

# THE SIGNS OF WATER

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## *Abstract:*

Signs of Water. A hidden waterscape in Palermo is recovered from the oblivion through a process consisting in a territorial analysis, a careful reading of ancient maps and historical archives, a deep design of new landscapes tracing the signs of the passage of water in a land where water has a permanent role along the centuries.

A vast agricultural territory covers the Conca d'Oro valley, where lays the city of Palermo: rich in landscape, environmental and archaeological heritage, only some areas were subtracted from the intense construction and speculative activity that characterized the history of the city in the sixties and the seventies of the twentieth century.

The main goal of this study is the recovery of the park and the enhancement of all the elements of interest and importance within it, today in a degraded condition. These include not only the historical artifacts but also the vegetation system and the remaining specimens of the nineteenth-century park of the former Orléans estate.

The theme of water is the guiding thread of the project: water in its various forms pervades the territory. The water as the origin of the area in which the river Kemonia flowed, and the "water system" of Arabic derivation, with all the elements that compose it, are a design inspiration and the park is endowed with a water museum which tells its history and origin, forming a new attraction in the park but also in the University, in direct contact with it.

Inside the park a strong landscape component is certainly the presence of all the artifacts that make the water system for the irrigation of the park of Orléans, all made following the principle of collection and storage of water, coming from the Arabic heritage. For all these characteristic elements, the restoration is planned, in particular of the larger tanks, the *gebbie*<sup>1</sup>, which are suitable to become points of interest and attraction of the park through their commissioning, making all these places more usable, as some tanks are hidden for the lack of pedestrian connections suitable for their exploitation.

*Keywords:* Museum of Water; Fossa della Garofala; Palermo; Landscape; Waterscape.

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<sup>1</sup> Gebbie, gebbia (sing.), Sicilian word to describe a water tank, open air, from the Arabic word *gabiya*

A vast agricultural territory covers the Conca d'Oro<sup>2</sup> valley, where lays the city of Palermo: rich in landscape, environmental and archaeological heritage, only some areas were subtracted from the intense construction and speculative activity that characterized the history of the city in the sixties and the seventies of the twentieth century. Some of these areas transmit the signs of the time through the succession of dominations established in Palermo, which left unmistakable traces in this territory (Fig.1).

One of these signs is the Fossa della Garofala, a place created by the river bed of the Kemonia river, today hidden by the surrounding buildings. It is a site of great interest from various points of view: historical, cultural, environmental, for its landscape and the geology above all. It tells the story of the formation of Palermo, containing the environmental components, handed down over the centuries, through which we can reconstruct the uses of this place: irrigation techniques introduced in Sicily during the Islamic domination, a historic garden of agricultural experimentation, a rural village, and one of the greatest royal estates of the late nineteenth century (Fig. 2).

Hidden among the palaces of Corso Pisani, one of the ancient road to Monreale, and behind the buildings of the University of Palermo along Viale delle Scienze, comes to light a forgotten landscape of Palermo, made of underground and irrigation systems of supposed Arabic origin, but also it offers exotic botanical species and of specimens of the Mediterranean scrub. The lands acquired in the fifties by the University of Palermo and formerly belonging to the King of France Louis Philippe D'Orléans, housed in the nineteenth century an elegant garden recalled in the testimonies of the era as one of the most beautiful in Italy and in Europe (Leone, Lo Piccolo, Schilleci, 2009).

The area, in its complex made by the "Palazzo" and the "Parco", today is almost isolated as it is a "fortified city" because the design of the infrastructures has determined a further break between the historical existing fabric and the park (Inzerillo, 1984).

The need to expand the university system along the Viale delle Scienze, while marking the boundaries of the Parco d'Orléans, unfortunately did not take into account the historical and landscape value of the site, compromising its integrity. Despite this, the park retains its extraordinary value (Fig.3).

The main goal of this study is the recovery of the park and the enhancement of all the elements of interest and importance within it, today in a degraded condition. These include not only the historical artifacts but also the vegetation system and the remaining specimens of the nineteenth-century park of the former Orléans estate.

By privileging the ancient pedestrian paths and connecting the valuable elements of value to each other, we want to improve the access of the park to give it a new museum function in connection with the other centers of the University Museum System, while maintaining its ancient function as a farm for experimentation.

