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EVIDENCES OF A POSSIBLE ISLAMIC WATERMILL IN LA MAJADA (MAZARRÓN, REGION OF MURCIA)

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I. INTRODUCTION

The mill that is analyzed in this project is located in the vicinity of the hamlet of *La Majada*, a former shelter for cattle herds that passed through this spot. The small settlement, near the *Rambla de La Majada* and the *Rambla del Cañete*, is located in the south-eastern sector of the *Sierra de la Almenara* in the historic *Campo de Calentín*, on the edge of an extensive plain that extends from the mentioned relief to the coast of *Mazarrón* on the southwest coast of the Region of Murcia. However, the mill itself is located on the right bank of the second rambla mentioned above, in what was formerly known as "*Huerta de Cañete*". This is an area of irrigated crop land which originated thanks to the availability of water sources from the collection of the water from the *Fuente del Cañete*, which, in addition to enabling the development of this agricultural area, fed the mill under consideration.

II. SOCIO-HISTORIC CONTEXT

Generally speaking, it is accepted that the agricultural system of the Andalusian world, based on the proportional distribution of water among the user groups, is characterized as a model of irrigation agriculture, created and managed by a tribal based peasant society. It is reflected in the morphology of a rural landscape with the absolute predominance of the settlement located in small hamlets, the well-known farms. In this way, the territory where the hydraulic system that sustained the complex of the *Huerta de Cañete* is situated, formed part of the *Lurqa* (Lorca) countryside during Arab times, whose southeast sector was dominated by the *Calentín* castle (*Al-Kalemtin*) fortress built in the twelfth century, according to widespread opinion, as a constant defense for the existing farmsteads in its radius of protection. Thus, the fortress, along with those of Tébar, Chuecos, Amir and Ugéjar,

would form the defensive line of the coastal zone of the Lorca territory traced in Arab times in the *Sierra de la Almenara*. To them one would have to add half a dozen smaller towers and the fortifications of Nogalte, Luchena, Tirieza, Xiquena, Puentes and, of course, Lorca, thus forming the medieval defensive remains of Lorca.

After the first notable advances of the Christian reconquest in the region, the territory ended up practically uninhabited, with the depopulation starting from the XIII century until almost the XVI century. After the reconquest, the sparse population that still lived in the already mentioned countryside, was attracted by the economic and demographic rise of the locality of Mazarrón, stimulated thanks to the development of the alum mining aided by the royal subsidies made to the Pacheco and The Fajardo. Nevertheless, a census was recorded by the farm owners in the territory of Lorca among which was the *Alquería de Cañete*, then owned by Diego de Aranda, who contributed 500 mrs to Lorca.

III. THE HUERTA DE CAÑETE HYDRAULIC MILL

The first clear reference to the hydraulic complex of *Cañete* dates from 1681. This is followed by others included in a series of deeds from notaries from 1734 and 1735 referring to various sales of pieces of land in the *Huerta de Cañete* as well as portions of water from the *Fuente del Cañete* that by right corresponded to them. Later on, Father Morote Pérez (1741) corroborates the above mentioned documents and the mill's own existence, as does the testament of Juan Antonio García Serón and his wife Beatriz Gigante, dated August 10th, 1753. It states that the Garcia Serón family succeeded in obtaining most of the territory of *Calentín* and the *Huerta de Cañete*, as well as the rich water resources that supplied it; sample of the great political and economic power of this family.

So, we are faced with a complex hydraulic system fed by an underground gallery that collected the waters of the *Fuente del Cañete* on the right bank of the rambla with the same name, which was subsequently added to an underwater reservoir transverse to the channel itself and later a water mill which, together, supplied water to a large cattle trough, a pestle for beasts, the flour mill being analyzed and a small irrigation space of about 15 hectares which, at least in the seventeenth century, was already known as *Huerta de Cañete* and that due to the availability of water resources remained until the mid-twentieth century.

Focusing on the mill, which belongs to the so-called horizontal wheel hub type, one of the most common techniques in *al-Andalus*. Overall, the preserved remains only correspond to the bucket, since the rest of the building is practically flattened. The bucket, more than 5 m high, has three rectangular bodies whose most striking architectural feature is the inner coating made by *atanores* (ceramic rings) about 3 cm thick, 75 cm high and a circumference of 1.10 m, elements that had to be built in specific pots where it was possible to fire the huge pieces.

This structural feature is especially relevant as it is a rarely documented peculiarity not seen in other mills in Spain and mostly in the Islamic period. This fact in itself deserves to be highlighted as the verification of an element of medieval Andalusian hydraulic architecture applied to a mill structure. Equally, it is essential to point out another singularity present in this mill, like the fact that the base of the section of the millstream that feeds the bucket is also covered with segments of *atanores*, probably of discarded

specimens of the bucket. In addition, it can be claimed, from the observed remains, that the millstream must have at least one bow, if not more in its course from the raft to the bucket.

