shores of the Caspian create the northern limits.

The town of Sari is an old capital of Mazandaran and the residence of the independent rulers who governed this region in the Middle Ages. The modern town was selected by Agha Mohammed Khan Qajar as his capital during the fight for the throne when his dominions did not extend beyond Mazandaran and Astarabad\* . The population is of mixed origin, partly due to rulers' habits of settling in the capital skilled craftsmen from other areas - often involuntarily. Zaths or Persians predominate while there are also some Turks, Kurds, Afghans, and Turkomen.

The shahrestan of Sari has a population of 204,982 in 38,879 dwellings. It has an area of 5,089 sq. kms.\*

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\* Ludwig W. Adamec (ed.), op.cit., p.374.

\* Ibid.

roofs of the older buildings are reed thatch, which is becoming increasingly scarce due to the reclamation of the swamps and marshlands for agricultural use. Sheet metal is now replacing reed thatch as a roof covering material. All houses in the Sari plain are constructed on high solid platforms which are about one metre above the ground level.

## 11 Sari Plains

The villages in the flat plains of Sari are mostly formed by herdsmen who came from the hills to settle and become agriculturalists. In villages founded through village reclamation, landlords had the custom of not demanding their share of the agricultural produce for several years; this encouraged the herdsmen to cut down the trees and form their agricultural settlements. The villages of Muzibagh and Pambeh Chuleh are examples of settlements formed in this way.

Muzibagh is composed of 65 households and has 450 people, who regard themselves as Mazandarani. According to the person interviewed, the village was founded 35 years ago by shepherds who came from Kia Sar area on the southern Sari hills. Today, less than half of the households own small plots of a half to one hectare of land on which cotton, soya beans, some rice and wheat are grown. Most of the population are agricultural workers who work on the farms of the six to seven large landowning families. One quarter of the population migrate to Sari in the slack winter months for manual work. Although cultivation forms the basis of their economy, some animal husbandry is still carried out by the villagers.

### Built Environment:

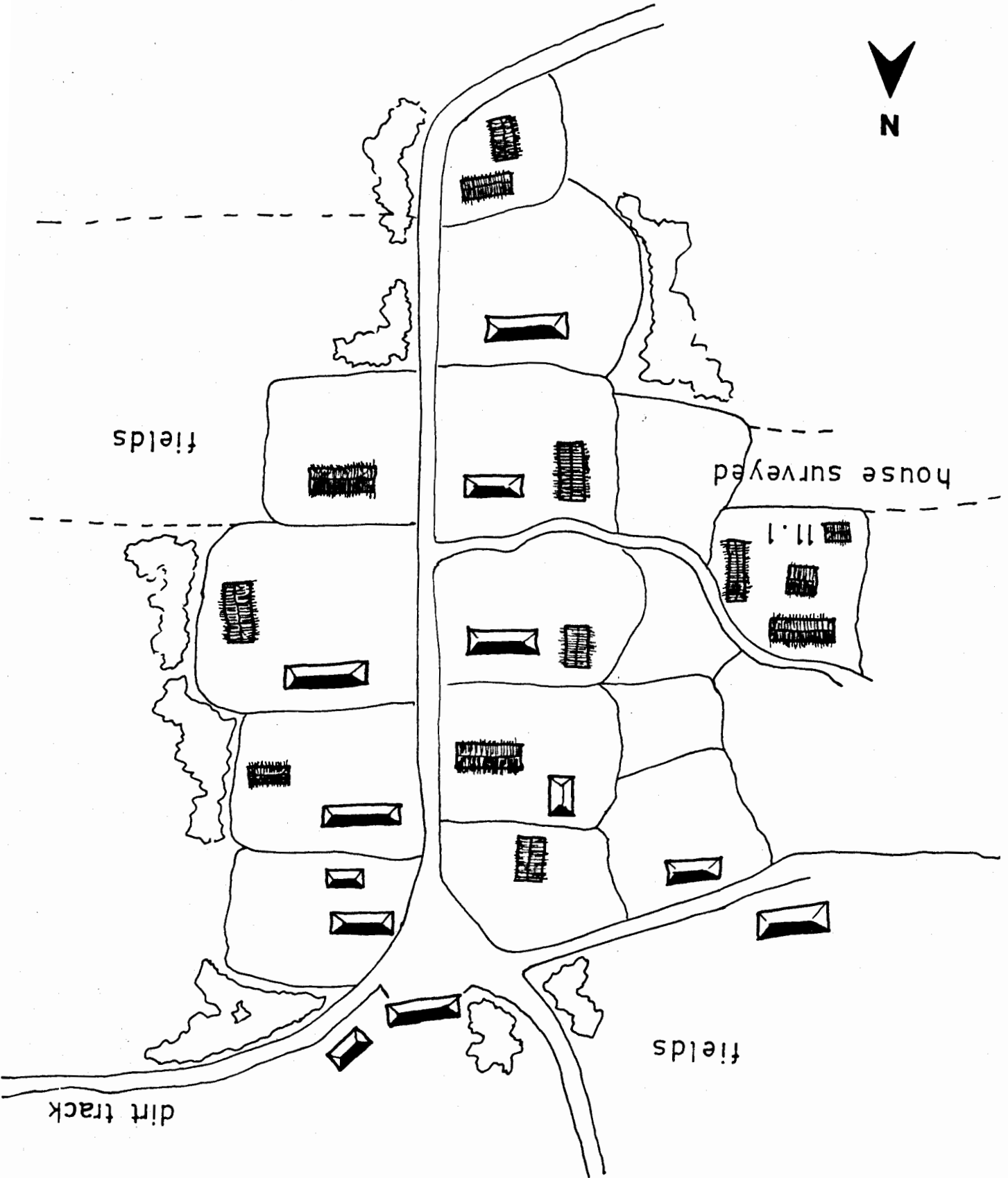
The plains villages are surrounded by trees, and are composed of loose clusters of houses normally situated in a linear pattern along the gravel road passing through the settlements. There are, however, some compactly clustered villages in the Sari plain, especially in the marshes which have been reclaimed. The settlement pattern of such villages is governed by the lack of suitable land to build on. Sar Marz is one such village where building land is very limited. In the rice growing areas of the marshes yet another very scattered settlement pattern is observed that is comprised of individual houses amidst the rice fields and swamps.