The theme of water is the guiding thread of the project: water in its various forms pervades the territory. The water as the origin of the area in which the river Kemonia flowed, and the "water system" of Arabic derivation, with all the elements that compose it, are a design inspiration and the park is endowed with a water museum which tells its history and origin, forming a new attraction in the park but also in the University, in direct contact with it (Longo, Tortorici – 2003).

The design hypothesis is done respecting the historical artifacts and the existings plants, designing new parking areas, seats, walkways and cycle paths which, on the basis of the existing ground signs, are integrated with the landscape and allow the development of elements that have remained of

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<sup>2</sup> Conca d'Oro is the name of the flat land that surrounds the city of Palermo, capital of Sicily. Is so called because of the thousands of orange trees which were shining like gold with their fruits.

what has been a more innovative property of the Conca d'Oro, which is now hidden and inaccessible to the public (Pizzuto Antinoro, 2002).

### **Program of Interventions for The Valorization of The Park**

The history of the park of Orléans has left traces distinguishable in elements of considerable historical and architectural importance, but especially the landscape, which act as a leitmotif for the program of recovery and enhancement of the area.

The main goal of the project hypothesis is a landscape restoration, designed to enhance not only the buildings but also the historical vegetation due to the original plants, together with the site musealisation. Considering the current situation of degradation and abandonment in which the park is actually, analyzing the problems of the site, a program of diversified interventions has been drawn up between actions concerning the existing historical artifacts and new additions.

Pre-existences are mainly dealt by restoration and recovery works, aimed at connecting the elements that constitute existing historical patrimony to each other.

The historical routes to be restored, identified through the study of the "Plan of the park of S.A.R. the Duke of Aumale" drawn up by the agricultural engineer S. Biuso in 1881, put in communication all the historical components of the park, among which the elements stand out (Fig.4).

There are sculptures in calcarenite: the obelisk surrounded by the round of cypress trees, the staircase that once connected the properties of the Orléans with that of the Prince d'Aci, the acclimatization stove used as a hospital of the plants by Louis Philippe d'Orléans. For these limestone artefacts, and in general for all the buildings dating back to the original plant of the nineteenth century park, architectural restoration is expected while maintaining the function they currently cover. The buildings concerned include: the home of agricultural workers, the building that once contained the steam engine to operate the water pumping system; The home of the Fathers Liguorini, currently houses a kindergarden for the University employees; the hunting lodge of the Prince of Aci; the cast-iron gazebo inside the cavity located below the School of Engineering departments, the stair in calcarenite, the acclimatization stove and finally the oranges' store.

Among the historical buildings belonging to the ancient plant of the park of Orléans, two are distinguished in the program of interventions: the rural village and the warehouse of Zucco wines. For these buildings is planned a restoration and also a specific change of function.

The first is given the new headquarters of the Water Museum, which will host a permanent collection on the water and the Fossa della Garofala, correlated with the University Museum System, as it is also present with the little Museum of Entomology; for the second one, on the other hand, we hypothesize the new function of a site for temporary exhibitions in connection with the Water Museum.

Inside the park a strong landscape component is certainly the presence of all the artifacts that make the water system for the irrigation of the park of Orléans, all made following the principle of collection and storage of water, coming from the Arabic heritage. For all these characteristic elements, the restoration is planned, in particular of the larger tanks, the *gebbie*<sup>3</sup>, which are suitable to become points of interest and attraction of the park through their commissioning, making all these places more usable, as some tanks are hidden for the lack of pedestrian connections suitable for their exploitation.

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<sup>3</sup> Gebbie, gebbia (sing.), Sicilian word to describe a water tank, open air, from the Arabic word *gabiya*

The *gebbie* defined are: the large tank connected to the home of agricultural workers, the tanks near the School of Engineering, the rectangular basin and the pool with the water tower on the natural terrace lower than the first; the great *gebbia* placed on two different altitudes, the semicircular tank higher and the rectangular one lower down connected to the first with a system of stairs. All the *risittaculæ*<sup>4</sup> that are still perfectly visible in the historical avenue passing by the *gebbia* with the water tower, are related to the program of enhancement, as well as those arranged in the various areas of the park which, connected to each other, bring to mind the ancient system of irrigation and the path taken by water (Fig. 5).

