

The Sri Lankan Tradition For Shelter

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The tradition is the opinion or belief or custom handed down from ancestors to posterity. The tradition is not static, it is the product of the functional demand adopted with the nature and environment, flavoured with culture and belief. It was developed with certain value systems, anything that was not acceptable to the society was gradually rejected, only what was proved useful for people were retained and adopted. The outcome of confidence and the human satisfaction experienced by the ancestors, formulated and precipitated the tradition. Today it is assumed that the ultimate objective of modernizing development is the urbanization and industrialization. In a country like Sri Lanka with a rural population of more than 80% one must be careful in formulating development policies. The result of inappropriate development policies which assume that increased agricultural production is synonymous with rural development, Where such policies are based on large scale, capital intensive agro-industrial projects, there may be serious disturbance to existing settlement patterns.

The house or the shelter is only an item in a settlement system. The urban life was based on access to services but the rural life is more interdependent and harmonious in its survival and performance. It is important to understand that building a structure as a shelter was not the tradition but it promoted one, building his own home. The settlement theories have developed over last 150 years but the neatness of these concepts are based on a number of assumptions which are open to question when viewed from a developing country where the tradition has a strong impact in the settlement pattern and the individual shelter.

The comparative studies carried out on the concepts of space utilization and the shelter, in Colombo based shanty and ordinary rural houses revealed that the tradition was the strongest influence that governed the design and their behaviour.

It reminded that the crow lived in Panchikawatte area, built its nest on a telephone post using steel wires, nails, plastic and other scrap materials available in the locality. But the size, form and the method adopted was the same as any other crow who built a normal nest on a tree outside Colombo. It is important that one should realize the proper understanding of the Sri Lanka Tradition for shelter by the Colombo based administrators, planners and architects will provide basic guidelines to satisfy the cultural needs of the people and for the continuity of the satisfactory occupation.

The traditional house that has existed in Sri Lanka for more than two thousand years was an outcome of a strong philosophy of Buddhist life — *i.e.* the simplicity and the impermanent nature of life. The house was part and parcel of nature, the materials were borrowed from the nature and returned to the nature. The traditional concept was to live in and around the open areas of the house and not within the enclosed compartments of the house and it was the most suitable solution for Sri Lankan climatic conditions. A house built in this nature, needs regular maintenance and it was continuously embodied in the customs. There are cultural festivals at regular intervals such as New Year, Vesak, Sudda Poya (Esala), Etc. The maintenance of the shelter by applying cow dung on the floor and walls, sometimes white washing, thatching the roof, cleaning the house etc., were aimed for the festival, hence the house was well maintained.

The adoption of the traditional house to suit the micro and macro environment was always a practical solution and interesting to understand in detail in order to appreciate its performance. The design and the slope of the roof provided protection from rain, the insulation capacity of the covering material and the breathing nature of the roof protected from the heat, a low wall plate height and long eaves protected the walls from the hot sun and rain and also covered the glare reflected from the cloudy sky. The gap between the wall and the roof also provided proper ventilation and defused light into the room. Construction materials used in walls were with very high insulation capacity. The verandahs with eaves, around the house and small windows kept the hot sun away and the interior of the house was cool and comfortable to live in this hot climatic region. The high plinth and the impermeable nature of the clay used for construction prevented the rising dampness during rainy days. The materials required for construction was selected from the locality and the simple technology utilized to put it together was the basic reason for a low cost shelter.

The construction of a house in a traditional form was linked up with a series of rituals that brought confidence and hope in the mind of the occupant on prosperity. The foundation was laid on an auspicious time specially selected by the Astrologer to suit the horoscopes of the occupant and his wife. Enshrine-ments of auspicious objects were made as a ritual with religious blessings and also requested help and blessings of all gods and deities. This brought in a spiritual entity to the new house, religious beliefs and practices brought confidence and blessings to the occupant in the traditional form.