Despite the varied distribution pattern of the dwellings in these settlements, the house unit remains basically the same. The individual houses sit amidst gardens that contain animal shelters, stores, and a cooking area as ancillary shelters. The gardens provide wind shelter to the house by the belt of trees that surround their perimeter, and in most cases contain a water well and a plot for growing vegetables. These yards are fenced with reed walls plastered with mud, a technique used also in the walls of many ancillary shelters and houses.

The main building of the plot consists of two or three rooms built side by side with a long verandah (aivan) that stretches the length of the house. Although this house type is predominantly in single storey form, some have expanded to two stories. Both floors have a similar plan with the rooms opening onto the south facing aivan which is used for circulation and certain summer activities of the household. Within many house compounds another building type is seen that is used in conjunction with the main house for human habitation. This building, locally known as "nepar", has one or two rooms on the square plan ground floor which is walled and has a few small windows. Above is an open platform with the roof supported on timber columns. The ground floor of the nepar follows in many cases the plan of the main house, but the front aivan in this case is walled in, acting as a circulation corridor. The ground floor is used either as winter living quarters for the family or as storage; the upper floor is ideal for summer use where the shaded open platform allows the cooling breeze to pass and reduce the affect of the warm-humid summer air.

The walls of the single storey houses are reed supported by a timber frame and plastered with mud. Chineh (packed mud) walls are also used especially in the two storey houses and nepars. Fired bricks are now in general use as well. The

Muzibagh 11.





The houses in the Sari plains are predominantly front aivan types, traditionally covered by reed thatch roofs.



Within many house plots there is normally a summer house called "incir" (in this case it is used as a summer house).

Muzi Bagh House 11.1

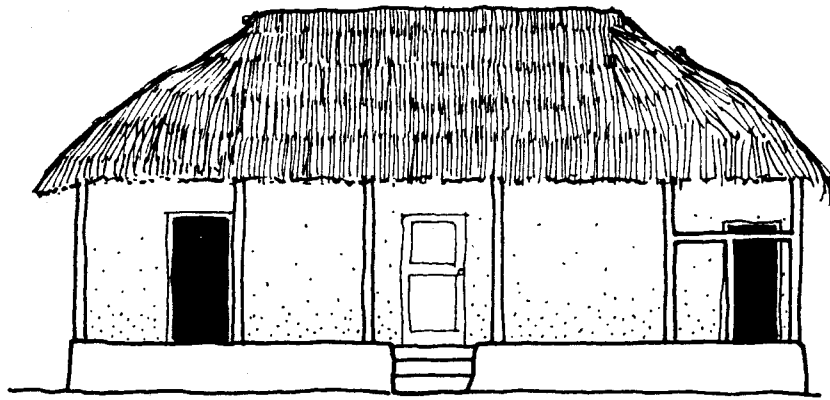
The orientation of the main house is to the south. Windows open to the north, west and south. The two storey building has openings on all four sides of the ground floor. Both buildings were built for living in.

Roofs are of hipped form, covered by thatch, supported by a timber truss framework. Sheet metal roof covering is replacing thatch in this area and new thatch is extremely rare.

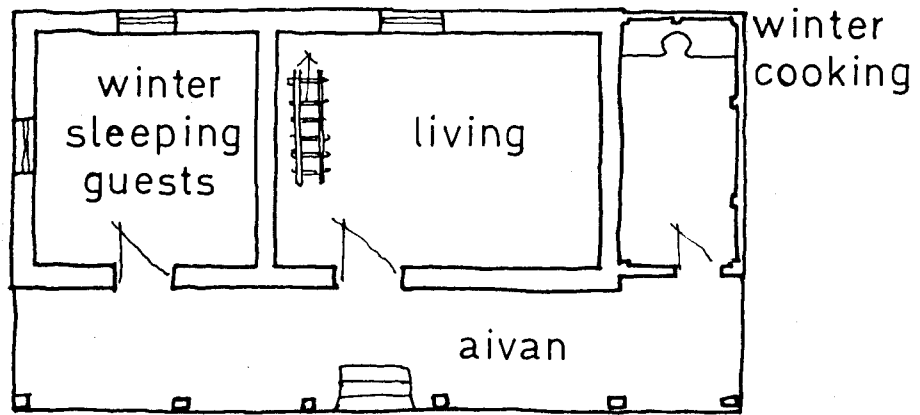
Walls of the verandah house are of reeds, packed and plastered with mud, and supported by a timber framework. The ground floor of the two storey building has chine walls. There are no walls on the upper floor. There are two other thatched outbuildings for animals. There are also two outdoor cooking areas. The whole plot is enclosed by a fence. There is a vegetable garden to the western side of the plot.

