

OBJECT



Pic. 1: Residential Building

FACTS

Altitude:	approx. 800m -1000m
Building Age:	approx. 5-10 years
Dimensions:	ca. 6x5x2,5m
Built surface:	ca. 30m ²
No. of stories:	1
Typology:	bahareque shelter
Climate:	tropical savannah
Topography:	rocky hillside
Used Materials:	wood, clay, corrugated iron, stones

INTRODUCTION

Our own experience on the place, contact to people knowing the area as the organization of the Caracas Urban Think Tank which comprehensively surveys the region, and the quotation of general Venezuelan vernacular architecture helped to gather information which we tried to keep as objective as possible.

SITE / LOCATION

The site of the house is located remote of the Camino Real to Choroni and is embedded in the hillside, which makes the place susceptible to erosion.

Because the houses have been added with the time, there is possibly no definite parcel organization. Furthermore, the site is not in possession of the inhabitants. The houses are self constructed but the land belongs to a Hacienda owner who gave the people his verbal agreement to settle on his property. Therefore the inhabitants invest into accommodations on foreign land from where, according to the law, they can be banished any time.

The occupied site differs in size dependent on number of family members and kept animals. As the site is chopped and cleared before construction, the close environment is recognized by grass- or even sandy soil due to highly frequented use. Around, trees afford shade and merge to dense forest.

Large stones or rocks serve sometimes as seats or working surface. In several cases a shed or storeroom is found in close distance to the residential house.

INFRASTRUCTURE

Like the majority of all houses in La Cecilia, this residential house obtains electricity. On some plots people receive water through hoses connected with the over 4 km attached provisional water pipes which supply the village and the mountainous area. The water is shared by all families and water for washing and the animals is received from the river or a well. There are no hygienic facilities in or besides the house. Every house with surrounding open space functions as an own unit of the settlement and is only connected through footpaths with the Camino Real. Besides the mixed used community building there are no public facilities in La Cecilia.



Pic. 4: A house at the Camino Real

SOCIAL STRUCTURE

The settlement of La Cecilia is formed up to a rural structure along the path of the Camino Real. The agricultural worker families work mainly on nearby cacao plantations, in Choroni or sometimes as tourist guides.

For additional income and for own use they illegally cultivate bananas and other fruits remote of the village. All families live below the poverty line on a social, hygienic and infrastructural subsistence level. The exclusion from the noticeable improvements in the valley (growing tourism around Choroni) results in an isolation leading to an enormous development backlog.

The village consists of around 20 accommodation units, a community building, a barbecue hut and a field for the game of „bollas criollas“, which is very important for the community life in this region. The community building is multifunctional: it is used as church, kindergarten, meeting place etc.. The community facilities support the rural, social structure.

Each family lives on its own, but for purpose reasons they help each other and create neighborhood relationships.

One family- including in some cases 3 generations - lives normally in one residential building. Our example presents a family with several children. Unfortunately we have no information about their precise employment.

A majority of the men work on the near cacao plantations. The women keep the houses, sell bananas and other fruits on the beach or at the market in Choroni. Some of them work for tourist services at the coast.

Like the adults, the children have to walk every day 40 minutes to Choroni in order to go to school. The younger ones stay at home or in a kindergarten sometimes organized by the mothers. For other social facilities like medical care, Choroni is the closest village.



Pic. 2: The Camino Real

Pic. 3: A provisional water pipe



Pic. 5: The community building

Pic. 6: The interior

USE

As a rule the houses consist of two or three rooms. They are not connected among themselves, but each room leads to a covered external porch in front of the house, the so called "galleria". This galleria affords shade, provides protection for rain and serves as the occupant's main whereabouts. Like in our example, the galleria takes up almost half of the area of the house. The house is as usual very enclosed. The inside is mainly used for sleeping, cooking and storing food and personal objects. In our case there is one bigger room with a gas stove, sitting area and probably the childrens' bed. The smaller one is possibly the bedroom for the parents.