Village carpenter is the key technical adviser in house construction. The site selection, location, setting out of the house, the well, the granary, etc. were all spelt out in the tradition, and it has proved functional in relation to the activities and in creating a comfortable living environment. The technology used in traditional housing construction was practised today in the same simple way as what was found many thousand years in the past. In Valmiki's Ramayana, the famous Indian episode composed more than five thousand years ago, it was described how Rama, Ssetha and Lakshmana built a wattle and daub house with jungle timber, twine and mud and the method of construction described has no difference to the method practised today. The wattle and daub construction was also used in the traditional system as mud wall (*tappa bamma*), sun baked bricks (*moda gadol*), rubble packed mud walls (*ketagil bitti*), some times baked bricks with mud mortar (*Gadol bitti*) and laterite block walls (*Cabok*).

In construction of shelter the roof was given special attention because it had to withstand heavy rains and wind in the monsoons, and the hot sun throughout the year. Nearly seven methods were adopted in roofing, to suit the availability of materials in the locality and the social standings of the occupant. Straw was a popular roofing material in paddy producing areas mostly in dry zone but it was the material used in hill country too. The pitch of the roof was about 45° and the straw was laid on jungle timber framework, to a thickness of about 200 mm either in bundle form or in just packed form and maintained applying a new layer on top of the existing at every harvest. In coconut growing areas cadjan or woven

coconut leaves tied in double using a tender coconut leaf was the common method adopted and also it was found in the hot climatic areas a layer of paddy straw was placed on top of the cadjan roof to extend its life span. Mana grass or Iluk grass which were about a meter long was used for thatching the roof in bundle form or spread and tied using timber sticks. In the Northern and Eastern coastal areas where Tal palm was freely growing, dried palmate leaves of this palm was the most commonly used roofing material and it can withstand both hot sun and the periodic heavy rain. Burnt clay flat tiles or half round tiles were in shelters used by clergy, royalty or chieftain in early days but later half round tile became the popular roofing material for anyone who could afford it.

In considering the basic arrangement of functional spaces, one can identify two basic concepts in arranging the rooms in relation to the open verandah or pila. **Most popular and general plan type was to have an outward looking house with an open verandah to the front as the outer living space.** This space is open and free, sometimes protected with half walls specially in rainy areas but well ventilated and was the social area where the occupants entertained outsiders. A place to sit was provided by spreading a mat on a raised clay plinth, a woven bed with a mat on it or with different types of verandah chairs. The inner rooms are small, dim lit and with no windows or may have one small window, and it was mostly a private space used by females and children to sleep.

The granary, a detached structure of the house, was found in different forms to store paddy and other grains and always located in front of the house, in most parts of the dry zone and a large timber box placed on stone stumps kept inside the house was used as the granary in wet zone houses. The size and number of these granaries varied according to the wealth of the family. The kitchen was divided into two functional spaces, the preparation area was mostly open and the other enclosed hearth area was with a smoke lattice hanging above the hearth to keep dry food.

Inward looking houses were mostly found in hill country with one or more courtyards. the rooms were located and entered through the verandah that was found around the courtyard. Located and entered through the verandah that was found around the courtyard. In this plan form all the living activities were confined to the open verandahs and the required lighting and ventilation were obtained from the courtyard. The granary was also located in a corner of one of these verandahs. The larger house, called walawwa belonged to the land lords and chieftains and had different rooms and spaces located around many courtyards. The main house of the larger walawwas had an upper floor, a two storeyed granary and many out houses. There were two types of courtyards found, one was designed space coming within the basic space and the other formed by locating different buildings around an open space and joining them together with a wall. During 17th Century the Dutch who established in Sri Lanka adopted the open courtyard system in their urban houses.

Even though Sri Lanka is a small island one can see a distinct variation in the topography forming the central hill country surrounded by a flat low country. It can be divided into climatic regions in relation to the rainfall pattern, the Central, Western, South Western and Southern parts of the island coming under the wet zone with a high rainfall and subjected to the South-West Monsoon, the remaining part of the



WARUWA



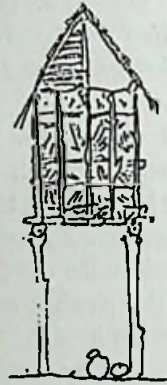
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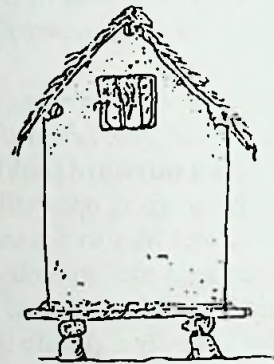
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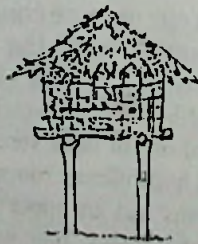
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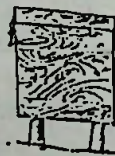
KURAKKAN ATUWA