One household of five people live here, whose occupation is agriculture, producing rice, wheat and cotton.

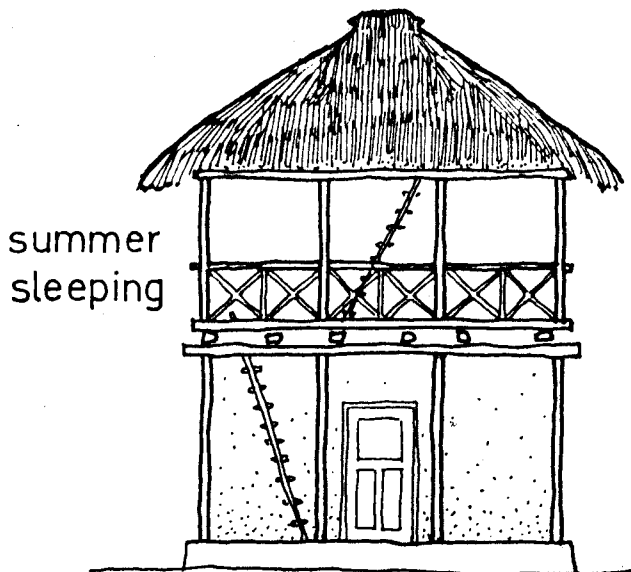
House 11.1 Muzibagh C3s



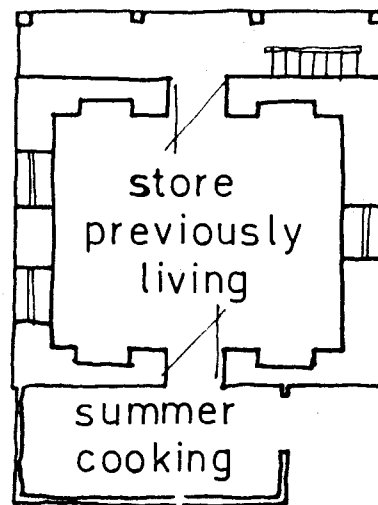
Elevation



Plan



Elevation

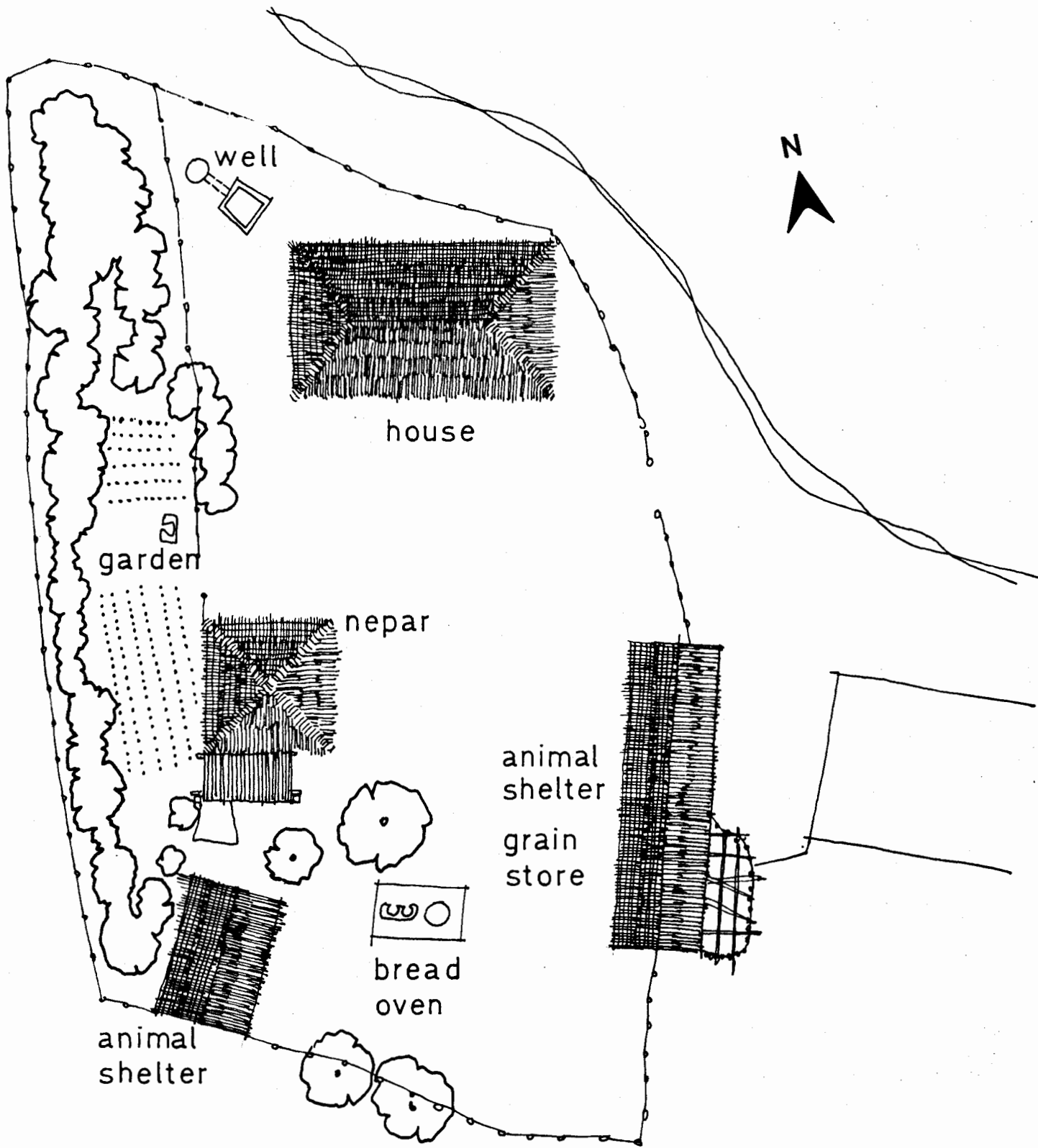


Plan

Scale



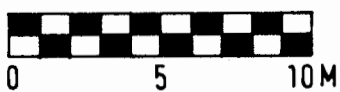
Nepar A1do



Site Plan

House 11.1 Muzibagh

Scale





The nepari has an enclosed room on the ground floor and a shaded, well ventilated open platform on the upper level which is inhabited during warm summer months.



## 12 Sari Foothills

The foothills on either side of the Tajan river valley begin a few kilometres south of Sari, and the building styles and materials undergo a gradual change from those in the plains. The settlements on the hillsides are noticeably more clustered and clearly defined as villages. The river basin that progressively narrows as one moves further towards the mountains is covered by rice fields that contain small wooden platforms elevated on timber posts, which are used for storing the harvested rice. At the narrow head of the valley rice cultivation practically ceases and small plots of wheat fields can be seen in forest clearings on the slopes.

