

# Encyclopedia of Vernacular Architecture of the World

Edited by Paul Oliver

## Volume **2** Cultures and Habitats

Asia, East and Central  
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### 2.IV.5.b-i **Andalucían: cave shelter**

The best-known cave communities in Spain are to be found in the southern provinces of Andalucía and Granada: Granada itself has a long history of cave-dwelling within the urban area. It has been suggested that this predilection is a survival from Moorish culture, and in fact, it has been associated with the gypsy community for at least five hundred years (Perez Casas).

A typical cave is fronted by a small patio which provides a semi-private zone where household activities can be carried on in the open air during pleasant weather. If the site is a gentle slope, it may be dug out in order to provide a vertical facade for the house: in this case, the patio is often trapezoidal in shape, with triangular retaining walls forming an oblique angle on either side of the facade.

Excavation often proceeds from back to front, the dwelling caves being cut out first, via a narrow access tunnel, and the facade and patio left until last. If the house is excavated all at once, it can be completed in six months, reckoning 3 cubic m (106 cubic ft) of rock excavated per day (Loubes). Otherwise, a period of three to five years may be necessary for a family to provide all the space required at the rate of one room per year. This gradual evolution of the house leads to great flexibility of layout to suit the occupants' needs.

Cave-dwelling spans are usually small – up to 4 m (13 ft) – and ceilings barrel or groin vaulted. The squarish room shape reduces structural load on walls normal to the cliff face, permitting openings to be cut through the rock mass to link adjacent spaces. The entrance door leads into a room which gives access to the other principal rooms. This is often used as a dining room. The kitchen is adjacent to it, almost always to the right-hand side, and is well provided with light and air. Pantries open off it. Bedrooms and stores are cut into the rock mass on the side away from the patio.

Several layers of whitewash are applied to the walls and renewed up to four times a year in order to make the most of available light by maintaining the reflective whiteness of walls and ceiling. The hearth is whitewashed even more frequently. The floor may consist of beaten earth, or if the clay is not solid enough, it may be screeded and finished with tiles. Furnishing

is sparse, and much use is made of niches hollowed out of the walls. These are particularly numerous in the kitchen and dining room, where they serve as cupboards for utensils and food.

Internal doorways are in general simply archways closed off by a curtain. The principal entrance door, on the other hand, is relatively elaborate and often ornamented. The door in its timber frame is set into jambs of brick or stone masonry with a relieving arch above and surmounted by a projection of the facade which protects it from run-off water. This 'eyebrow', a major decorative feature of the house front, sometimes forms a small porch roof covered with tile or corrugated plastic sheeting. Windows are also set in masonry surrounds, and brightly painted.

Another distinctive element of the house is the chimney, which is bored up through the overlying rock to emerge on ground level above the house. To increase the chimney's draught, it is usually built up for a metre or so above the surface in the form of a cylinder or cone topped by a picturesque chimneypot. The facade and chimney, like the interior, are whitewashed.

Variations exist within the region. At Guadix, for example, in Granada province, above-ground constructions roofed in red clay tiles frequently extend the cave space outwards in front of the cliff.

Earlier this century, it was estimated that there were at least 30 000 cave inhabitants in Spain, scattered through many regions of the country (Jessen). Today, the main concentrations are around Catalayud in Aragón, and in the southern provinces of Granada and Andalucía. There has been a considerable reduction in the total numbers of cave dwellings in recent years: in the city of Granada, for example, numbers of cave inhabitants fell from 3682 in 1950 to 2142 only ten years later (Perez Casas). Rehousing policy has clearly contributed to the deterioration of certain cave communities (*barrios*) to the point when they become uninhabitable, and are abandoned.

Nevertheless, some cave dwellings are being rehabilitated to present a smart, well-kept appearance. A series of small units, perhaps on more than one level, may be linked by galleries and stairs, with decorative masonry and wrought iron-work. Internal sanitation is a priority for some; others have blocked off rock-cut archways and plastered rough walls to produce a facsimile of conventional, orthogonal rooms.

HELEN MULLIGAN

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Cave dwelling in Guadix,  
Granada.



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### 2.IV.5.b-ii **Andalucían: Morisco**

In the capital city of the last Islamic kingdom in the Iberian peninsula there are a number of houses built in the 16th century by the Morisco, Islamic Andalucían people who were forced to become Christian. This repressed social group, consisting of craftsmen and horticulturists, was able to synthesize the most important elements of *nasrid* (Arabic colonial) architecture with those of Gothic as well as Renaissance provenance brought by the Castilian conquerors.