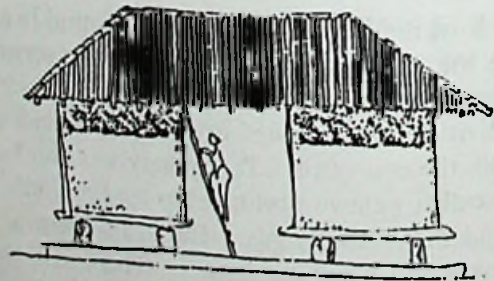
ATUWA



COMPARI



ATU PETTIYA



ATU-GE

TRADITIONAL GRAIN STORAGE STRUCTURES

country is dry with North-West Monsoon rains in December, January and February. With these variations in the topography and the climate, different provinces in the country is subjected to varying micro climatic conditions with a change in vegetation and temperature. It is interesting to note that these variations have influenced the design and construction of the traditional house hence a provincial identity in the traditional house form is remarkably interesting. In addition to the climate, the difference in ethno cultural groups, occupational patterns and social behaviour in different provinces have influenced the design of the traditional house.

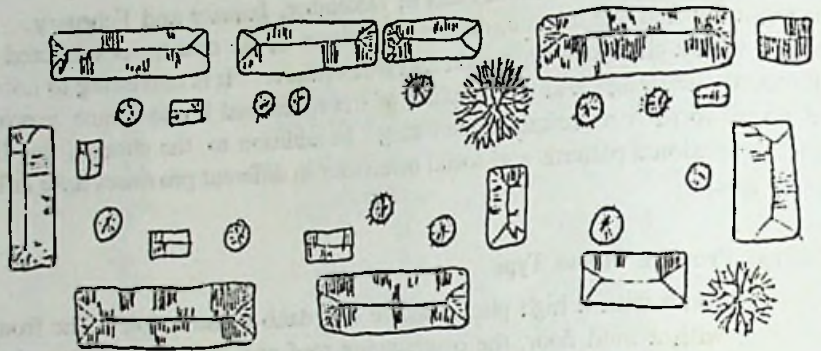
(a) North Central Province House Type

It was a linear house with a high plinth, wattle and daub construction. The front pila was open, about a meter wide with a mud floor, the overhanging roof was supported on round timber posts and because of the low eave, one who sits in the linear mat spread on the pila is well protected from the glare and the hot sun. Each room along the pila generally represented a family unit with stepping stones kept in line with the door leading to the room. Two side verandahs were extended with a partly hipped roofs and a half wall with one of these forming the kitchen and its working area with a pounder, grinder, etc. The other was used for storing agricultural implements or to keep a bed for an elderly male or some times children used as the study area because the rooms are rather gloomy due to absence of windows, but the light inside these rooms was sufficient for other activities. The roof was thatched with straw and the house could be extended lengthwise by adding more rooms to the existing line. The granaries found in front of the house were to store paddy and kurakkan (Eleusine Coracana). The paddy storage structure was of two kinds, both raised above ground on four legs to a height of about 1,750 cm. and with a timber platform on the top, the granary known as 'Varuwa' was circular in form with an external jungle timber structure to support the straw wall and the timber framed conical removable, straw roof cap. The other was known as 'Veni Bissa', in this case the jungle timber frame work found in Varuwa was replaced by a closely wrapped rope made out of straw. The roof cap was similar. The Kurakkan Atuwa was rectangular in plan on a similar platform, with walls made out of jungle timber and Tal palm leaves. The roof was two pitched gable with straw covering and the chamber is entered through an opening at the top of the gable wall. A fire-place to boil milk, or in some cases the kitchen was found under this granary and the smoke and the heat would have helped to extend the period of storage and protected the grain from insects and humidity.

