

The particular ensemble of Mas d'en Segures: Functional and constructive analysis of a house and a barn in Tinença de Benifassà (Castellón, Spain)

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Topic: T1.1 Study and cataloging of vernacular architecture

Abstract

In the northern interior of the Castellón province Tinença de Benifassà is found, a rural and mountainous region in which territorial organization combines villages with plenty of scattered settlements. As the phenomenon of rural exodus goes on, more and more of these ensembles are abandoned, which implies a critical patrimonial and identity loss, both physical and immaterial. Vernacular architecture shares morphological and constructive characteristics with that present at other regions of Spain, such as Teruel or southern Catalonia. These parameters are strictly linked with immediate environment and field labour in rough terrain. The analysis deepens on the documentation of Mas d'en Segures as a case study of spread settlements in the region. It was made up of four houses, three barns associated with threshing floors, and some farmyards. Some morphological, functional, and constructive characteristics differentiate this settlement from others in its context, which marks its antiquity and relates it with defensive constructions.

Keywords: Scattered settlements; rural architecture; defensive buildings; vernacular architecture.

1. Introduction

This paper aims to analyse the network of farmhouses known as *mas* in Tinença de Benifassà as a case study to esteem their contribution to the cultural landscape and historical value. It results from ongoing studies about the spread settlements in the region, especially those with historical relevance, notable traits, or defensive architecture. Tinença de Benifassà is a historic territory set on the most septentrional part of the Castellón province, not far from the borders of Aragon and Catalonia. This area has an antique relationship with Morella, an industrial and administrative pole on a regional scale, and a city with historical significance to the Valencian kingdom. Its abrupt geography and the hydrographic composition characterise a landscape and vegetation with certain mediterranean factors but, in general, more similar to those present in the Iberian System.

Seven small villages compose it, but quite a few scattered ensembles colonise all its territory, defining a complex structure with a significant weight of dispersed habitat. The elementary unit of the network outside the towns is known as *mas*. This concept has been defined in several ways, with its nuances, by scholars in geography, history, architecture or anthropology. It is a broad idea that includes not only the dwelling buildings but also agricultural constructions, woods, and arable and pasture lands that are managed and exploited by the community (Tarazona Marí, 2005, p. 163-165). It usually includes a house for one family, though it can also refer to a group of houses for three or four households.

Spread settlements are a common way of populating territory all around the world. However, geographic determinants such as orography, climate, soil, or even land ownership

structure determine how vernacular architecture develops in each region. Here, arid farmland where grain is almost the only crop viable, dry and windy climate and rugged orography have made settlement to be relatively remote. Distance is generally directly connected to relief and the chance of taming the mountains with terraces to take advantage of every piece of land. Where territory is not so harsh, houses can be a 20-minute walk away, but this could be more than an hour where the terrain is rougher and the soil available to grow crops in is lacking. The above system is not exclusive to the region; it is present in the Valencian provinces' interior and vast areas of Catalonia and Aragón, with subtle differences related to each location's context if mountainous areas are compared. Construction's typologies on plains is not comparable to mountain *mas*. The former has been extensively investigated, especially in Catalonia's fertile regions based on the studies by J. Danés i Torràs (2010), but its conclusions are not broadly applicable to rugged areas.

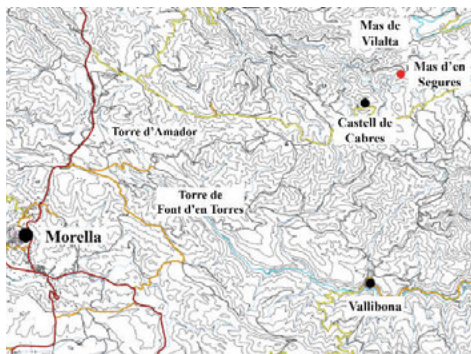


Fig. 1. Map of the settlements analysed.

Currently, Tinença de Benifassà is suffering the effects of depopulation, as well as other Spanish mountainous and inland regions. Its territory of 180 sq km had a census of 252 inhabitants in 2021, which means a population density of 1,4 people/sq km (INE, 2021), although the actual number is slightly lower. Some experts on Spanish regressive

demographic phenomena consider this circumstance a 'demographic desert' (Burillo, 2019, p.85-86). The present situation is even worse in scattered settlements. Only a few remain inhabited or used at present, usually those easily accessible and as bovine farms or weekend houses - the vast majority were abandoned more than 40 years ago due to challenging life conditions and accessibility difficulties.