The small village of Chajkam is situated in the hills above the southern slope of this river valley. It is inhabited by about 250 people in 30 households, who are mainly engaged in cultivation (wheat and barley) and animal husbandry. According to the information obtained in our case study, the village had originally 50 households, most of whom evacuated Chajkam during the plague that occurred 150 years ago and only three households remained. These three families, along with some of those that returned after the plague became small landholders. Chajkam does not have one major landlord.

### Built Environment:

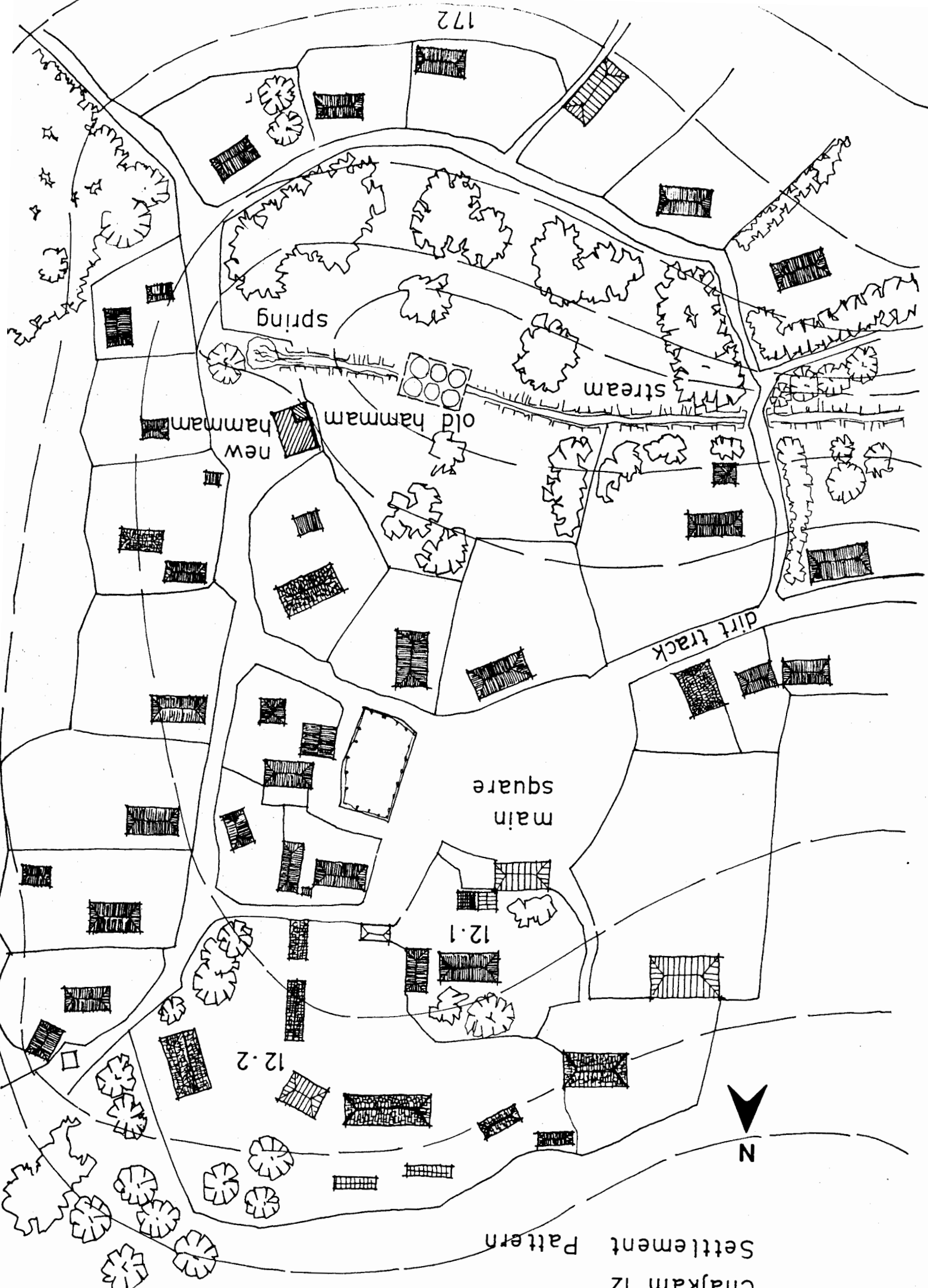
The main part of the settlement is clustered in the small plateau amidst the hills that gently rise up around the village on three sides. The village square is a central open space surrounded by the relatively close clusters of houses. There is a spring in the southern part of the village with an old and a new public bath beside it.

