The Influence of the Romans in Mérida Spain: The Aqueducts

by

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The goal of my thesis is to examine and analyze the influence and importance of the Roman aqueducts in Mérida, Spain. Throughout the history of the world there has been an ever-evolving spectrum of power and influence. Although we can date the city's origin to prehistoric time Mérida truly became a world center after the conquest by the Romans. The introduction of engineering, concrete, and the arch created a city representative of the ancient world.

Mérida stands as a Spanish city in which considerable Roman artifacts still lie visible today. The rationale for this study comes from the immense influence of the Romans on the ancient world, as well as on the one in which we live today. By exploring scholarly articles, books, and pursuing historical analysis I was able to conclude that Mérida was a microcosm of Roman influence. By examining the architecture, specifically the aqueducts, we can see that the Romans provided the source for urban living. They gave their people an active water supply and thus a way in which to survive and thrive.

What made the Romans unique was their ability to provide this basic necessity thousands of years ago. In Mérida two main aqueducts supplied the city with water from sources miles away. The ability to bring water to a site over many miles in the ancient world is an astounding feat of engineering. The conclusion reached in this thesis is that the aqueducts were a prime contributor to the success of Mérida.

Batchelor of Arts in International Studies in History
Thesis of Jasmine McKenzie
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I understand that my thesis will become part of the collection of Oregon State University. My signature below authorizes release of my thesis to any reader upon request. I also affirm that the work represented in this thesis is my own work.

_____
Jasmine McKenzie, Author

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Acknowledgment Page

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To my friends.
Thank you!

Map of the Iberian Peninsula: Image 1

Methods

I began my thesis by discussing possible topics with my International Degree Thesis Adviser, Dr. Ferngren. As I am a History major, my topic had to coincide with my country of emphasis as well as my field of study. My original topic idea was to research the olive tree migration from Greece to Spain and study its effects on the economy. However, after some discussion, my adviser suggested art and architecture as influenced by the Romans. From there I began to look up the topics and found myself drawn to the idea of Roman architecture in Spain, specifically the aqueducts in Mérida.

As I continued my search I looked through many websites regarding the aqueducts, which I found to be very informative. Using the Google search engine, I typed in variations of Spain and aqueducts. Then I narrowed my search to Aqueducts in Mérida Spain. From there I submitted my proposed thesis topic to Dr. Ferngren.

I continued to research, looking through encyclopedias, Roman and Spanish historical books, and concluded that Mérida Spain is appropriately named, "Little Rome". It houses more Roman historical sites than any other city in Spain. From my examination of historical elements of the aqueducts in Mérida as well as other Roman aqueducts throughout Europe, I was able to understand the importance and significance of these structures in the Roman world.

One item that not all may be able to duplicate is the research I did using Spanish. Using basic histories of both Spain and Rome I was able to gain a comprehensive

bibliography from which to work. Consulting with Dr. Ferngren gave me a more inclusive view of the ancient world.

As I continued to find information I cross-checked it with other sources. This was extremely effective when using Spanish books. By cross referencing I was able to make sure the information I received was accurate.

Background/Literature Survey

Early History of Spain

Spain's history is a rich tapestry that spans pre-historic times to the present. Geographically diverse, Spain is broken up into isolated valleys by transverse ranges of mountains. [1] It is believed that the Iberian Peninsula, which includes Spain and Portugal today, was home to some of the earliest humans in Europe.[2] They are supposed to have come from Mesopotamia and possibly by way of north Africa, or southern Europe.[3] Both the Celts and the Iberians inhabited the peninsula creating the group known as the Celtiberians. The Celtiberians were a Celtic people of late La Tène culture living in the Iberian Peninsula before and during the Roman Empire. The Celtiberian group began when Celts migrated from Gaul, what we know of as France, and integrated with the local Iberian people. By about 200 B.C. Spain had come under the control of the Roman Empire, one of the most powerful and extensive empires the world has ever seen. Spain served as a pivotal point within the Roman Empire, which spanned an area from Britannia to Dacia.[4]

Spain grew in importance even before Roman conquest. Tartessos is considered the earliest urban culture known in Spain. "Its riches and prosperity had become proverbial, and we find them alluded to in the verses of Anacreon." [5] Rich in copper, gold, and silver,[6] Tartessos dates from c.1100 B.C.[7] Among the early invading conquerors the Phoenicians, Greeks and Carthaginians were the first successively to colonize the Spanish Mediterranean coast. They established trading posts and became quite prosperous for many centuries. Around the time of Tartessos' establishment

Phoenician merchants created more trading posts. One such post was the colony of Gadir situated near Tartessos. We know it today as Cádiz. "It was the chief Phoenician colony outside the Pillars of Hercules, having been established by them long before the beginning of classical history… To the Greeks and Romans it was long the westernmost point of the known world. "[8] Because of its elevated status throughout the Mediterranean world it was able to thrive as an important trading post.