There are few remains of inhabitation in the area before the Christian conquest and are limited to minor and brief settlements, which date from before the 1st century BC. Tinença de Benifassà was divided into two *husun*¹ at an administrative and military level during the Muslim period (Pica, 2014, p.54). The remnants of one are located near the monastery - the other one on Castell de Cabres - but there are not many more remains from this time. In 1233, when the Crown of Aragón ruled the region, Jaume I ceded these lands to the Monastery of the Order of Poblet, which first colonised the area with Cistercian farms and had been the motor of the region for many centuries (Pica, 2014, p.60-69). Until the disentailment processes in the XIX century, the religious community exerted the lordship rights of all this territory, which caused many conflicts with Morella. Since 2006, the area is protected as a natural park to sustainably manage its natural resources due to landscape values that have been formed because of environmental and human interaction.

2. Methodology

Research methodology has been based on both site work and documental studies. Several visits to the area and its surroundings have been carried out, making it possible to conduct a photographic record, architectural survey and identification of materials and techniques. These processes allow the comparison of technical-constructive, functional or morphological results of the case study with other cases.

¹ *Husun* is the plural form of *hisn*, an Arab term that designates Andalusí castles with defences and military

functions and relevant influence on its immediate inhabited environment.

Previous studies carried out in nearby locations, such as Maestrazgo in Teruel or Els Ports in Catalonia had been reviewed, but also specialised bibliography about the history and scattered architecture on the enviros in Castellón province, such as Maestrat or Morella and its territory. In the future, this information will be completed with the archives that are not currently accessible, such as Benifassà convent. *Mas d'en Segures*, in Castell de Cabres, fullfils these investigation's goals as an ensemble located on the ancient route between two clustered population places and comprising four houses, a defensive building with particular characteristics and other secondary structures.

3. Mas d'en Segures

Mas d'en Segures is found in the northeast part of Castell de Cabres municipal district, 1180 m high, halfway in the path between the town and Coratxà, at around 50 minutes on foot. Its location offers a clear view of the village and its connection road with the rest of the region, and advantageous position in climatic terms. As it can be seen in other examples such as *Mas de Vilalta*, o *Torre d'Amador* in Morella, this type of ensemble is located in a place relatively protected from the wind by the terrain and with a good amount of solar radiation to avoid cold, not far from natural fountains or ravines.



Fig. 2. Mas d'en Segures, Castell de Cabres. Scale 1:750 (Source: Villasante Claramonte, 2020).

It comprises four households (*del Rei, del Racioner, del Bord i del Sord*), four ovens, and three barns, each with a threshing floor. The general composition of the *mas* is assembled by a 'central core', formed chiefly by the houses and some pens mainly for draught animals; a small group of stables and other auxiliary buildings southeast of the core; and finally, the barns on a satellite position. Aerial images show clearly how the constructions have been laid out. Moreover, the first bay from the north side shows the probable origin of the entire ensemble, conserving the alignment on both sides in all its length, from *Casa del Racioner* to *Casa del Rei*.

Houses were all jointly set along on a northeast-southwest axis, supported on the terrain slope and aligned northwest. This dense configuration helps to ensure the maximum amount of solar radiation possible, as well as limits thermal transmission losses reducing the portion of the façade exposed. In fact, two of four houses had a small frontage width, and *casa del Racioner* is the widest. On other examples considered, such as *Mas de la Carcellera* or *Torre Segura*, dwelling buildings also follow this habitual organisation in which they face south and stay together to reach the maximum comfort conditions available. The use of topography in the design of vernacular architecture is likewise crucial and widespread in mountainous areas not only for protection from the elements - mainly wind and cold- but also for functional reasons.



Fig. 3. Mas d'en Segures. Castell de Cabres (Source: Villasante Claramonte, 2020)



Fig. 4. Pallissa del Racioner. Window with stone benches (Source: Jara Calabuig, 2020)

In the case of threshing floors, the difference of level was used to ease the storage works in barns, and because of that, it is usual to see them associated with a slope. These constructions, made for storing grain, and some pens are the only ones that are free-standing. However, a general pattern can not be established, as in other examples analysed, buildings are more compact or even complete one or two groups, as it happens on *Mas de Vilalta*.