The houses stand in small fenced yards containing out buildings such as animal shelters and in many cases a "nepar". The houses in the foothill areas are mostly two storey and are of the front verandah (aivan) type similar to those found in the Sari plains. These buildings usually have a one metre walkway along the sides and the back of the house as well as the wider front aivan. The nepar is again basically similar to those described in the Sari plains section, but some are enclosed on both the ground and upper floors by walls constructed with chineh (on the ground level) and boards (on both ground and upper levels). This is due to the cooler, less humid climate of the mountains, which reduces the need for shaded open platforms.

The main wall building material is chineh or mud brick. Shingles, the traditional roofing material of the area, are being replaced by sheet metal due to tree cutting restrictions hampering the production of shingles. The wooden shingles in this area are longer than those used in Gilan (1m.x30cm.) and are nailed to the roof battens. Chajkam displays a variety of roof types using shingles, reed thatch and sheet metal as their covering material.

Chajkam 12

Settlement Pattern



Chachkam (on road between Sari and Kiasar): house 12.1

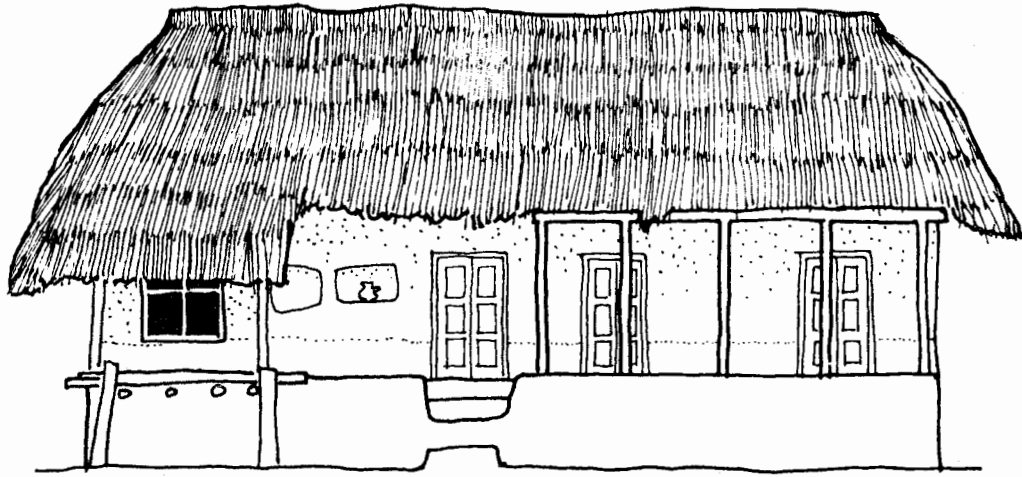
In the case illustrated here the roof of the main house (verandah type) is hipped and is covered by thatch, supported by a timber truss framework. The walls are made of chineh and are at least 60cms. thick. The volume of the walls is reduced by the use of alcoves. The house stands on a 1½m. high solid plinth. Openings are all on the verandah side, facing south.

The two storey building with an open upper floor clerestory has a pitched roof (known as a gable roof) covered with sheet metal and supported by a timber truss framework with strong cross bracing. There is a leanto at one side which has a shingle roof. The walls of the main structure are chineh. The leanto has a timber framework with a lath and mud infill. The building is aligned north/south, with one small window on the south side, the door on the north side. The buildings stand in a small fenced enclosure, with two other outbuildings, both with pitched thatch roofs. One is for animals, the other is a lavatory.

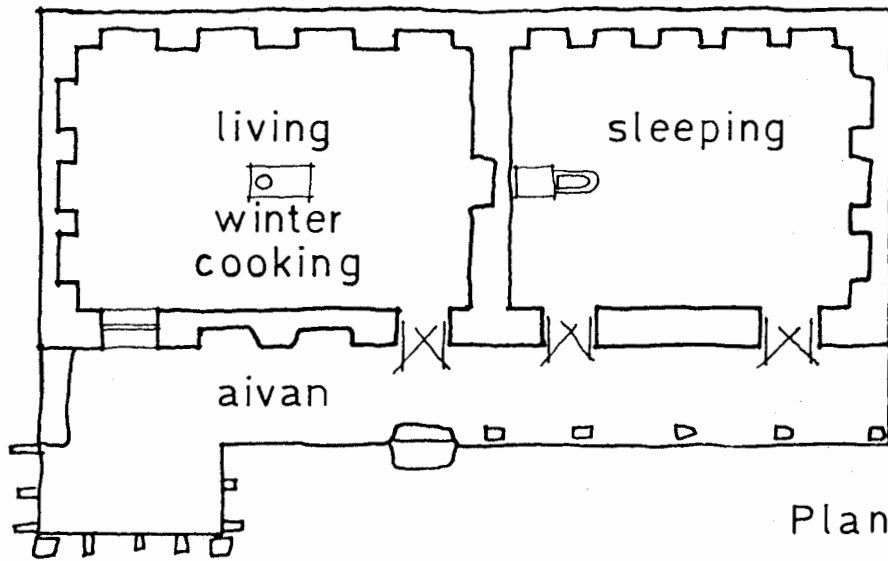
There is one five person family living here, who grow wheat, barley and rice.