By the ninth century B.C. the Greeks began to colonize Spain. They established posts such as Emporion (trading post), or modern-day Empúries. This settlement was built on the northeast corner, where both the Phoenicians and the Greeks lived symbiotically. It is actually the Greeks who are credited with the name *Iberia,* named after the river Iber. Through the sixth century B.C. there were many more attempts at colonization by other powers. One power struggled to gain control against another. However, it was the Romans who eventually won out, by defeating the Carthaginians in the second Punic War in 202 B.C., giving them control of the Western Mediterranean.

The most important Carthaginian colony was unquestionably Carthago Nova. We know it as modern Cartagena.[9] Initially the Romans came in contact with the Celtiberians which, at this point inhabited nearly all of Spain. The Roman invasion brought to Spain new cultural elements that have remained ever since.

Early History of Rome

According to tradition the founding of Rome took place in 753 B.C. Since its establishment there has been continuous inhabitation of the region. Influenced by surrounding Mediterranean cultures, the Romans took a great deal from the Greeks and

the Etruscans. The Romans established a written form of language, adopting the Etruscan alphabet.[10] However, it is the Etruscans that stimulated the ultimate engineering genius of the Romans.

The Romans learned and adapted the Etruscan ways of building. It was from the Etruscans that the Romans learned to build temples. They transformed Rome from essentially rustic living to urban prosperity. [11] The Romans' ability to build did not leave them impregnable to attack, however, and in 387 B.C. the Gauls sacked and destroyed Rome. After the invasion, Rome quickly rebuilt and went on the offensive. Romans conquered their teachers, the Etruscans, and took land from the Gauls. Ever advancing, the Romans gained control of over half the Italian peninsula by 290 B.C. In the third century B.C. Rome gained control of the Greeks in Magna Graecia, located in southern Italy.[12]

The Punic Wars set the stage for the Romans. By confronting the super-power of that day, Carthage, Rome set out to become the strongest power in the western world. By conquering the empire of Carthage the Romans brought the Western Mediterranean under their control. For the first time Rome and her citizens controlled an overseas empire.

Roman Conquest of Spain

The first interest that Rome displayed in the Iberian Peninsula was not the result of any concern with the country itself, or even with its natural resources or its inhabitants. The Romans were engaged in Spain because of the presence of Carthaginians. [13] A conflict of commercial interests led to the Punic Wars with Carthage, which was destroyed by the Romans in 146 B.C. The Carthaginian colonies in the Western

Mediterranean were taken by the Romans and incorporated into the Roman Empire. The Romans had to fight the Spaniard for two-thirds of a century (292-133 B.C.) before they were able to conquer this fiercely independent people. The Iberian Peninsula was divided into two Roman provinces. Roman rule became absolute.

Spain was subsequently divided into two provinces. In the north was Hispania Citerior. which later became known as Hispania Tarraconensis, with its capital in Tarraco. The south was called Hispania Ulterior, with Córdoba as its capital. Mérida served as the capital of the Roman province of Lusitania and contains more important remains than any other town in Spain. [14] Romanization and urbanization followed quickly.[15]

Early Roman Architecture

Borrowing from their conquered cultures, the Romans developed and integrated their architectural styles. The Romans built in the classical style of Greek architecture. However, this style was adapted to fit the life and times of the Roman world, creating a completely different form of architecture. The two styles, Roman and Greek, are categorized as classical architecture. The Etruscans were the people who gave the Romans their initial education in construction and architecture. Several architectural elements used by the Romans, such as arches, were derived from the Etruscans.[16]

By adapting Etruscan and Greek architecture to Roman living, the ancient Romans created their own architectural elements. For example, they used vaults and arches together. They knew a great deal about construction materials and were able to combine otherwise risky components to create structures that were unsurpassed for

thousands of years. Examples include the aqueducts, amphitheaters, basilicas, and the Coliseum. During their period of Spanish domination they built their roads on a peripheral rather than radial pattern.[17] This permitted them to have access to more of the peninsula by arranging their roads in such a manner. The Romans also incorporated the use of arches and concrete to create huge covered public spaces.