These houses constitute a popular urban building type developed around a central patio, with a small pool as ornament and to keep it cool. The external facades are not decorated except for the gate, which has a round or pointed brick arch. Usually an angled entry protects the patio from curious glances, while for the same reason of privacy, windows are small and are placed only upstairs.





Central patio of a Morisco house at San Luis Alto Alley, Granada

These houses used to have two storeys, both with a similar distribution: main rooms are located at the north and south sides of the patio, with which each communicates through a decorated plaster arch. Some houses have a third floor only on the north side in order to protect the rest from cold winds and to serve as a belvedere looking south. The great difference between downstairs and upstairs temperatures allows seasonal use as Granada, located at a height of 660–800 m (2165–2625 ft), has a continental climate, with cold winters and hot summers. The thermal differential between night and day can reach up to 25 °C (77 °F).

All materials used by Morisco builders were economic, and they produced very good results. Foundations were made from rubblework and the walls from tapial or rammed earth and lime, sometimes reinforced with brick pillars as well as inserted courses. Communications on the upper floor required open wooden galleries. Ceilings were also made from wood – flat on the ground floor but collar-beam and coupled roofs used to form the pitch were exposed upstairs. Usually, rafters and roof boards were decorated underneath. Roofs were always covered with Spanish tiles and eaves were made from brick, showing a chevron pattern.

Among the few houses that belonged to wealthy families, built on spacious sites according to a symmetrical model, are the 'Casas del Chapiz'. The smaller one had a site of 365 sq m (3930 sq ft), and a rectangular patio of 13.75 m × 7.65 m (45 ft × 25 ft), with galleries on four sides and a central pool, plus another outdoors to irrigate its huge orchard.

Families typically had to build their houses on irregular sites that produced trapezoid-shaped patios, as seen in an example located at San Luis Alto Alley. It covers a site of 101 sq m (1087 sq ft) with a patio of 38 sq m (409 sq ft). It has galleries on three sides but rooms only off two of them, north and south.

ANTONIO ORIHUELA

#### 2.IV.5.c Aragonese (Spain, NE)

Originally, the territory of Aragón was the land between the two branches of the river Aragón running along the Pyrenaic valleys of Hecho and Canfranc. It was a small

county that, encouraged by the politics of Charlemagne in the frontier of Spain, resisted the Arabic invasion. By the 13th century the Aragoneses united with the Catalans and spread their influence and culture all along the Mediterranean. In spite of such expansion, the Aragoneses were demographically weak and when Alfonso I conquered the fertile River Ebro basin he repopulated the country favouring the settlement of Bearnese, Gascons, Catalans and Mozarabs, together with most of the Moors who had worked the rich agricultural lands and who were allowed to remain as owners or as colonists under a master landowner. With the arrival of the Bourbons, Aragón lost its autonomy as a kingdom, retaining only its civil legislation.

Laws related to the family have played an important role in the development of the cultural identity of the Aragoneses. Only in the River Ebro basin, with plain and rich agricultural land, has the Spanish law that stipulates the proportional division of the patrimony among descendants predominated. Aragoneses law favoured the continuation and unity of the family lineage and allowed the election of a unique inheritor of the whole family patrimony. This is reflected in the traditional cultural concept of house, that includes the building, the domestic group, the lineage and all the material and spiritual possessions, and most cultural values have been related to it. Such traditions were originally linked to an agricultural and stockbreeding culture with levels of production close to subsistence and settled mainly in the mountain areas of Huesca and Teruel.

Human settlements have been traditionally determined by river valleys and mountain chains that made communications difficult and resulted in a general lack of medium-sized cities. Farming has been the traditional lifestyle of the Aragoneses and even now represents 13 per cent of the total value of the economic production. Half of the Aragoneses live in the city of Zaragoza – the capital of the region with about 600 000 people – working in the industrial and service sectors, while the rural areas, specially in Huesca and Teruel, are scarcely populated and its inhabitants show a very high age profile.

The traditional Aragoneses house is a three-storey rural building with a courtyard in which to keep farming tools and a few domestic animals. Its building materials have depended on

See also for 2.IV.5.b–i  
1.VIII.5.d Mass wall

References for 2.IV.5.b–i  
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An Aragoneses rural house, northern Spain.