The climate is cool temperate, with medium humidity in summer; however, quite a high rainfall, mostly in the autumn, winter, and spring. Average annual rainfall is 700 mm.

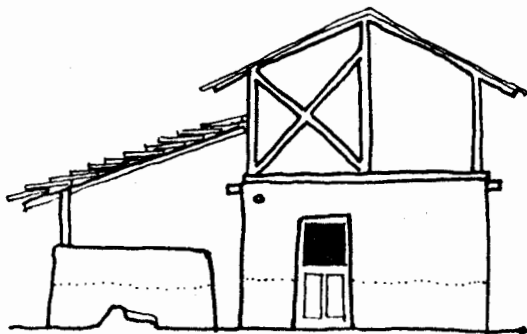
House 12.1 Chajkam C2s



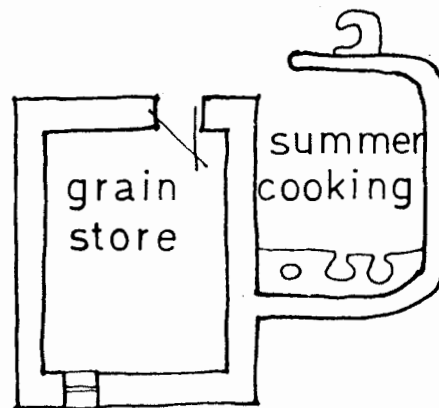
Elevation



Plan

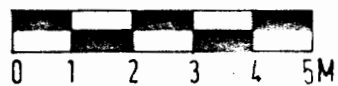