(b) Kurunegala House Type

It had many similarities to the typical North Central province House, wattle and daub construction, general house plan indicated two long rooms along the front verandah which was about 1,500 cm wide with a half wall on the outer edge. The verandah was extended to the front, either at the middle of the linear house or at a side with a front gable and forming an entrance porch with a half wall around. A special curved timber beam was placed across the open gable with a king post supporting the ridge. This additional spacious verandah may be required to spread the paddy just after the harvest for drying in case of rainy weather. The roof was covered with cadjan because it was a coconut growing area and some times covered with straw.

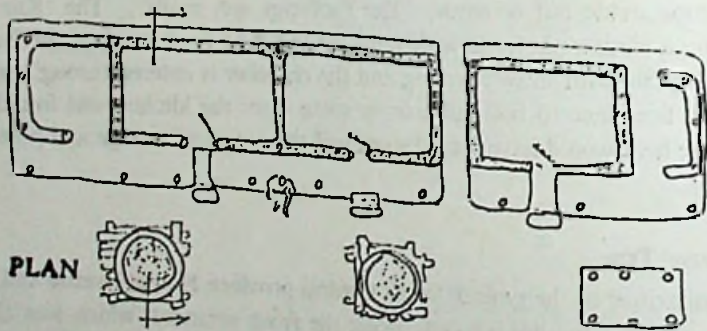
The granary that was constructed in front of the house was basically a circular cane basket raised above ground and placed on a set of stone stumps to protect from the ground dampness, structurally stabilised with three jungle poles planted on the ground and tied to it. The basket was covered with clay and cow dung forming a full wall or the top one-third was left for ventilation, keeping the upper part of the basket exposed, the roof was a conical cap, thatched with straw, the paddy was poured or removed from the top by raising the roof cap. In some places these Bissas were white washed and decorated with drawing of animals, people, plants and flowers in abstract form and these were referred as Bihi Paintings.



