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# Traditional Date Presses (madabis) in Qatar

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## Introduction

*Madabis* or *madbasa* are one of the oldest architectural elements to be uncovered in the state of Qatar. *Madabis* are rooms dedicated for the preservation of dates and extraction of its syrup found in the 18<sup>th</sup> century coastal towns of the Arabian Gulf and the Arabian Peninsula, due to the vast availability of date palm trees there.

Date presses or *madabis* took their name from their function of producing date syrup. As per the Arabic Dictionary of Lisan al-Arab, '*dibs*' is the syrup of dates. Date presses help in preserving and storing dates during their ripening seasons in order to be consumed during other seasons as dates syrup. In some areas of Shatt al-Arab, the date-presses are also called *mijassa*, a name it takes from the insulating material, plaster, used in the construction of the rooms.

## Architectural features in the Construction of *Madabis*

The techniques that were used in the construction of *madabis* are the same as those used in houses built during the similar period. Building materials available in the local environment such as stones, limestone, sandstone, beach rock (*Faroush*), coral, plaster, tree trunks, green and dry palm fronds, *Danshal* beams (mangrove), *manghrour*, palm trunks, mud, and mortar were all used in their construction. While the exterior of the house was built with roughly cut blocks of different shapes and sizes, the inner walls were built with irregular rocks. The average thickness of the outer and inner walls ranged between 40-55 cm.

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## Traditional Date Presses (*madabis*) in Qatar

*Madbasas* are built as small rectangular or square shaped rooms with a single entrance. All parts of the floor and interior wall of the *madbasa* are covered with lime and *Sarooj* mortar. The technique used is based on building two longitudinal walls consisting of two outer screen walls made of stones rich in fossils and seashells, and between them are irregular stone infill, with gravel and mortar made of mud. The inner walls of the *madabis* were mostly made of beach rocks; a material which is not solid, and largely composed of salts or shells that are still visible on its surface. The depth of the foundations of these walls and their underground thickness are yet to be determined. However, it has been observed that these rooms tend to have varying dimensions and measurements, depending on the owner's financial capacities.



Figure 1: Aerial view of the date presses in Al Zubarah Souq (Al Zubarah archaeological site) a World Heritage Site

The *madabis* employed traditional roofing methods which used *Danshal* beams (*mangrove*), *manghrour* or palm trunks to support the weight. (Eddisford & Morgan, *The Radwani House: Architecture, Archaeology and Social History*) (Eddisford & Roberts, *Origins of Doha Project: Season 2 Historic Building Survey Report, 2014*) The second



layer of roofing was made using palm fronds and sticks, or by using a layer of mud and coating the interior walls with *Sarooj*.

Dates were packed in sacks and placed on the edges of sloped ridged floors of the *madabis* with weights on top. The compression would make the dates release a sweet sticky syrup (*dibs*), which would drip into an underground sunken collecting jar placed at the end of the channels. These pressing and collecting areas were accessible through a direct entrance from the street.