Elevation



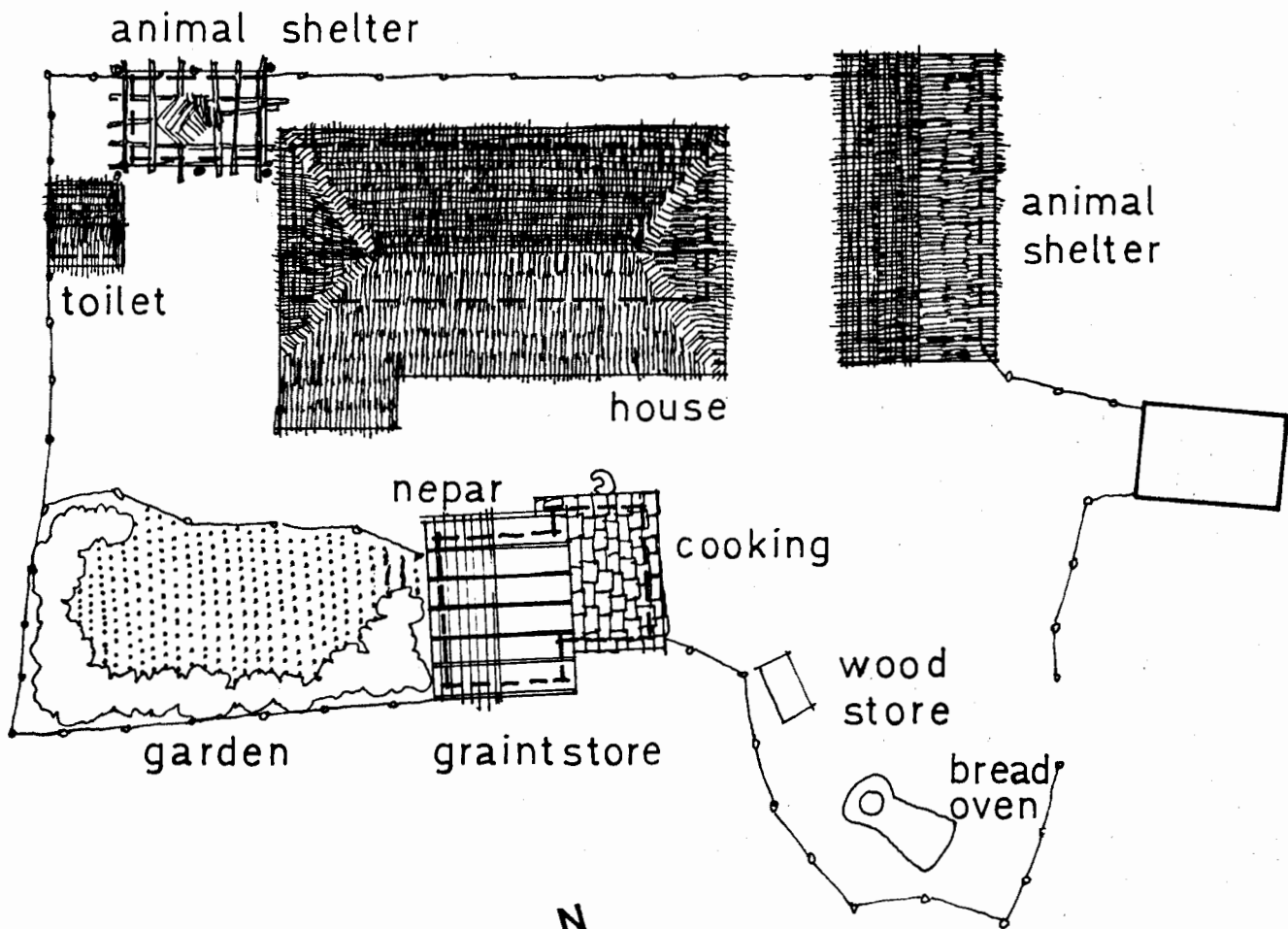
Plan

Scale

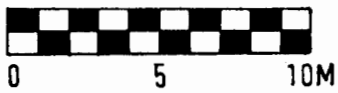


Nepar

House 12.1 Chajkam



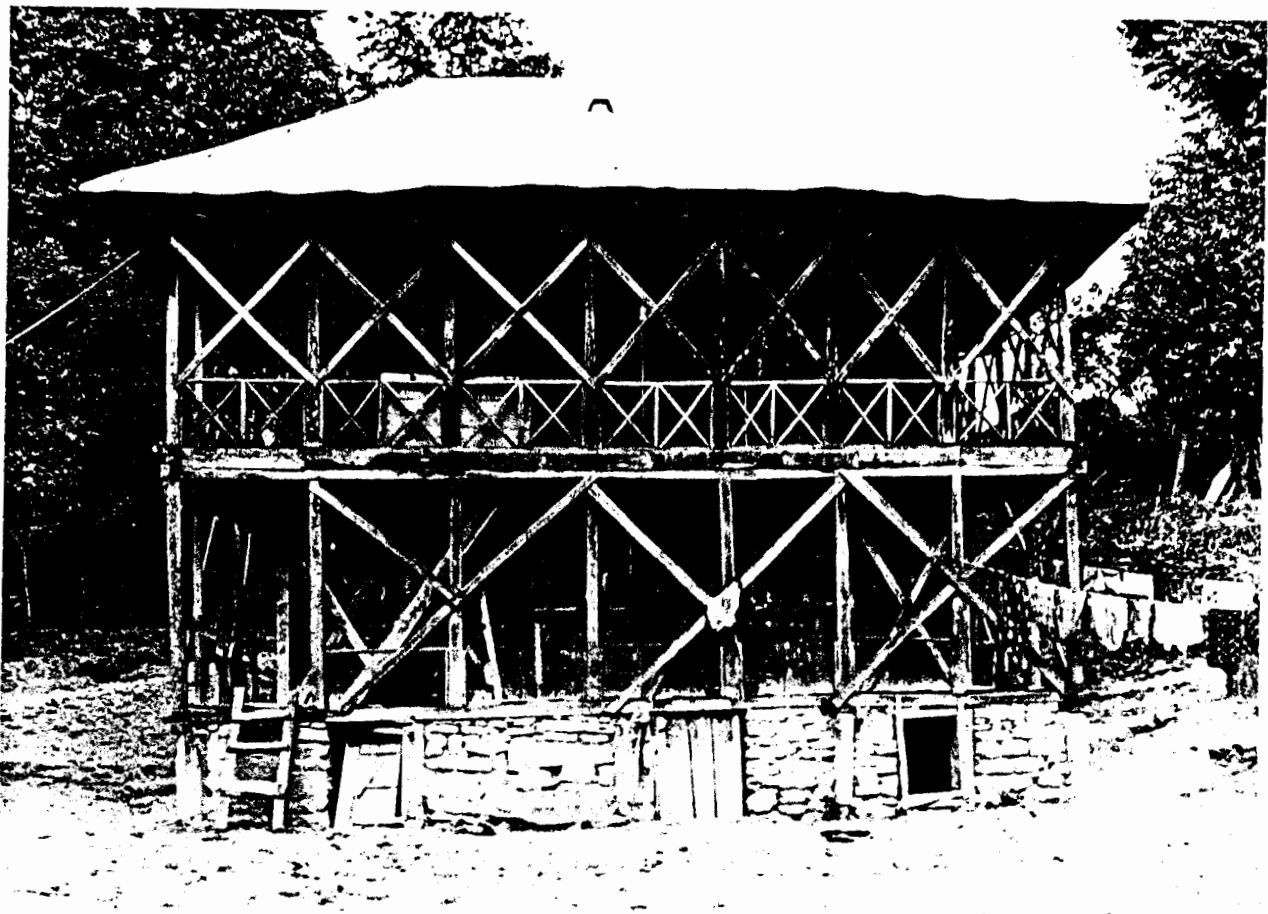
Scale



Site Plan

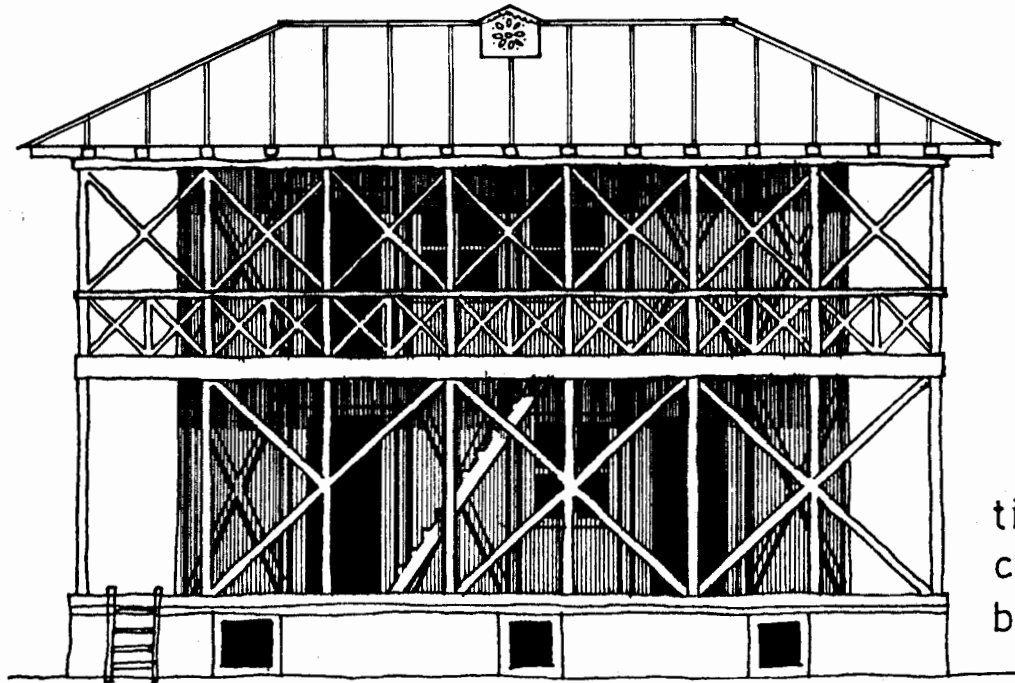


Two storey front verandah (aivan) house in Chajkam village in the Sari hills.