Concrete was an ingenious innovation of the Romans made in the first century B.C., when they created a concrete that could support vast amounts of weight. The innovation made it possible for the Romans to construct many bridges, baths and aqueducts across their immense empire. The aqueducts in particular supplied water to city-dwellers and enabled the Romans to urbanize Europe. Early Roman concrete was a simple mixture. It consisted of sixty to seventy-five percent sand and gravel or crushed stone, fifteen to twenty percent water, and ten to fifteen percent cement, which was prepared by roasting limestone, clay and other ingredients. [18] The Romans were the first major concrete users since the Egyptians. However, the Romans continued to improve concrete, incorporating it into many public works. They came up with technology that allowed them to use the light weight combination to form things such as the roof of the Pantheon.

Expansion/Development of Core Ideas

History of Mérida

Created to serve as the retirement center for veterans, [19] Emerita Augusta (the ancient name of the town Mérida) was founded in 25 B.C. [20] by the decree of the Emperor Augustus, who founded Mérida as a Roman colony in order to reward his soldiers for their efforts during the conquest of Spain. He gave them plots of land and a place to live in tranquility for the rest of their lives. That is where the original name, Emerita Augusta, was born. It was a fusion between the people, the Emeriti, and the founder, Augustus. Emerita Augusta soon became the capital of the province Lusitania. Currently Mérida is located in the autonomous community of Extremadura in western Spain.[21]

Importance of Mérida

Today the Roman antiquities make Mérida the major archaeological sites on the Iberian Peninsula.[22] However, in ancient times Mérida served as a cross-road for the Roman Empire. Indeed, Mérida acted as the main cross-road of the Iberian peninsula.[23] The Romans placed the region of Extremadura at center stage. Because of its prime location in Roman Spain all passages to and from other major cities traveled through Mérida.[24] When Mérida became the capital of Lusitania it also became the center of the political, cultural and administrative life of a province with over 40,000 inhabitants. Because of the engineering technology provided by the Romans, Mérida was formed and

quickly made into an advanced city. In particular, the aqueducts gave life to a city that grew in importance and prosperity.

Sextus Julius Frontinus

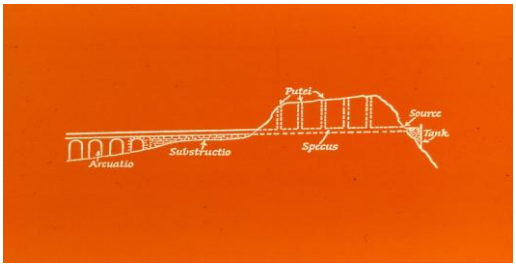
Born about 30 AD, Frontinus became an urban praetor in 70 AD and after his consulship in 73 or 74 went to Britain as governor. He was appointed as the curator of the waters of Rome in 97 AD. It was then that he wrote his work on Rome's water supply, the De Aquis.[25] During his lifetime Frontinus was the leading authority on water supply and building structures. Frontinus's knowledge of land survey was extensive.[26] The Strategemata served as a textbook for a society with no formal means of training. He gave complete instruction on how to use tools and in which situation each tool was best. With an instinct for public improvements that dominated his career he embarked on the construction of highways and aqueducts.[27]

Elements of Aqueduct Construction

To construct a Roman aqueduct a suitable water source had to be found. If the source was new, great energy went into studying the effects the water had on people before it was integrated into the city's water system. [28] It was to traverse large rivers and other natural barriers between the source and the city that the Romans created the aqueduct. In ancient Rome the construction of aqueducts was made possible by concrete. Ancient Roman concrete, known in Latin as *opus cementicium,* was a mixture of three basic materials, an aggregate, a binding agent, and water. Fragments of pumice were employed as aggregate to reduce dead weight in many of the great domes such as the Pantheon.[29] These ingredients were then placed in wooden frames and allowed to dry.