The elements that most tell the ancient history of the Fossa della Garofala are the calcarenite caves dug from the water in the banks of the paleo river bed of the Kemonia river and subsequently modified by human hands. It is therefore planned to consolidate the calcarenite walls of the pit, considered as a whole an open pit, and of the individual cavities present which, unfortunately, are currently not usable (Todaro, 1988).

The cavities referred to are the *muchata*, the cava with the cast-iron gazebo in the center, located below the School of Engineering departments, the cave located near the Department of Nuclear Engineering, below the citrus grove. Making the caves accessible an ancient landscape can be discovered, a geological heritage.

## New Social Orchards

Considering the ancient character of the Conca d'Oro flatland, as was the Orléans Park at its time<sup>3</sup>, with this this project we assign an area of 6,300 m<sup>2</sup> dedicated to the creation of social gardens, intended for employees and students of the University of Palermo.

The gardens represent the physical place of a community that reconstructs the relationship of care and management of the land, in a manner respectful of man and the environment and, therefore, adequate to the conditions of the soil and the season. They are able to create a sense of community and, at the same time, contribute actively to urban decorum, and to the enhancement of local resources.

The idea is to have a parcel or a small plot of land of about 30-50 square meters, delimited so as to be easily recognizable, even through the use of perimeter fence, achievable only with biodegradable material; a plot of land, a portion of land to be used as orchard and where to carry out related projects.

The social garden is a plot of public land made available to citizens, single or associated, and intended for the cultivation of vegetables, with the aim of enhancing the local varieties and encouraging their use of recreational and social meaning. The gardens provided for the project are aimed at self-production, the individual parcels are entrusted to individuals for the cultivation of vegetables, flowers and fruits for the purpose of private consumption, without any profit.

The area designated to the creation of the social gardens is arranged on several levels and it is in close connection with the park, the historic avenues and the cycle path; in this way they are easily accessible for everyone. The parcels are connected by wide main paths and secondary routes, narrower, those are served by pergolas, which allow the shading as well as the place for the cultivation of climbing species, and a new building to store the necessary tools for agricultural works, an equipped roof garden roofing in order to integrate the building with the surrounding rural environment.

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<sup>4</sup> Water pipeline made by several clay elements.

## New Accesses and Routes

In accordance with the current accesses to the Fossa della Garofala park, overlapping the historical map of 1881, they have been identified to be highlighted and put in connection with the park through the project proposal (Fig. 6).

The entrances are a stopping point and a transit point at the same time, for this reason they have been redesigned from the point of view of the connection with the urban fabric surrounding the park, transforming them into squares of various sizes according to where they are placed.

The new main access considered in the project is that which directly connects the park, the campus and Via Ernesto Basile, to the south side. The new passage, which traces the historic access to the estate, makes room diagonally between the two buildings of the Student Dormitory and the Department of Nuclear Engineering; the road goes into the park through the great semicircular *gebbia*. The layout has been redesigned to give greater prominence to the sign of Biuso and to channel visitors into the pit.

To complete and make this sign continuous, it was decided to highlight the pavement lines, a path where the margin of the pedestrian path ends and the driveway begins. In this way there is the feeling of an infinite line that leads inside the park.

In this redesigned space, pedestrians can stop and rest in the vicinity of areas shaded by vegetation and equipped with seats. Adjacent to the avenue that leads to the semicircular *gebbia* the calcarenite pillar placed at the center of a circular area, dating back to the nineteenth-century plant, marks its entrance.

The connection, both from a physical and a visual point of view, is made possible above all for the use of the same flooring both on the sidewalks and on the road. The new design of the ground provides, in fact, the use of outdoor flooring in harmony with the surrounding landscape and little impact from the environmental point of view.

For the recovery of the historical avenues and for the cycle paths inside the park, it was decided to use a natural stabilizer for soils, environmentally-friendly, consolidating and durable, allowing to realize a natural flooring that does not alter the ecological characteristics of the ground but which improves its mechanical properties.

The driveways and pedestrian paths on the edges of the area, on the other hand, have been chosen to cover them with a paving with "visible gravel" effect, suitable for outdoor spaces both for pedestrians and for pedestrians, integrated with the environment and that maintains a natural effect by combining aesthetics with durability.