3.1. *Casa del Racioner* and *Pallisa del Racioner*

Casa del Racioner and *Pallissa del Racioner* are the best-preserved buildings of the *mas*, which belong to the same family. Their interest and efforts on preserving this constructions allow a more profound investigation. Each one has its specific traits due to the different uses of the buildings, but they also share some architectural attributes that make them valuable. The names of the houses always referred to the head of household who inhabits there, in this case, *el Racioner*. In canon law, this term was associated

to people who had some prebends and roles in the community. People who lived and managed these buildings probably had functions related to store title or intermediation with the religious order.

The granary on the south, known as *Pallissa del Racioner*, stands out compared to the rest of the ensemble. It is dominant over the pathway to Coratxà due to its position and dimensions - its height point surpasses 10,5 m, while the plan measures 8x6 m. Granaries and pens are commonly built with lower-quality materials than dwelling buildings (García Lisón, 2000, p. 52-55), and as a matter of fact many of them in this region are wrecked or about to collapse. These measures are clearly superior to the usual barns in the area, morphologically close to the square and approximately 6x6 m and one storey high. Regardless, this building also had three separate accesses on distinct faces, which gave the possibility of using each floor for different purposes. At the time of the research, the whole building is used as a storehouse, while the architectural layout hints at the ancient coexistence of multiple uses - lower floor as a corral, first floor as a haystack and second floor, which has a loft, as habitable spaces.

Actually, the differential character of architectural elements was conspicuous for each storey: the last one was accessed through a semicircular arch facing northwest with prominent voussoirs, but what was even more distinguished is the southwest-facing window built with stone benches. This element was more typical of religious or noble buildings and definitely not common on a barn. Findings of oral testimonies of older people in the area did not show these benches as habitual in vernacular housing. These statements had been completed with studies of rural architecture carried out by *Els Ports* Natural Park (Benet Ramos, 2014, 2016), in the nearby Montsià region, which did not find this feature on nearly forty constructions analysed as they were reasonably more austere. Nevertheless, B. Martín's thesis on towers and

fortified architecture in Maestrazgo, Teruel, demonstrated that there is not a rare trait (Martín, 2021, p. 64, 103, 180). Many of the buildings on that investigation and others in Teruel, specially those carried out by E.J. Ibáñez and J. F. Casabona Sebastián (1990, 1992), presented it on towers or defensive constructions, generally associated with elite families or nobles (Ibáñez, 1992, p.318). What made *Pallisa del Racioner* significant is its free-standing position with the rest of the buildings, the multiple functions its layout provides thanks to different entrances and the gable roof -most of the similar towers are built with a shed roof-.

The barn was built with masonry walls of about 55 cm wide, reinforced on its corners with stone blocks well engraved. Although the state of the building at the time of the research allowed noticing the uncoated wall, there are enough remnants of lime coating on the exterior layer to consider it a general cladding, as well as some traces of gypsum plaster on the last storey interior walls. This last characteristic revealed the former use of these spaces, more as living ones than for storage. On the south front there were three buttresses disposed with unlike quality and dimensions, showing how different their building times were. The roof was assembled with Spanish roof tile on a wooden board, supported by a squared beam with dimensions 55x35 cm approximately. Rounded wood beams were more common, as trees in the area do not have large diameters, indicating this construction's importance.

Morphological and structural parameters were similar to those found in *Torre de Font d'en Torres* in Morella: gable roof, the position on a slope or the access through the semicircular arch facing southwest - although this example was not located in any ensemble and its layout is not so versatile. It is estimated to be original from the 15th century because of its gothic features, and some oral testimonies assure that a religious community existed on its origin (Gamundí, 1991, p. 158).



Fig. 5. Torre de Font d'en Torres, Morella (Source: Villasante Claramonte, 2022)



Fig. 6. Torre d'Amador, Morella (Source: Jara Calabuig, 2022)

Torre d'Amador (or *Torre Madó*) is an ensemble in Morella formed around a tower from the late 15th century or 16th. It resembled the type of tower in the area, or even on Teruel's Maestrazgo, although these usually had more defensive elements. This tower had been used historically as a storehouse for the tithe to guard it safely, but its look and construction techniques are rather more austere than the other two towers considered (Gamundí, 1991, p.

161). Despite that, its protective character is justified as there are remains of embrasures on its walls, now walled up.

There were other examples of defensive architecture in the area of Morella, usually associated with the leading ensemble in its *dena* - the subdivisions of the municipality - such as *Torre Segura* or *Torre Querol*. They were generally more similar morphologically to the type of *Torre d'Amador*, dating from the 15th or 16th centuries and having the function of tithe safe-keeping combined with others of the *mas* (Gamundí, 1991, p. 88).