In general the families cook inside their houses with gas or a small fireplace. As extractor there is a hole in the roof. Sometimes you can find fireplaces outside. The porch is at the same time a place to be, for the children to play, to store and to dry the washings. Sanitary facilities are not found in or beside the house. The inhabitants wash themselves outside at a provisional water pipe or at the river further in the valley. The surrounding bushes are their alternative for a latrine.

The open space around the house is used as a meadow for around three donkeys and other animals. Sometimes little sheds are added to the houses.

The porch is at the same time a place to be, for the children to play, to store and to dry the washings.

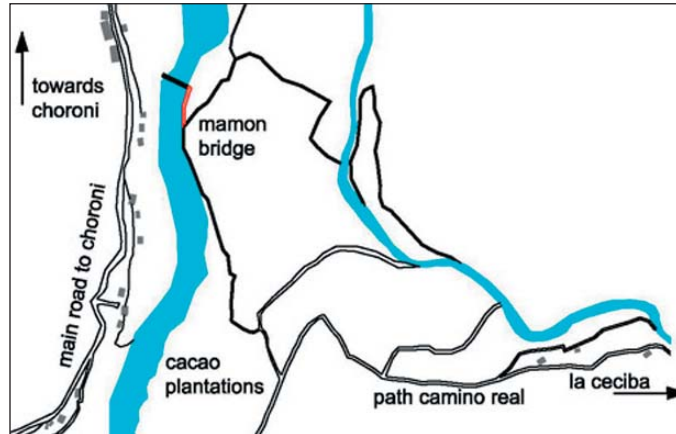
Sanitary facilities are not found in or beside the house. The inhabitants wash themselves outside at a provisional water pipe or at the river further in the valley. The surrounding bushes are their alternative for a latrine.

The open space around the house is used as a meadow for around three donkeys and other animals. Sometimes little sheds are added to the houses.

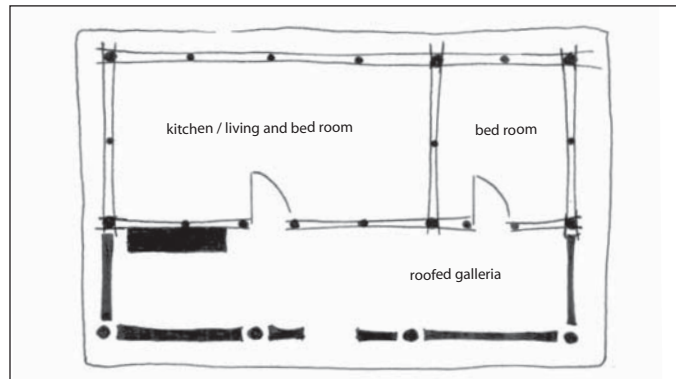
SPECIAL FEATURES

One significant characteristic found in all settlements in the region and also in the community building of La Cecilia is an altar with holy figures, saints and candles. This is due to the strongly catholic orientation of the people. Sometimes altars are even found besides the streets in specially provided shelters.

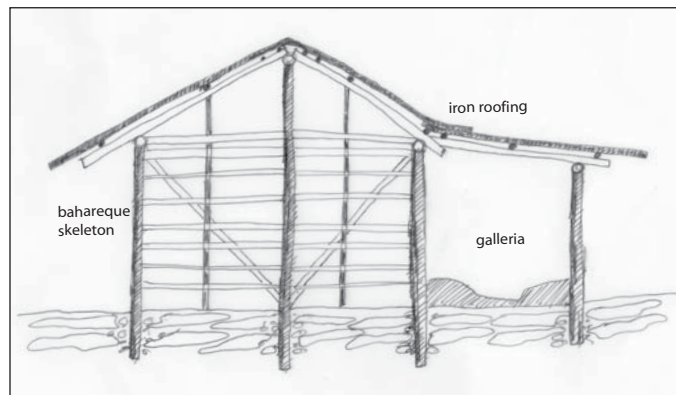
People also hang up pictures or chains with little saints inside their house or outside on the wall as seen in the picture. They probably serve as an object of prayer or protection.