Once dry, cement is extremely hard and durable. It made for a better arch than wooden frames because it was impervious to fire. Concrete was also easier to transport than stone. Because of its effectiveness, concrete sealed its place in history. Indeed concrete has been described as the very foundation of civilization.[30]

In order to get the water from the source to the city the Roman theory of water-supply was to use a gravitational flow, aided by a small fall in the conduit. [31] By the end of Roman rule the ancient world had an immense and creatively engineered water system. In Rome there were around hundreds of miles of aqueducts, of which many were underground,[32] to keep the waterways clean of animal remains and free from enemy attacks. Powered solely by gravity and a high-pressure air supply in the conduits, the aqueducts moved water effortlessly to the city. [33] As shown in the drawing below the Roman engineers constructed visible portions of the aqueducts in places such as valleys in order to maintain an even flow from water source to city.



Aqueduct Sketch: Image 2

When faced with hills or obstacles, the Romans simply went through them, as represented by the specus (tunnel) portion of the aqueduct. The puteus (ventilation shaft) acted as the air and inspection shafts, located above the specus. To keep them functioning efficiently the Romans had to maintain these structures. “The channels above ground [were] built of stone slabs, keyed with cement-filled slots…the lining is of fine cement.”

[34] No matter how much care was taken when creating aqueducts, the structures suffered from leaks, frost damage and foundational instability. Above ground it was necessary to cover the channels in order to keep rain water out and to preserve the water from the heat of the sun. Wash-aways were possible with winter rains, and overgrown vegetation created significant threats. [35]

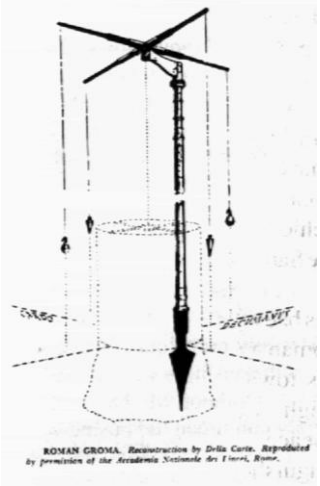
Aside from the extensive organizing and engineering the aqueducts, building took a lot of time and energy. In order to create a continuous flow the ground beneath the waterway had to be level. Despite their lack of surveying tools engineers were extremely accurate. [36] In order to accomplish this task chorobates were used.

Recreation of Chorobates: Image 3

The picture shown above is a recreation of a chorobates. It was a tool that procured the horizontal angle of the land with which the Romans were to use. Vitruvius depicted a chorobates as, a straight plank about twenty feet long. At the extreme ends it has legs made to correspond, and fastened at right angles to the ends of the plank, and, between the plank and the legs, cross-pieces joined by tenons. These have lines accurately drawn to a perpendicular, and plummets hanging severally over the lines from the plank. When the plank is in position, the perpendiculars which tough equally and of like measure the lines marked, indicated the level position of the instrument.[37] It determined the slope of an aqueduct and the levels of the land through which it was to pass. It is similar to the

level used by modern carpenters. According to Vitruvius, a leading architect in ancient Rome, the chorobates did the most accurate work of the tools available to the Romans. [38]

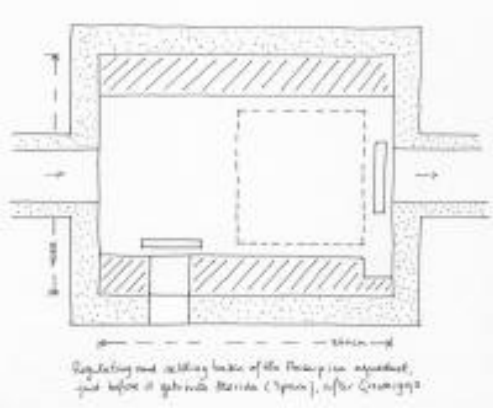
Many tools were used in the construction of Roman aqueducts. Another example of one is the Groma. The Groma was the principal surveying instrument of the Roman agrimensores, the land surveyors. The instrument itself was simple in design, crossed arms resting on a bracket and attached to a vertical staff. The four arms each had a cord with a hanging plumb bob. It was designed to survey straight lines and right angles.[39]



ROMAN GROMA. *Reconstruction by Della Corte. Reproduced by permission of the Accademia Nazionale dei Lincei, Rome.*

