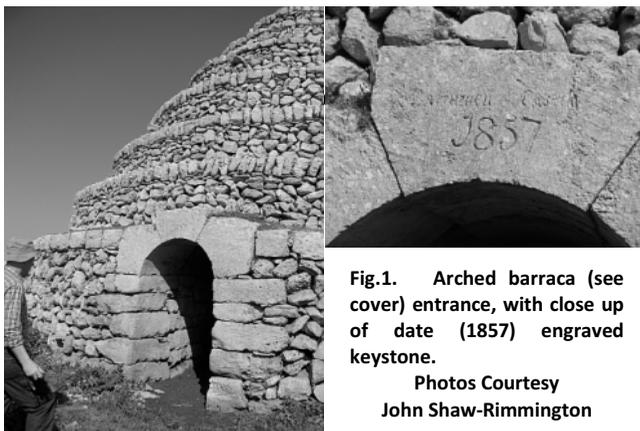


# Espai Paret Seca: The Dry Stone Wall Space

Frédérique Mahieu and Sean Adcock photos © Frédérique Mahieu unless stated

Menorca is one of the Mediterranean Balearic islands, around 400 miles off the Spanish Coast and situated just to the north east of Mallorca. Its landscape is lined with a dense network of stone walls (*paret seca*), clearly linked to the rural economy. These walls are made of irregular stones abundant as a result of ploughing. They divide the land into parcels (*tanques*) which are connected to each other by gateways (*portells*), and help to organize a crop rotation and pasture system. Other retaining walls created terraces which could then be cultivated.

Some of the walls are very old, but the peak of dry stone construction in Menorca was the 19th century, when the *barraques* (barracas) were built. These immense, round stepped stone towers, also known as 'pont de bestiar', look a little like a tiered wedding cake, have hollow interiors with corbelled roofs, and give refuge to horses and flocks of sheep. They are mostly found in the area north of Ciutadella and can easily be admired from the path that leads to Faro Nati (Punta Nati lighthouse). A fine example is seen on the front cover and the care and detail in the construction of some of these is exemplified by the particularly fine entrance to this one, shown in Fig.1.



**Fig.1. Arched barraca (see cover) entrance, with close up of date (1857) engraved keystone.**

Photos Courtesy  
John Shaw-Rimington



Their presence is a reminder of a time when agriculture determined the wealth of a community, when any effort to improve productivity of the land was justified, no matter how much time it took (figs.2 & 3). With the passage of time the fields became less important, but the walls remained, all but forgotten remnants of the past. They became integrated into the landscape so it seemed as if they had always been there and would always be there, where as in reality the lack of maintenance threatens their continuity. Fortunately, the historical value of these modest structures, which some refer to as 'architecture without architects', is now beginning to be

**Fig.2. Sometimes it appears that the landscape is made entirely of walls.**

recognized. The walls are a precious legacy of the

since disappeared are revealed: a rich vocabulary, a way of life and work, a philosophy, an admirable skill, and a deep love for the land. For centuries they have transformed hostile terrain into a beautiful landscape that deserves care and protection.

Among the walls there is extensive animal and plant life, enriching the island's biodiversity, adding to crop fertility and protecting the land from erosion. The builders used different types of stone, in different ways, and add elements such as stairs (*botadors*), and niches (*menjadores*), which can be found throughout the fields. Fortunately, the tradition of building dry stone walls has not disappeared in Menorca as it has in other places, and to this day there are artisans dedicated to this craft (*paredadors*). Menorcan walls follow the basic design of most walls with two skins of graded stone filled with hearting (*reble* – strictly rubble) and battered (*peu* or *tumbada*). In most the stone rather than being flat layed is, like Mallorcan walls, set polygonally (see *Stonechat* 15 Summer 2008), and here the stones are set length in but sloping downwards



**Fig.3. The walls reach right to the sea!**



**Fig.4. Juxtaposition. A restored fieldstone wall in the foreground, a prehistoric talyot built from huge boulders in the background, sandwiched between them a modern animal shelter with sawn slab apex roof [see also fig.19 p.9] covered with turf**

towards the centre helping to keep the faces at the correct batter, given the Menorcan climate there is little concern of this channelling water into the wall and associated freeze/thaw problems. The levelling off is typically alast row of small stones (*igualada*). The Menorcans then refer to 'coping' as 'sealing the wall' and describe the function of coping in stabilising the top stones and holding the two sides together as 'acting as a joist'. This finish can be either dry, with rectangular stones (*cobertores*) or with flat heavy slabs. Finishing can also be done using a mortar of lime and sand, to either join the slabs or to create a finished look that is either rounded or pointed (*mitja conyo* o *esqueno d'ase*) which is then white washed.