Timber frame with triangulated cross bracing stabilizing the building against ground movements are an important feature in this region.

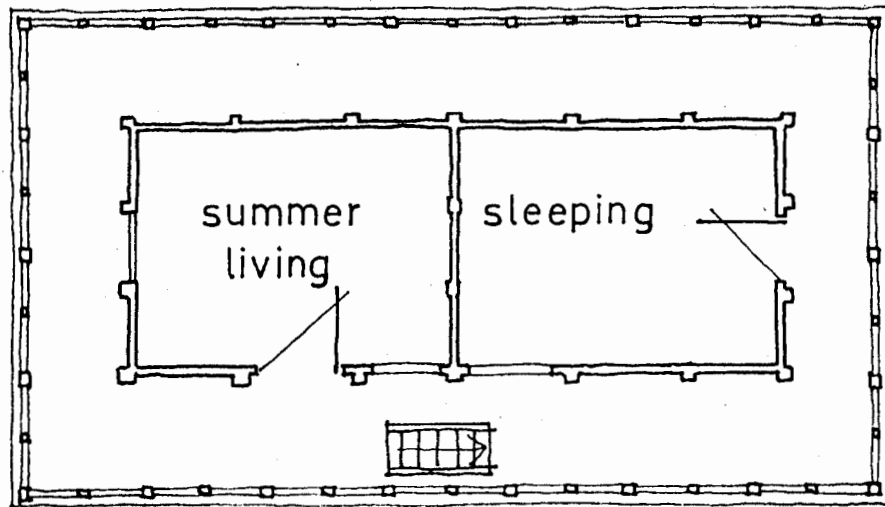
House 12.2 Chajkam D2d2



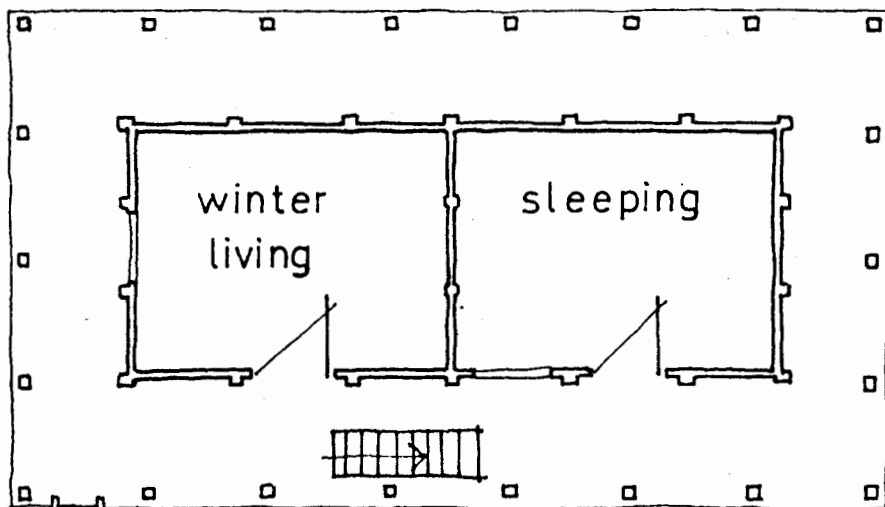
timber  
cross  
bracing

Elevation

basement storage  
& animal shelter



Upper Floor Plan



Ground Floor Plan

Scale