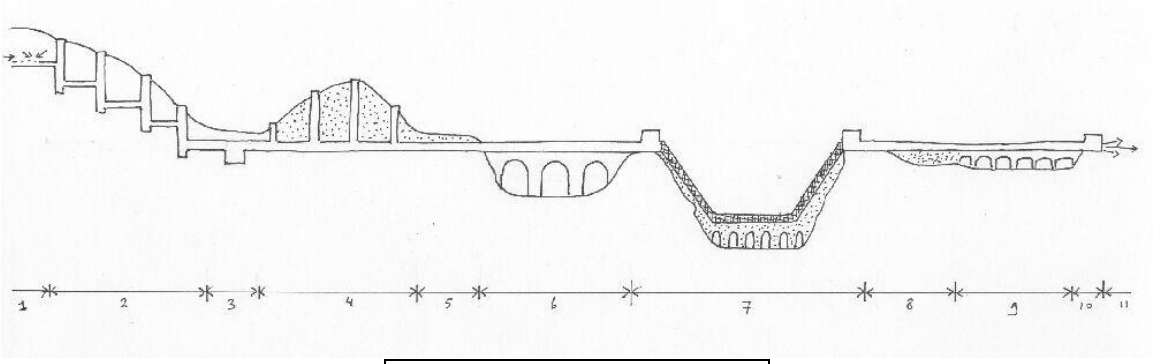
Sketch of Groma: Image 4

The groma was placed in the ground as shown in the picture above and used as a crude yet effective means of surveying. In the creation of roads, aqueducts, canals, and other structures, the Romans excelled in the use of crude surveying instruments as measured by modern-day standards. Great undertakings such as the aqueducts were accomplished through the use of hand tools, hordes of slaves, and a great deal of time.[40] Even with the use of these tools it took incredible manpower to create the aqueducts.



Settlement Basin: Image 5

The drawing above is an example of a cross-section of the Los Milagros Aqueduct of Mérida. It shows the regulating and settling basin for this aqueduct just before it entered the city. This basin represents a great deal in terms of sanitation and purification. "In order to remove the coarsest impurities and clarify the water it passed through settling tanks."[41] It allowed the sediment and other natural elements that had been traveling with the water to sink, thus purifying the drinking and bathing water that entered the city.



Sketch of Aqueduct: Image 6

1. Source (in this case: infiltration gallery)
2. Steep chutes (in this case: dropshafts)
3. Settling tank
4. Tunnel and shafts (putei)
5. Covered trench
6. Aqueduct bridge
7. (Inverted) Siphon
8. Substruction
9. Arcade
10. Distribution basin / castellum divisorium
11. Water distribution

The drawing above is a basic step-by-step image of the path water takes from the aqueduct source to the city. The sketch is labeled one through nine. Number one is representative of the source or basin where the water is drawn from. Number two is the path through which water travels entering the aqueduct's main system. The shafts to the surface are the *Putei*, as previously mentioned. The third section of the image is the settling basin. Number four is the underground tunnel that guides the water. Number five is a covered trench that helped the flow of water. Section six is a good example of an aqueduct bridge. This may very well have been an uncovered section of the aqueduct. Number seven is the inverted siphon that aided in the water flow, providing a continuous pressure system to keep the water moving. Number eight is the continuation of the aqueduct to a higher point than the siphon. Number nine is the arcade, which serves as the passage covered over by a succession of arches or vaults supported by columns. Section ten is the distribution of water. In Mérida "the water brought in by the aqueducts was distributed through the city by a complex series of channels and drains."[42] Eleven is simply the water flowing through the series of waterways. Through these steps the Romans were able to maximize gravity, purification techniques, and their ability to modify old concepts to serve in new ways.

Regular repairs and cleaning were required to keep the aqueducts in usable condition. Apart from cleaning the channels of the aqueduct repairs tended to be at three principal points. "The hill-side sectors and the bridges across valleys were liable to