Pic. 7: Site Map: La Cecilia is located further on the mountain; unfortunately no plan of the village exists



Pic. 8: Plan of residential house in Picture 1



Pic. 9: Section of residential house in Picture 1

CONSTRUCTION

The basic form is rectangular and covered by a saddle roof. A porch is attached at the long side of the house.

The structure of the house is composed of pillars made of wood, sunk in the stony soil and connecting horizontal beams which bear the purlin roof construction. The walls are non-load-bearing and are made of a clay technique called "bahareque".

The roof, the galleria and the gable is covered by corrugated iron sheets.

The woody beams of the porch's roof are borne by a purlin of the house and a beam borne by independent pillars.

CONSTRUCTION PROCESS

First, holes are made for the foundations to put up the woody pillars in. Then horizontal beams are connected to the pillars and the rafters are put on.

So a self-load-bearing woody skeleton is created, to which the porch construction is added in a next step.

After that, the roof structure is covered and the "bahareque" walls can be built.

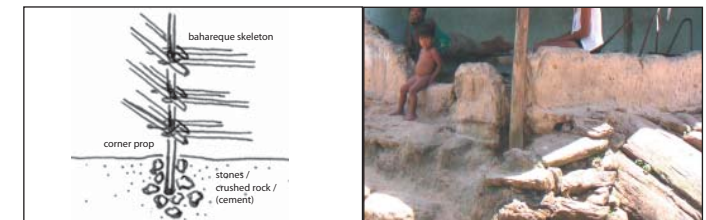
Eventually the porch was added later to the house.

Normally the whole family takes part in a house construction. Community buildings are built by the whole village and the process is considered as a common, celebrated procedure.

FUNDAMENT

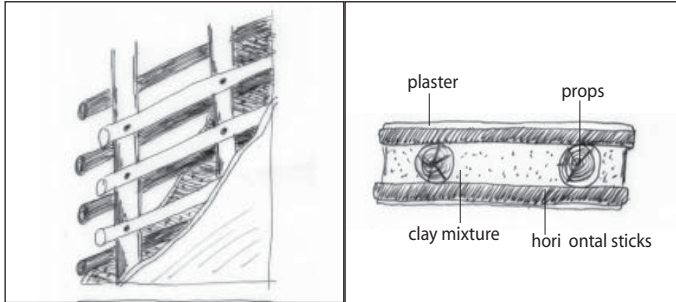
As the construction is borne by pillars, these ones are sunk in the soil. As a rule a hole is dug in the very stony soil, the pillars are put in and additional stones fill in the hole. Rarely a mixture made of cement is added for a higher strength.

The stony soil – in our example a mountainous slab – offers a stable floor slab.



Pic. 10: Fundament corner detail

Pic. 11: Fundament detail galleria



Pic. 12: Wall construction

Pic. 13: Cross-Section

WALLS

The walls are built in "bahareque" technique – one of the simplest ways to construct a wall. Thin horizontal beams are nailed on the bearing pillars from both sides and in regular distances. For bracing, diagonal struts are fixed between the bearing pillars. The space between the beams is filled with a clay mixture. The walls are plastered with clay and from the outside the wall is painted in a light-blue color. To protect the wall against the weather, the roof juts out 0,5m. However, exposed to heavy rainfalls and erosions in the rainy seasons, the plaster is already vanished in the area of the floor and has to be repaired.

The gable is not constructed in "bahareque" technique, but it is covered with corrugated iron sheets. The wall materials apart from the corrugated iron are found in the direct surrounding. The wood was won during the clearing of the site and out of the surrounding forests. The clay was mixed out of available soil.