The elevated spots from which you can enjoy the view of the Fossa della Garofala landscape are one of the key elements for the project that, reconnecting to the idea of the lookouts of the park of Louis Philippe of Orléans, take back its character by offering different points of view from which to observe the area.

The raised square, located behind the School of Engineering Departments, is an example. What is now an abandoned and marginal area of the university campus, acquires a new stop function thanks to the inclusion of new seats facing the valley of the pit, a "promenade" connecting and access to the park through a ramp system that link the highest level, placed on the University floor, with the lower one inside the pit. The ramps join the natural terraces on which the geysers are placed, the rectangular one behind the Department of Hydraulic Engineering and the *gebbia* with the water tower, and the social gardens.

## The Routes of The Art and The Memory of The River

In order to bring to light what was the path of the river Kemonia and to transform the Fossa della Garofala into the "museum of itself", which tells its story through the historical landscape components of the park, the process is enriched by a series of sculptures arranged along the historical paths that border the depression of the pit. In this way it is possible to valorize not only

the river layout, but also the surrounding environment, mainly composed of citrus groves and experimental fields, for the School of Agriculture.

The sculptures fall into strategic areas that correspond to the main access points and along the link promenade, offering a glimpse both to the valley and to the sculptures themselves and to the background of the vegetation that characterizes the place.

It was therefore conceived a collection of seven works of art in total, inspired by the sculptors Igor Mitoraj, Alexander Calder and Claes Oldenburg<sup>5</sup>.

## **The New Water Museum**

The system of the new museum is in accordance with the current University Museum System including, within the project area, the Museum of Entomology.

The headquarters of the new Water Museum are located near the ancient rural village, built in the nineteenth century at the behest of the Duke of Aumale, today in total abandonment. The building, with its elongated rectangular shape, can be reached via an access ramp, hidden by a high limestone parapet and next to the historical avenue that runs along the Fossa della Garofala, near the experimental fields, and is currently composed of three distinguishable volumes: the first one is more elongated than the other two and with the lowest interpianto of 3 m, the second is connected to a courtyard where in ancient times there was a Bath called Lupo, the third volume instead, not being property of the 'University of Palermo, belongs to private individuals and therefore lost its integrity.

The project foresees, through the recovery of the original plans of the building, the distribution of new functions. The central volume contains the entrance area and access to the courtyard in which a pool is placed, in correspondence with that of the original plant in the park, an area for conferences that can be separated, if necessary, thanks to mobile panels.

The lower and longer volume, on the other hand, lends itself more to the exhibition space of the permanent collection of the Water Museum, and also contains an area for co-working activities and services (Fig. 7).

To exploit also the outdoor areas near the museum as rest areas, it was decided to redesign the banks of the natural depression of Fossa della Garofala, with the inclusion of green steps: small terraces that act as stands for public sessions.

A further hypothesis is to host the two museums in a new exhibition center, which can be built at the site where the building was originally used as a warehouse for Zucco wines, by the Duke of Aumale. However, since this artifact does not belong to the University of Palermo, this remains only a general hypothesis. However, a continuous paving in Levocell was designed and prepared within the project to connect the areas at the edge of the project area.

To give a sense of homogeneity attributed to the buildings that are within the Fossa della Garofala area and whose belong to the Departments of Agriculture, we chose to treat them in the same way from the point of view of the facades, equipping them with wooden panels which can carry the name of the building and the department to which they refer. The Museum of Entomology is going to be renovated, especially the façade, enriched by the silhouette of insects that refer to the contents of the museum, and put it in relation to the new facade of the Water Museum.

## **Conclusion**

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<sup>5</sup> Possibly the art works will be made by local artists following that samples.



Landscape is a matter of things, views, sensations, smellings, traces, plants, human activities. Is a matter of history and future, especially when you have to save it. What is possible and what is not possible is the main topic.

In the Fossa della Garofala site, history talks to us, traces are underlining the centuries, the water is still immanent. There is a kind of archaeology which is claiming to be restored and it is part of the human landscape. There is also a claim for modernity, a new need to be landscape in that place, a waterscape, once flowing open, now flowing in pipelines, leaving the riverbed to the grasses, the bushes and the trees (Fig. 8).

It's time for humans to go back there, to unleash the landscape, taking its space on this land, a wonderful land.