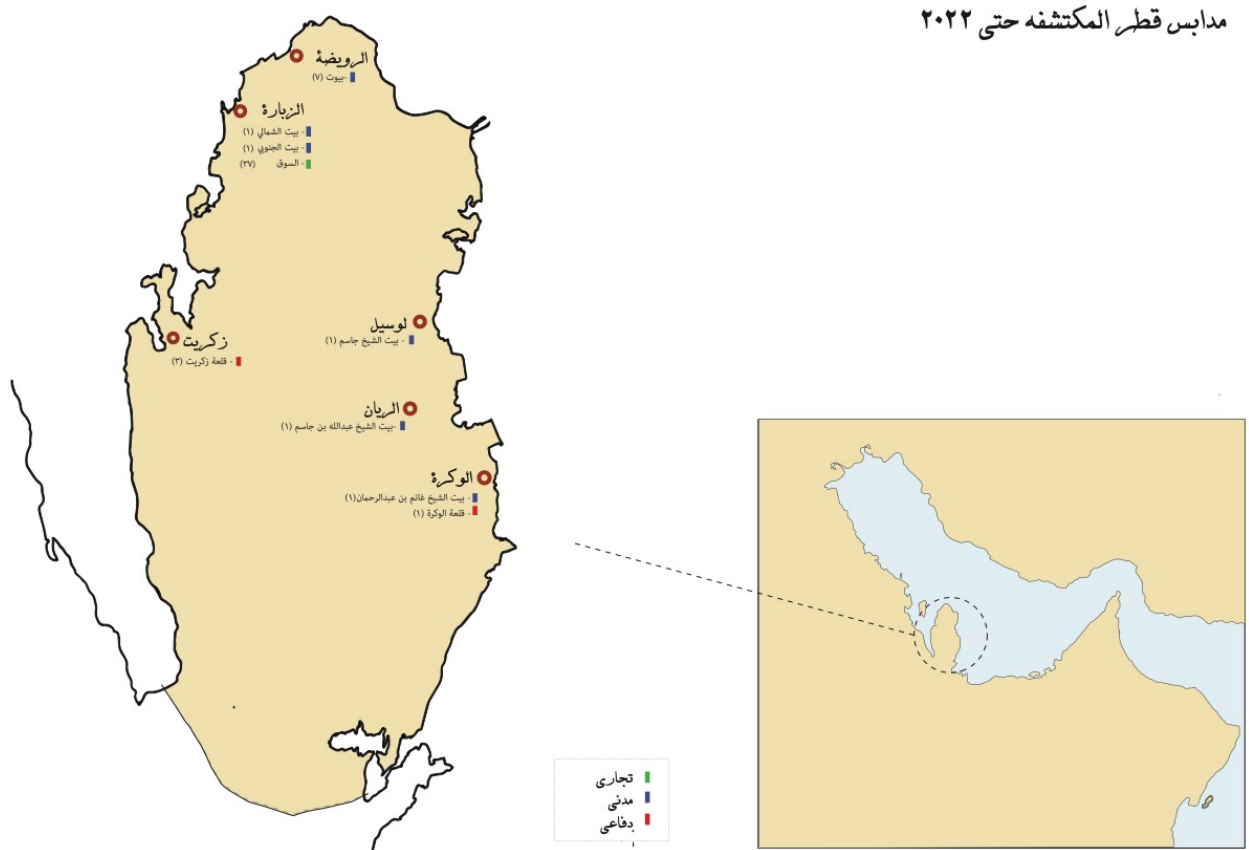


Figure 2: One of the date presses (Northern Palace) at Al-Zubara site

It can be observed that there was much emphasis and attention on the bonding material, the coating of the walls, and the floor of the date-presses in order to ensure that insects or mice do not infiltrate the room. The plaster insulation helped isolate date sacks from ground moisture and the varying temperatures during different seasons of the year. In the case of Qatar, since most of the date presses were located near the seashore and salty mudflats, it was necessary to have good insulation and ensure that the process of storing dates and producing *dibs* does not fail; thus, preventing financial and economic loss.

Although the architecture of these date presses is not identical, they do display an overall consistency with the design style that existed in the region.<sup>2</sup>

## Locations of Date Presses in Qatar



In the past, the *madabis* were built in different parts across the territory of today's state of Qatar, between the coastal and inland areas. Owing to the state's rapid socio-economic development and modernization projects, many date presses have been removed or destroyed, for instance the date presses in the Simaisma area, or *al-Amara* as they were known there. Only a few date-presses have been preserved.

<sup>2</sup> Al-Zubarah Archeological Site.