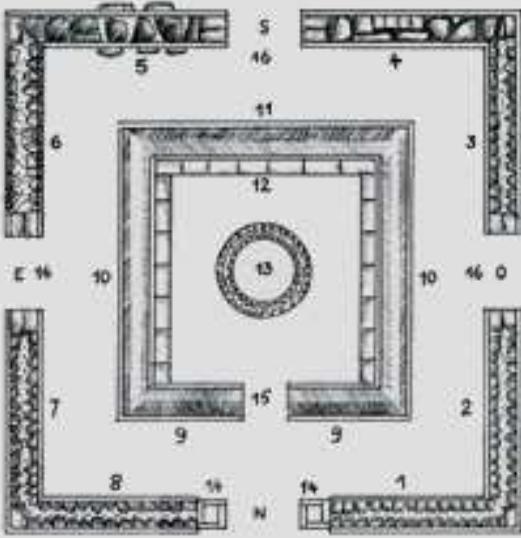
## THE DRY STONE WALL SPACE

A recent project has seen the creation of 'garden' near the town centre of Ciutadella at the quarry of Lithica, pedreres de s'Hostal (see <http://www.lithica.es/>), which contains examples of the different rural and urban walls typical to the island. This project was designed by Frédérique Mahieu, a fifty something year old Belgian who studied graphic design before moving to Spain in 1981 where she lived on a mixed farm and was first introduced to walling. She has been living in Menorca for the past 30 years where she learned to wall on the traditional Menorcan way and has been a professional for 15 years.

Frédérique was able to secure European Leader Program funding for her project, along with additional finance from Consell Insular de Menorca (the Menorcan Council) and Lithica. Along with Cristobal Torres Canet, and helped by amongst others José Miguel Puertas Esteban, Frédérique created 'The Dry Stone Wall Space,' an amazing and delightful formal enclosure to show the various dry stone styles and features associated with Menorcan walling.



**Fig.5. Working on the central feature. Frédérique left, Cristobal right.**



1. Recycled stone from an old wall in the fields of Ciutadella. *Cobertores*. Rustic work.
2. Grey hard stone. *Cobertores*. Inside adjusted (worked), outside rustic.
3. Pink hard stone. *Cobertores*. Inside adjusted (worked), outside rustic. *Fibla*.
4. Red stone from Ferreries. *Lloses* (slabs). Inside adjusted (worked), outside rustic. Outside embedded staircase
5. Black stone from Cala Llonga (Maó). *Lloses*. Inside linear staircase, outside crossed staircase.
6. Mixture of yellow sandstone (*marès*) and hard stone (field-stone - *pedreny de tanca*). Overhanging *cobertores*. Square food troughs.
7. Field stone mixture (*pedreny de tanca*). *Cobertores*. Triangular food troughs.
8. Recycled stone from Ciutadella. *Cobertores*. Rustic.
9. Quarried sandstone (*marès*). Inside adjusted (worked), outside rustic. Half rounded *tàpia*.
10. Quarried sandstone (*marès*). Inside adjusted (worked), outside rustic. Flattened *tàpia*.
11. Quarried sandstone (*marès*). Inside adjusted (worked), outside rustic. Triangular *tàpia*.
12. Bench finished with sandstone *quarts*.
13. Enclosure with a wild olive tree.
14. Cornerstones from the quarry.
15. Small entrance with inclined corners.
16. Large entrance with straight corners.

The dry stone wall space has been constructed to promote a better understanding of the walls and lead people to a deeper appreciation of the landscape of the island, and similar constructions worldwide. Frédérique believes that dry stone wall ties together not only all the countries in the Mediterranean, but much of the world, that man has always been fascinated by stone and working with it has awoken many emotions transforming stone into art, and that it is our collective responsibility to respect and to care for this valuable ethnologic heritage.

The space comprises a pathway between examples of walls built using traditional methods native to the island. The walls differ in the type of stone used, the manner in which the stone is worked, the finishes and the different individual features which they include. This concentration of architectural elements integrated into a structured space provides an opportunity to observe and compare different types of walls, which would otherwise be difficult given their isolated locations spread out over the country side.



Fig.6a (left). Plan of The Dry Stone Place and location of features (key left)

Fig 6b (above). The Dry Stone Wall Space

## THE FINISHES

**COBERTORES:** The finish is very important in determining the aesthetic aspect of the wall. The most typical in the countryside is the *cobertorada*, which is formed using rectangular stones called *cobertores*- literally 'covering stones'. It is a dry finish, without mortar. In areas where sheep are raised the *cobertores* often overhang the line of the wall in order to prevent the sheep from jumping over. Typically the stone is not large enough to bridge the wall, so it is a double cope formed of two rows filled with *reble* (rubble) - see Figs. 7a & 7b.