IV. CERAMIC *ATANORES* AND THEIR CHARACTERISTIC FEATURE

Without a doubt, the most characteristic and singular attribute of the *Molino de la Huerta de Cañete* is the use of the aforementioned ceramic *atanores* in the interior of its bucket used as a coating of the same, apparently, to avoid leaks in it and to ensure the water tightness of the structure. This construction technique is not very common in hydraulic architecture and even less in the construction of mills, so that the analysis of remains of its use in other places and other mills is a relevant and necessary element to understand the possible origin and execution of this hydraulic-industrial complex built in the old *Campo de Calentín*. Similar examples found so far correspond mostly to structures or sets from the Arab era built in isolation or as part of irrigated spaces linked to well-documented farms.

However, in all cases, the presence of *atanores* or ceramic rings in the bucket is only one of the indicators to be taken into account, and should therefore be thoroughly evaluated to make unquestionable claims regarding the dating of these industries. Furthermore, it will be necessary to carry out a historical analysis of the buildings by studying all the archival, bibliographical and cartographic documentation that can provide information about the mills, not forgetting the conclusive and decisive character that can contribute to the archaeological study of the identified mills, led to by qualified personnel and by using the corresponding research techniques of this science.

V. CHRACTERISTICS OF THE ARCHITECTURAL REMAINS RELATED TO THE ANDALUSIAN HYDRAULIC

If the Andalusian work made its predominant mark on the world by the proportionate distribution of water and the existence of these small hydraulic units, the farmsteads, and their cultivation space, there are other common elements in their recognizable morphology that are identified and related to the social logic of their design, such as: 1. The location of the irrigated space in relation to the residential complex, giving a deep interaction between the fortification (*hisn*), the settlement (farmstead) and the land; 2. The identification of the main route of the acequia, from which other smaller ones subordinated to the first ones; 3. The shape of the plot of land, with typical arborescent plants due to the social agreement reached between the various clan groups for the distribution of water; 4. The location of the mills, perfectly integrated in the original design of the agricultural space and generally following a concrete scheme that begins with the accumulation in the raft of the captured water that is later poured into the bucket; besides its location in the main ditch, opening or closing the hydraulic systems; And 5. Ownership, law and distribution of waters, characterized in the territory in Muslim times by the proportional distribution to the land with temporally limited batches and that also allow us to know the distribution of ownership of the same.

VI. CONCLUSIONS

In the absence of archaeological studies which would allow more precise and conclusive data, the presence of *atanores* in the bucket of the mill associated with the hydraulic system of Cañete, the documentary sources consulted, from archives to bibligraphies, and the general features of the hydraulics Andalusí present in the complex in which the mill is integrated, open a whole series of research perspectives within the milling field that could permit an approach to the Andalusian rural world from another perspective little known until now and researched in the Region of Murcia by the historians who deal with the study of this century.

Undoubtedly, the use of these rings is a constructive milestone that, after comparing other mills, constructions and systems in which they were also used, lets us claim that this is evidence of the Andalusian origin of the building, probably reused in later centuries, which was linked to a nearby farm, whose villagers would take grains to grind the cereal in the building to obtain flour with which to feed themselves. This fact is reinforced by the results of the surface surveys carried out in the surroundings of the mill in which traces of a population close to it are visible through the presence of ceramic fragments of Arab origin which have been found.

Both the historical and bibliographical documentation consulted, as well as the physical characteristics of the remains based on the location of the land in relation to the location of the residential area, as well as the layout of the main and secondary ditches of the growing area, size and the arborescent plants in the field of irrigated space, the location of the raft and the mill in the scheme of the hydraulic complex and the unique property, right and distribution of the harvested waters, are distinctive features that allow us to formulate a solid hypothesis about the origin of the milling industry and the system itself, taking into account the need for a more exhaustive archaeological study and characteristics that are also present in other analyzed Andalusian irrigated spaces.

In addition to this, the associated fort, farmstead and cultivated space, is more than present in the remains, so the existence of the aforementioned land and, possibly, that of the elements that make up its hydraulic complex, must be closely linked to both milestones, being able to establish with this a probable chronology that should have been close to the twelfth century, when it seems that the story of Calentín was constructed and that coincides with the stability reached with the reign of Ibn Mardanis, the King Wolf.

The Christian reconquest, the rise of Mazarrón associated with its mining and the expulsion of the Moors, also increased these migrations in spite of those which documented the existence of the settlement known as *Alquería de Calentín*, approximately in the XVI century, as well as the use of the flowing waters of the *Fuente del Cañete* in the XVII century that supplied the land of the same name. However, the use of water, not the mill, was maintained until the mid-twentieth century thanks to the incorporation of a motor to extract water resources from the subsoil of the rambla, replacing the old water mill whose implantation could be due to the exhaustion of the natural source used since Arab times.