OPENINGS

To protect against insolation, animals, insects and burglary the house construction is relatively enclosed. The main entrances are the two doors which are made of bars boarded with wood from the back. The lower part of the door is also reinforced with wood boards and matches in painting the colour of the walls. The doors are probably prefabricated and then individual adjusted to personal requests.

A lockable window is found on the back of the house. In the roof is a vent opening for the smoke resulting from the cooking fire.

ROOF

The roof is a purlin roof in a form of a saddle roof. On the roof ridge purlin and the lower beams, there are rafters with horizontal struts where the roof covering is fixed on.



Pic. 14: A transport mule



Pic. 15: A new construction site



Pic. 16: A shed



Pic. 17: Roof detail

The flat smoothly inclined porch is built in the same principle. It is borne by a long side beam and on the other side by a beam on independent pillars - analog to the house wall.

The corrugated iron is folded around the roof ridge. The galleria has got its own piece of corrugated iron which is overlapped by the house's one to avoid leaks.

ENCLOSURE

The site is not limited through walls or fences, whereas other families fence their places provisionally with wood or corrugated sheet. To protect the most private sphere, little walls made of bahareque limit the "galleria". On average they are around 0,5m high and in some places very worn already. The free space belonging to the house is obviously defined by grass, sandy soil and other marks of use. The houses with their own surrounding sites are relatively close beside each other and form a rural structure.

Dense green and isolation of the settlements surrounding also give sufficient enclosure. The house itself is better protected towards intruders, animals and thieves. Doors and windows are rare and able to be shut and it is taken care that there are no other unintentional openings.

INNER BUILT ELEMENTS / FURNITURE

As far as we can tell, houses are usually furnished with beds, cupboards, storage, table with chairs for the whole family and a kitchen niche and surface.

ORNAMENTS & SYMBOLS

The family's house is, as usual, not decorated with any symbols or ornaments. A very light coloured plaster is used. The façade of the community building is painted in bright blue and with white hearts. Built and created together by the village people

*Pic. 18: An altar**Pic. 19: Christian painting*

this nice way of execution and creation reflects the important status of the house within the village structure.

PROBLEMS / CHANCES

The Henri Pittier National Park with one of Venezuelas' highest biodiversity is threatened by invasions and growing numbers of new constructed houses. To provide agricultural and other usable space, construction material and firewood large areas are deforested. The cultivation of bananas which need direct insolation increase the susceptibility to erosion. The progressing destruction of intact natural spheres and resources can lead to natural disasters. Deforestation and watering of the banana plantations already affected the water balance which requires the supply of water over long distances. Not existing garbage systems endanger the ecosystem.

Because the majority of the regions' inhabitants live below poverty fighting for existence, the consciousness of conservation fades. Resources are used ineffectively and uneconomical.

The settling of the people is tolerated but no responsibility is taken for it. There is no clarification or support given. The illegal settling in the mountains in social and infrastructural isolation contributes to destruction of the parc and impoverishment of the inhabitants. La Cecilia is representative for this increasing problem.

It is of interest for the National Park administration and NGOs active in this region to abolish the Status Quo in favour of the park and the people, take responsibility and together find solutions. The organization of the Caracas Urban Think Tank takes La Cecilia as a case study and focus of its pilot project which initiates the socially, ecologically and economically sustainable development of an agricultural worker families' estate.

Images:

Pic.-Nr. 1-6, 11, 14-19: Caracas Urban Think Tank,
Pic.-Nr. 7-10, 12-13: Own Source

Literature / Source:

Caracas Urban Think Tank (->websites);
Bernd Ciecior, Habitat und Technikos, 1988; Saarbrücken;
Graziano Gasparini, Arquitectura popular de Venezuela, 1986, Venezuela;
Gernot Minke, Lehmbau Handbuch. Der Baustoff Lehm und seine Anwendung, 1995

Websites:

<http://www.ccstt.org>
<http://www.inparques.gov.ve>
http://www.mipunto.com/temas/2do_trimestre02/pittier.html