VILLAGE LAY OUT



ELEVATION



PLAN



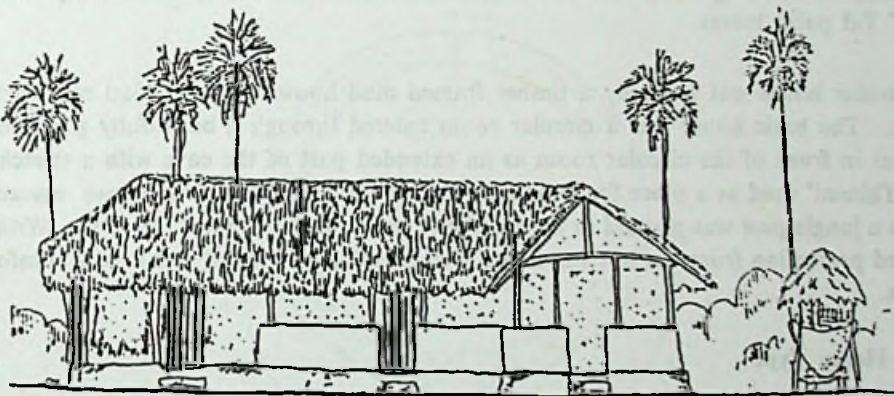
SECTION

TRADITIONAL HOUSE - NORTH CENTRAL PROVINCE

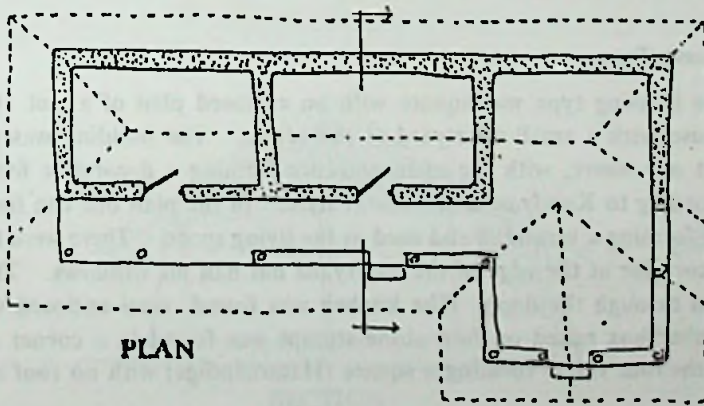


SECTION

SIDE ELEVATION



FRONT ELEVATION



PLAN

TRADITIONAL HOUSE - KURUNEGALA DISTRICT

(c) Mullaithive House Type

This housing type was circular in plan form and found in Northern part of Sri Lanka. The time and the modernization that has crept into these areas have erased most of these traditional houses but in Mullaithive, Puthukkudiyiruppu, Thunukkai and Amban these circular housing tradition still prevail. In Mullaithivu the house was a composition of four basic buildings around an open garden area but enclosed within a three meter high fence made out of Tal palm leaves. When entering through the gate called 'Padalai' one comes to the open compound 'muttam' where the main round house was found in front of a half open rectangular hall the 'mal' and it was the place where outsiders were entertained. The kitchen was a separate building either circular or rectangular in plan with the kitchen yard visually barricaded by a fence.

The Komparai or the granary was also a circular basket structure raised on four pillars with a conical roof out of Tal palm leaves.

This circular house was basically a timber framed mud house with a conical roof thatched with Tal palm leaves. The basic house was a circular room entered through a beautifully panelled door and the verandah was in front of the circular room as an extended part of the eave with a stretched and raised plinth the 'Thinnai' used as a place for people to sit. If the diameter of the house exceeded more than three meters a jungle post was planted in the middle of the house to support the roof. With the low eaves that provided protection from the hot sun and a well maintained 'tinnai' was a very comfortable place to sit and relax.

(d) Jaffna House Type

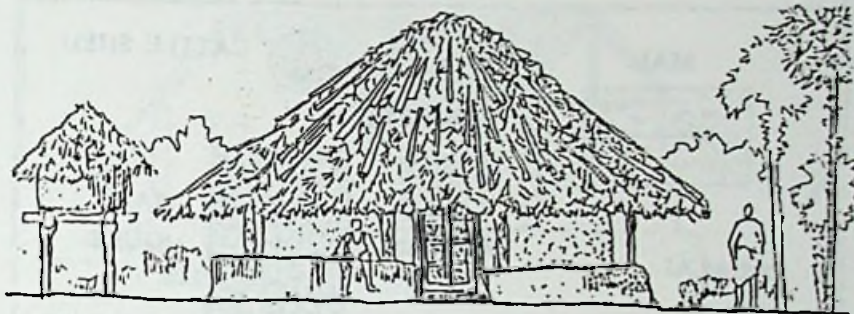
The layout of the Jaffna house with a covered fence enclosing the compound and the arrangement of individual units in relation to one another was very much similar to the Mullaithivu house, but the main house is rectangular in shape with an open front verandah raised as a thinnai and having one or two rooms with a hipped roof thatched with Tal palm leaves.

(e) Kandyan Farmer's House Type

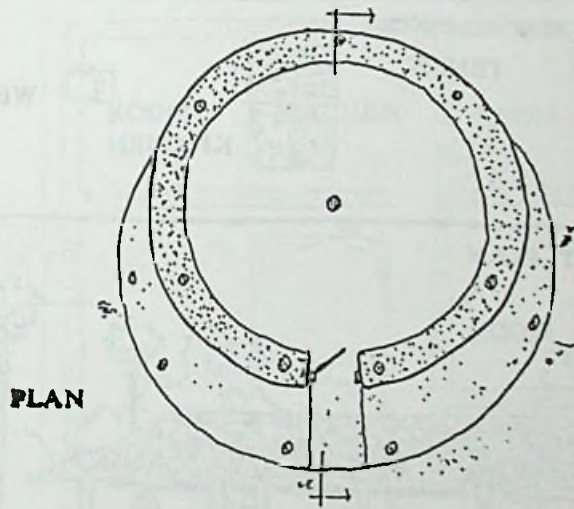
The basic form of this housing type was square with an enclosed plan of about 10M x 10M. It was an inward looking house with a small courtyard at the centre. The building was raised on a mud plinth to a height of about one metre, with the main entrance forming a decorative feature with a nine piece door constructed according to Kandyan architectural style. In the plan one can find two sides were open towards the courtyard forming a verandah and used as the living space. There were two linear rooms entered through a narrow corridor at the edge of the courtyard but had no windows. The light from the courtyard entered the room through the door. The kitchen was found semi enclosed within the house and then the granary a timber box raised on four stone stumps was found in a corner of the verandah. The roof was hipped with the four ridges forming a square (Hatarendige) with no roof above the central courtyard.