**Fig 7a (left). Rustic Cobertores.**

**Fig.7b (above) . Formal Cobertores partly filled with reble, central circular enclosure (Fig.6a No.13).**

**LLOSES:** In the centre of the island, the walls are often capped with large flat slabs (*lloses*) rather than *cobertores*. Sometimes they are placed dry (Fig.8a) , but frequently a lime mortar is added to create a bed or fill the joints (Fig. 8b). The mortar is applied sparingly and is sometimes painted with white wash. People used the stones they found in the fields and in the middle of the island it's easy to find slabs. Away from the fields "cobertores" are common because when you have to buy stones you would generally not receive any slabs, which are difficult to acquire – this is why the *lloses* in the dry stone wall space are small and mortared.



**Fig.8a (above). Large slabs (*lloses*) gathered from fields and set dry.**

**Fig 8b (below). Mortared *lloses* in the dry stone wall space.**



**TÀPIA:** When big stones are scarce, or a more decorative finish is desired, a rounded cap is created. This finish is called *tàpia*, *mitja canya* o *esquena d'ase* and is achieved by piling small stones up until the desired shape is formed, and then carefully covering that shape with smooth layers of mortar, after which the surface is white washed. The central enclosure presents three variations of *tàpia*: the finish of the front wall is rounded, the finish of the side walls is more flattened, and the back wall has a triangular finish.

**Fig. 9. Flattened *tàpia* in foreground, triangular *tàpia* under construction in background.**

**(Fig. 6a. Corner 10/11 right)**



**FEIXES:** Certain walls finished in the *tàpia* method are further reinforced with vertical trapezoidal bars of mortar (see fig 6b), referred to as *feixes*.

Nowadays the use of mortar is more urban than rural. It has however always been used in the countryside to enhance the appearance of walls around the farm houses notably on the main road access to the house, or in places where it's difficult to find suitable stone for coping, but only in places where water was readily available for mortar.

**QUARTS DE MARÈS:** A more modern method of finishing a stone wall is to cap them with sandstone slabs. Sandstone (*marès*) is the most common Menorcan stone, readily available from the quarries and used for house building etc. The name *Quarts*, refers to a specific size of sawn (6 sides) sandstone 600 x 400 x 45mm - these have been used to finish the seat of the bench lines the walls of the inner courtyard, visible in Fig.15 .

## TYPES OF STONE

The island is divided into different geological regions. The southern half is made up of sandstone (*marès*) in light tones, and the northern half, which is older, presents a greater variety of stone. Walls are built with stones collected from the fields and because of this their appearance changes according to the geographical location.

## ARTISANAL INTERVENTION



Fig.10a (left). Rustic section of the dry stone wall space (reverse of 10b).

Fig.10b (right). Artisanal section of the dry stone wall space (reverse of 10a).

you can observe this type of working: the builders used the same stone on both sides of the wall, but one side they used the stone in its natural, rustic form, and on the other side the stones have been worked, refined and 'adjusted' (*paret ajustada*).

The wall builder (*paredador*) shapes the stones with a hammer to make them fit. Depending on the way in which he works the aesthetic aspect of the wall is different. The walls in the fields are built with hardly any changes to the stones themselves, but in more urban areas the stones are dressed, presenting very flat surfaces and narrow joints. On some of the walls in this enclosure

## COMPLEMENTARY ELEMENTS

### ESCALES and BOTADORS:

The dry stone technique allows for the introduction of practical elements into the wall's construction. Embedded stairs are built with flat stones set into gaps in the face of the wall in forming a staircase. The *botadors* are cantilevered steps which protrude from the wall surface. They are built using very long stones, which overhang the line of the wall by a third of their length. These stairs can be found in a row (Fig.11a) , or staggered/alternated (Fig.11b) - a method which prevents the sheep from climbing out.



*Botadores*: Fig.11a. (left) Step stile. Fig.11b. (right) Staggered step stile.



Fig.12. Triangular food troughs, *menjadores* (Fig.6a, No.7)

**MENJADORES:** The *menjadores* (food troughs) are niches for animal feeding and can be square or triangular (Fig.12).

**FIBLES and PASSADORS:** The *fibles* or *passadors* are tunnels or passageways built into the base of the walls to allow water or small animals through (Fig.13).



Fig.13. *Fibla* in Menorcan countryside.



**Fig.14. Fibla in dry stone wall space under construction left, and completed right (Fig.6a, No.3)**

**CORRAL:** At the centre there is an enclosure (Fig.15- perhaps more accurately 'exclosure'), a circular wall or corral. This is a very typical element in the fields, there to protect trees such as fig and wild olive, from the livestock. Enclosures containing individual trees and groups are both common.



**Fig. 15 (right). Central enclosure. ( Fig.6a. No.13)**

**Note also bench on straight walls (Fig.6a. No.12) and drainage *fibla* in curve.**

This article was prepared by Sean Adcock from a publicity leaflet for The Dry Stone Wall Place written by Frédérique Mahieu and from further information she provided.