Casa del Racioner is located on the southwest part of the central core of *Mas d'en Segures*, being the only house with a west-facing front that is very advantageous thermically speaking. It was one of the largest houses on the *mas*, as well as *Casa del Rei*, but with the best position and distinguishing architectural elements. In this building, a window with stone benches facing west on the most significant room of the first floor is also preserved, through which Castell de Cabres can be seen. Some authors point out that these benches on the window -known locally as *festejadors*- were more common in Catalan farmhouses between the 14th and 17th centuries (Pradas, 2021). Storage was the last usage of this room, but its favourable orientation and this window hint at a more considerable use. Right below this space was located the kitchen, where stood out the large fireplace that occupied virtually half of the room and could be dated, at the latest, on the 17th century following Miguel del Rey's parameters (del Rey, 2010, p.280). Behind this fireplace, the owner found a diminished arc blocked off, the same width as the own kitchen and with high-quality keystones. This element had no sense in the layout and indicates the distinct steps of the stratigraphy of the building. In this respect, distinguishable construction phases were also noticeable from the west front of the house, coinciding with the alignment of the first bay stated before, which would be the origin of the four houses.

Constructive and structural solutions were somewhat similar to those found on the granary related to the walls and roof, although it was striking that the round ridge beam on this building is considerably smaller than the one in the barn. Nevertheless, in this case, and as a common practice in the region, only the main front was coated with lime plaster while the rest maintain its masonry insight. It was precisely on this façade, on the main entrance, that a basket arch can be found, again with high-quality stones. There is only one arch more on the ensemble, a rounded one, on the front door of *Casa del Sord*.

4. Conclusions

Mas d'en Segures as a whole, as well as its constructions separately, is a singular example of rural architecture and spread ensemble in the area. Both buildings analysed share some traits in their structural and morphological attributes that make them particular, compared with others in the region.

Pallisa del Racioner - whose name may be changed to *Torre del Racioner* - stands out from the rest of the group because of its defensive character and distinct architectural components already defined, which state the quality of its construction. There are not as many protective elements as in the buildings studied in Teruel (Martín, 2021), presumably due to the social relevance of its inhabitants. In those investigations it is stated that generally, its owners were part of the local elites. In Tinença de Benifassà, even if proprietors probably had some prebends in what relates to tithe storage, buildings in *Mas d'en Segures* do not have such a representative character. An essential factor to consider is that, on the line of other ensembles in the area, defensive use of this building may be related to safe tithe custody, more presumably to prevent the success of banditry actions than for military reasons. Overlapping uses are another defining attribute of this building that presumably had living spaces on its top floor while agricultural

and livestock uses were in the lower levels. Compared with other examples whose longevity is adequately documented, its origin could be established in the 14th or 15th century, although a deeper investigation is desirable, using dendrochronology or reaching historical documentation inaccessible for the moment.

Establishing a date of construction for the house is visibly more complex because of its organic growth and different strata. Authors have found difficulties in establishing specific types for mountainous farmhouses because of their variability (del Rey, 2010, p.339-341) justified by the necessary adaptation to their immediate environment. Nonetheless, there are some elements like the stone benches on the window - with similar appearance and materials to those of the granary- or the large fireplace that reveal the age of the construction, presumably coetaneous to the barn.

The ensemble described is only a tiny sample of the richness and history that rural architecture in this area has. The environmental benefits of the complex network of farmhouses, as well as their heritage importance, have to be considered, appreciated and catalogued to at least preserve its cultural value. Nowadays, the economic and social situation in rural contexts as this one do not favour the occupation of the territory in the way it was 50 or 100 years ago, and that is what is causing this patrimonial loss. The cultural landscape in Tinença de Benifassà, where environmental protection exists by law, can not be understood without the presence of scattered settlements that are disappearing. Protective legislative instruments of this type of building are not considered to directly and feasibly impact their preservation since the problem is more related to social and economic situations and lack of use. The institution ruling the natural park, however, could carry out cataloging studies as it has been done in

Els Ports Natural Park in Catalonia, contributing to landscape care that also includes its vernacular architecture. Thus, even if a significant proportion of these constructions are about to disappear or be reduced to ruins in the following years, a testimony of its historical, cultural, antiquity or sustainability values will remain.



Fig. 07. *Casa del Sord* (Source: Jara Calabuig, 2020).

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