(f) Ruhuna Chena Housing Type

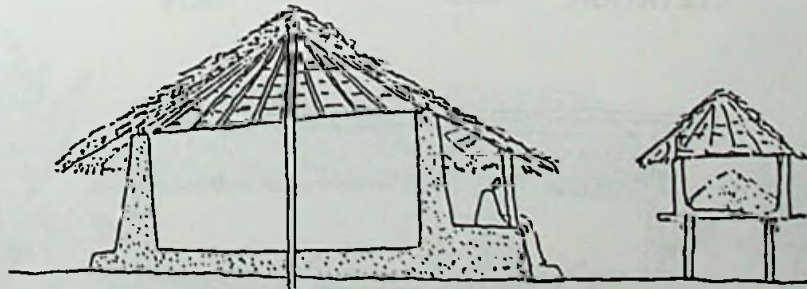
This was a very simple small rectangular house with one room and the verandah, wattle and daub construction, with a rough finish and very temporary in nature. The roof was thatched with Mana grass Illuk grass or cadjan. The tradition is that a newly married couple will always put up a new house for their occupation.



ELEVATION

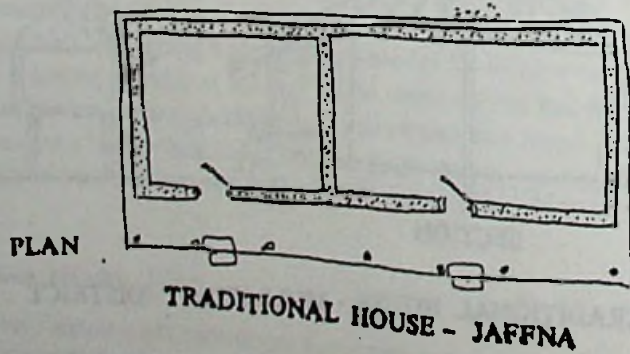
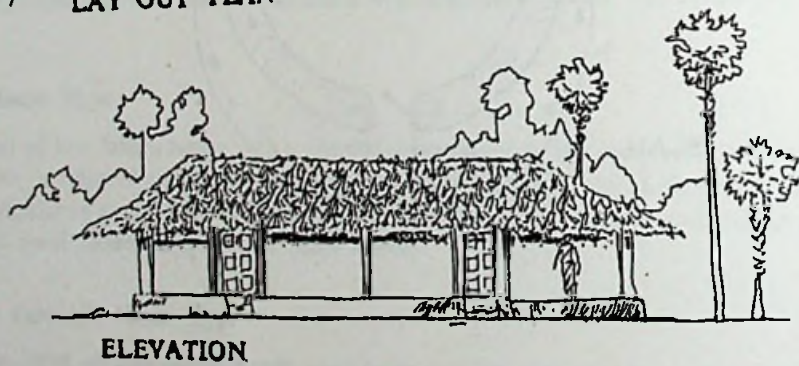
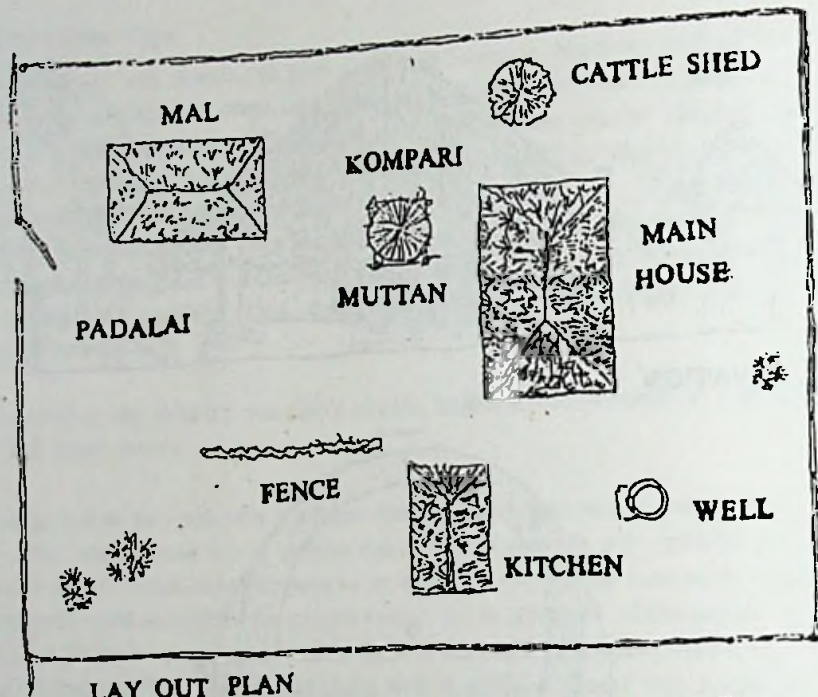