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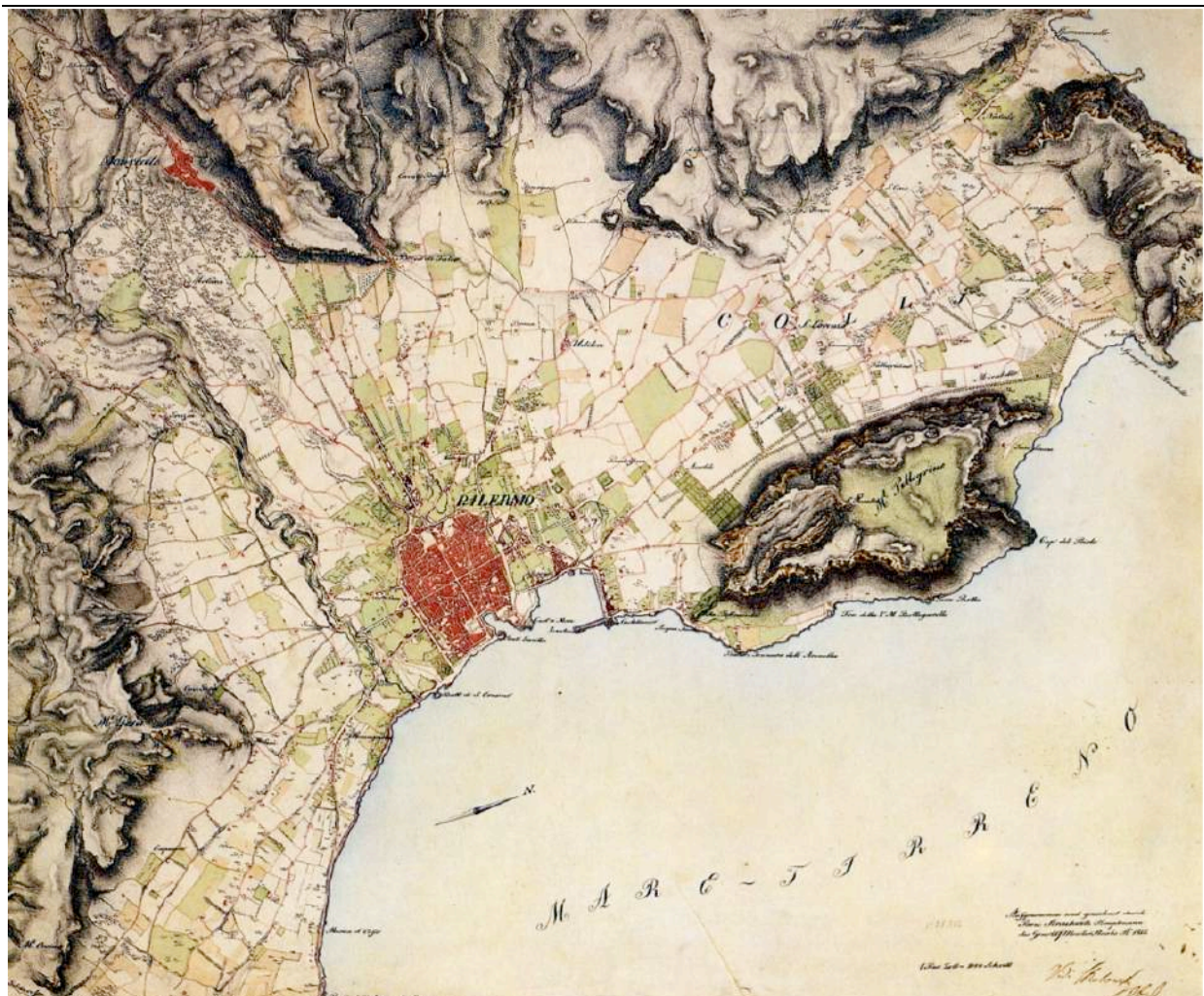


Fig. 1 – The Conca d'Oro Valley in 1825. From: L. Dufour, *Atlante storico della Sicilia: le città nella cartografia manoscritta 1500 – 1823*, A. Lombardi Editore, 1992





Fig. 2 – The Fossa della Garofala from a West view. Aerial drone picture (M. Leone author)



Fig. 3 – The Universty of Palermo Campus today. The Fossa is squeezed between the Campus (south) and the city (north). Google Earth 2019