Today, *madabis* can be seen in Qatar's old souqs, the most important of which is the Souq Waqif. In Lusail, a date press is found in the Sheikh Jassim Al Thani House. In Zekreet, date-presses were located outside the forts as independent buildings. The settlement in Al Ruwaida Archeological Site along the coastline of northwest Qatar, has been found to have a warehouse featuring date presses along with a central fort, mosque, boatyard, etc. (QA Creates)

The house of Sheikh Ghanem bin Abdul Rahman Al Thani in al-Wakra also has a *madabis*. While some *madabis* were for civilian use, they were also built for other purposes. Date presses found in the al-Wakra fort were built for defensive (military) purposes. These date presses, found in fortification sites and defensive structures in the Al-Wakra Fort, were important sources of nutrition for soldiers during the long periods of political volatility.

Some date presses were also built to serve commercial purposes, for example in the ancient city of Al Zubarah (in the seafront souq), where approximately 36 date presses were discovered. The city of Al Zubara (a World Heritage Site) is located in the far northern part of Qatar and is characterized by a type of local architecture that was common along the Gulf coast and Shatt al-Arab. Al-Zubarah prospered commercially and hosted migrants from the inland and surrounding areas, the central part of Arabia and the mainland off the Arabian Gulf, between the 18<sup>th</sup> and late 19<sup>th</sup> centuries CE. (Rahman, 2006)

While Al Zubarah is best known for its thriving pearling industry, evidence of export of dates also exists. (Zahlan, 1979) (QA Creates) (Gulf times, 2014) Pieces of broken ceramics beside date presses can be traced back to China and Iran. The oldest *madabis* were discovered in Al Zubarah in the seafront *souq* area and in two palaces owned by some local (unknown) merchants. The remains of over twelve date presses have been uncovered in the *souq* area, suggesting that the area was a warehouse district in the 18<sup>th</sup> century.

Date presses built in private homes (for civil use), occupied at least one of the rooms in the vicinity of the building. Interestingly, these *madabis* were floored later during the life of the building, which indicates that production was moved elsewhere, perhaps to

the commercial center (seafront souq). It is understood that a department was dedicated for their protection and preservation. (Qatar Museums)

## **The Significance of *Madabis***

Dates tend to have a short harvesting season, thus, it must be consumed or processed after its harvest in order to be stored for long. Considering the arid geography of the desert, dates were one of the few produces that were locally available for consumption. Thus, people developed ways to preserve the produce for longer periods such as the production of date syrup. The fact that date syrup is more versatile than raw dates may have played a part in its preference.

As explained earlier, date syrup had civil and commercial purposes. Evidence of date syrup being a commodity that was traded suggests that it would have contributed to the economy of the settlements. The location of many date presses within military forts also show that it was considered a vital source of nourishment for warriors during political unrest and conflicts with rival tribes and others.

Although date syrup was an inevitable commodity for Qataris, lifestyle changes that came with oil-money and socio-economic development slowly replaced date syrup with processed sugar. However, with the new culture of health and diet food in the 21<sup>st</sup> century, date syrup may be regaining its social relevance. The health-conscious youth are fast replacing processed sugar with healthier options such as unprocessed jaggery, palm sugar and date syrup. The latter is a sweetener that boasts the heart-healthy benefits as dates itself with minerals such as magnesium and potassium. It contains more than twice the calcium, potassium, and magnesium levels of honey or maple syrup and up to ten times the antioxidants. (Landry, 2019) The trend of health-consciousness has also reflected in the global consumption and demand for date syrup. In 2020, global date syrup market generated \$361.3 million and is projected to reach \$514.3 million by 2028. (Allied Market Research, 2021)

## The Role of Qatar Museums

Qatar Museums and its Architectural Conservation Department have played significant roles in the restoration, preservation, and conservation of the discovered date presses. (Qatar Tribune, 2018) (Qatar Museums restores Al Zubarah date press site , 2018) Qatar Museums has paid attention to the conservation, documentation, and restoration of the *madabis* and preserving of this element of Qatar's cultural heritage for future generations. To this end, Qatar Museums has established specialized departments to protect, conserve and restore all heritage sites and historical buildings, in addition to modernizing the Cultural Heritage Law, and adopting pioneering projects in the fields of cultural heritage preservation.

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