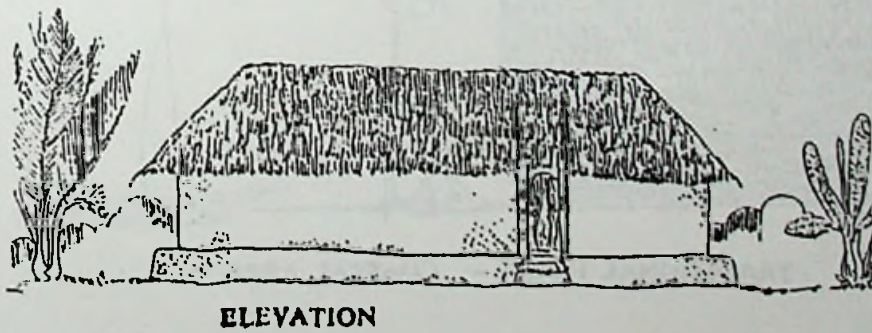
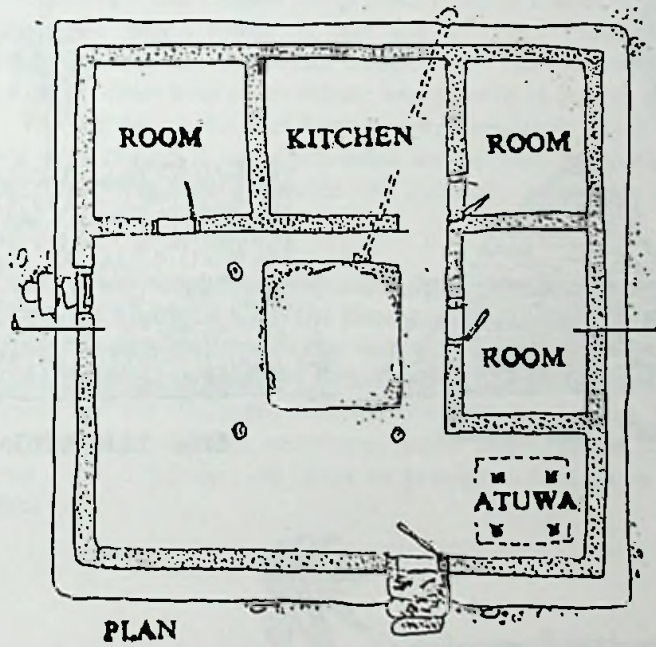
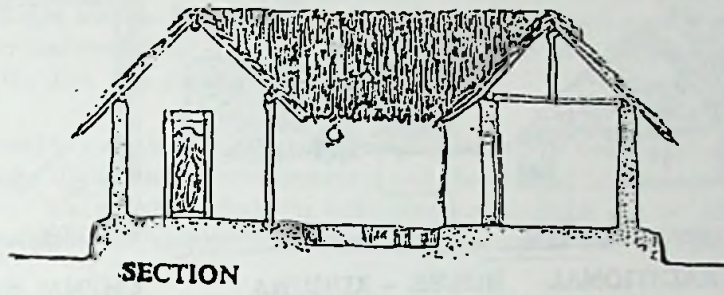
PLAN