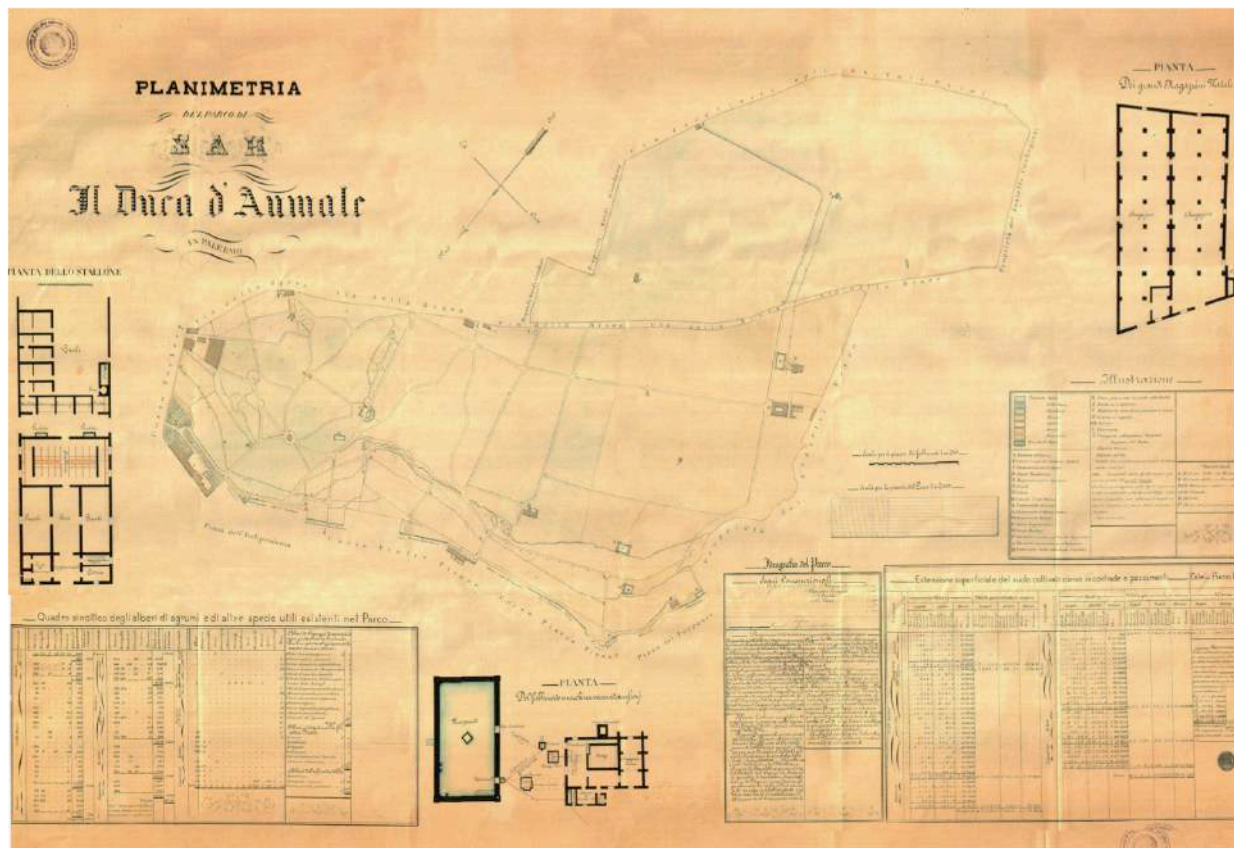


Fig. 4 – Historical Map drawn by Salvatore Biuso in 1881. Picture taken from the original map shown in the Department SAAF, University of Palermo



Fig. 5 – The bigger gebbia (today empty), with water tower and stairs to go inside. Aerial picture from drone (Author M. Leone)



Fig. 6 – The new roads and pathways to enter the park system. From Martina Botta, *I segni dell'acqua*, Master of Architecture Thesis, defended at the School of Architecture in 2018 (Tutor Prof. M. Leone)



Fig. 7 - Rendering of the new museum in the rural houses refurbished. From Martina Botta, *I segni dell'acqua*, Master of Architecture Thesis, defended at the School of Architecture in 2018 (Tutor Prof. M. Leone)





Fig. 8 - The landscape today: a view towards east and the palms alignment. M. Leone author.