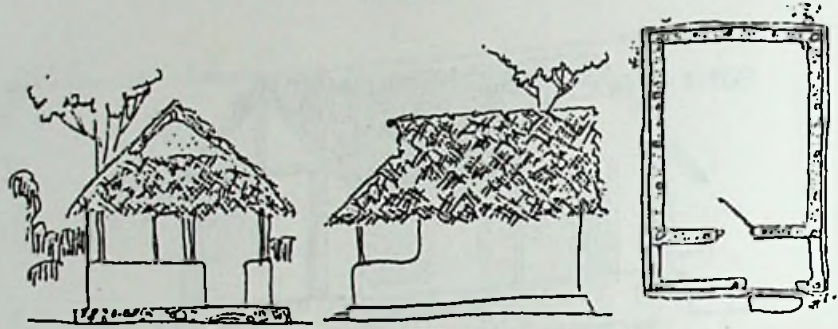
SECTION

TRADITIONAL HOUSE, - MULLATIV DISTRICT



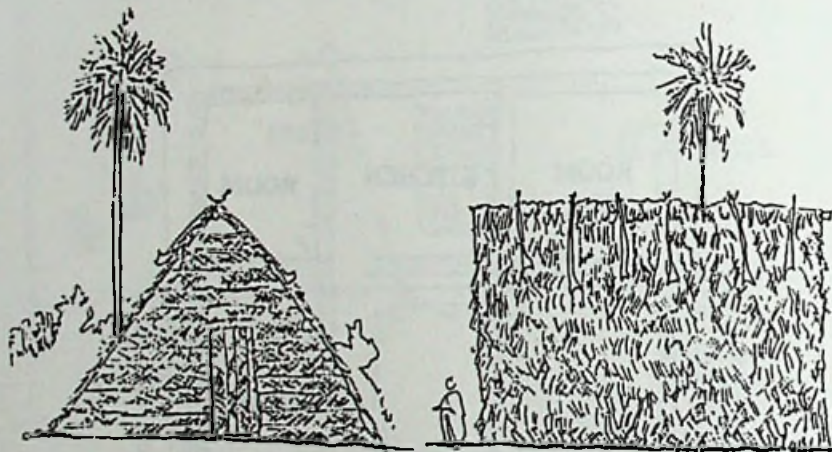


TRADITIONAL HOUSE - KANDIYAN FARMER'S



TRADITIONAL HOUSE - RUHUNA

CHENA TYPE



FRONT ELEVATION

SIDE ELEVATION



TRADITIONAL HOUSE - COASTAL AREA

(g) Coastal Housing Type

There were the houses occupied by fishing community along the coastal area. It was rectangular in shape, one roomed house with no plinth and no verandah. The roof was a gable with cadjan covering and the walls were also constructed out of cadjan. In some areas the roof has extended up to the round without any wall and the door was also very temporary in nature.

It was very interesting to note that a provincial identity in traditional housing types were still preserved in those locations due to the functional environmental and the cultural acceptance of those plans and forms to the occupants. The deviations from the basic plan was common due to different requirements of various families, availability of materials in relation to their economy and the influence on styles.

Within the last two hundred years the colonial influence on housing and construction methods were synthesized with the local architecture and evolved many other types of houses that came in parallel with the tradition. These houses were mostly found in the coastal areas from Negombo to Matara. The verandah in these houses became an important architectural feature with decorated timber or masonry columns, doors and windows were much refined and painted in colour, the floor finished either with clay tiles or cement. The half round clay tiles became more popular as a roof covering and the walls white washed and plastered even though it was constructed out of mud or cabok. These houses were environmentally well suited, it was functional, durable and culturally acceptable to the socio economic condition of the rural folk.

The tradition was always an acceptable solution to the problems prevailed in the society. The tradition was not static, it changed with the time and the changing needs of the society. If the change was in harmony and sympathy with the nature and the culture it survived comfortably giving a new outlook to the brought down tradition. When the change was in conflict with the nature and the culture that did not survive and got eliminated with the time. The Sri Lankan Tradition of creating a shelter for occupant was a product of long time experience, which embodied the Sri Lankan Culture, life pattern and the environment. The tradition was there to provide a foundation and strengthen to the shelter to come in the future.