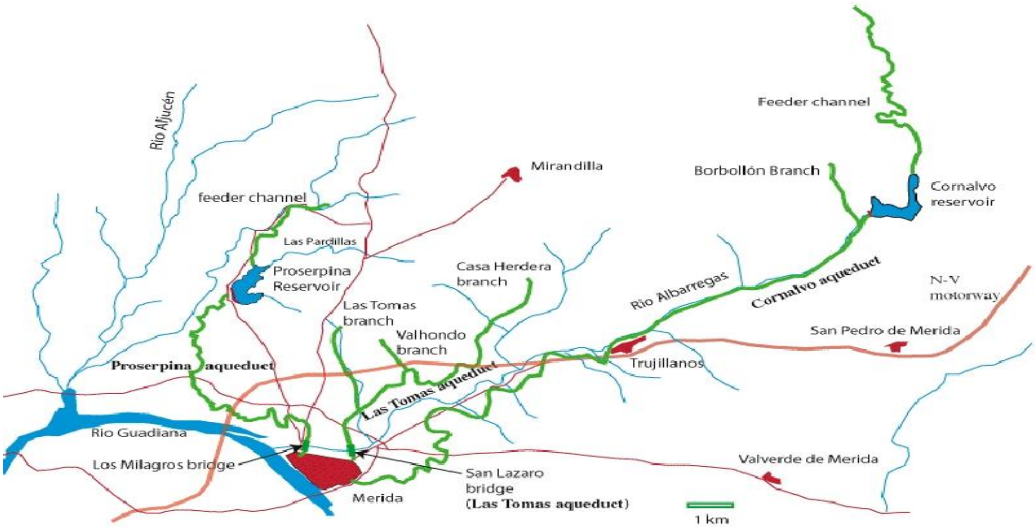
damage by heavy storms and spates." [43] The stone arches of the structure were also a constant worry. The wind stresses were quite dangerous as were earthquakes. "But it is clear that the normal work was the routine of stopping minor leaks, anticipating damage due to weathering or the growth of trees, and cleaning the channels." [44]

Roman Aqueducts in Mérida

The town of Mérida was supplied by a hydraulic system consisting basically of two capacious reservoirs. In ancient Spain these reservoirs fed the two main aqueducts: the Los Milagros and the San Lazaro as well as other secondary conduits. The Proserpina reservoir had a sloping wall more than 400 meters long and six meters thick.[45] It has been calculated that it could impound more than five million cubic meters of water.[46] The Proserpina reservoir fed the Los Milagros aqueduct about three miles north of Mérida.[47] Large parts of the Los Milagros aqueduct still survive. There is a series of arches nearly 825 meters long that cross the Albarregas valley.

The Cornalvo reservoir is 220 meters long and the wall has a very steep batter and rows of steps along the part of the dike facing the water.[48] This reservoir fed many conduits on the eastern part of town. The San Lazaro aqueduct, however, did not take from this reservoir. Spanning 1600 meters long, the San Lazaro was supplied from springs and watercourses in the environs of the town. [49] When the aqueducts were first built, water was not stored for future use. However, with the creation of the dam water could be controlled.

The secondary channels through which water flowed to town were also important to the survival of Mérida. These included the Valhonda Branch, the Las Tomas branch, and the Casa Hendera branch.



Overview of Mérida, the two main aqueducts that fed the city, and its secondary water contributors: Image 7

Purpose of Aqueducts in Mérida

During antiquity Mérida's aqueducts served the people of the city not only as a source of water but also as a source of culture. The aqueducts provided the source of life, which gave way to a plethora of peoples communing in a common area. The city was able to grow economically as well as ethnically. In the region of Extremadura, the culture shows influences from Portugal as well as from the Spanish province of Salamanca and the Andalusian *comunidad autónoma* (autonomous community). The aqueducts made possible the development of agriculture and the seasonal migration of livestock. The prosperity and tranquility of Roman Spain up to the end of the fourth century is still well

illustrated in many of its surviving monuments in Mérida such as the impressive bridges and aqueducts.[50]

The aqueducts in Mérida provided a source of clean water and made possible a sanitary sewage system. The counterpart to water supply was waste-water disposal.[51] Expelling bodily remnants was the continuation of the flow of water that was brought to the city through aqueducts. Mérida thrived as a result of the aqueducts. The convenience and subsequent prosperity resulting from the aqueducts far outweighed the worry of water contamination. The opportunity to fetch uncontaminated water from street fountains and basins would have helped to keep disease and infection at bay.[52] Extreme care was taken when choosing a site for aqueduct placement. Because of this the contamination of water was minimal.

The ability to provide water for large numbers of people allowed Mérida to host guests from across the region. This mini-version of Rome became, among other things, home to the many Roman antiquities. Intricate and elaborate Roman structures, such as the amphitheater and aqueduct arches, sprang to life. The aqueducts served as more than a means of getting water. They were the very foundation of society as a whole. By providing *the* basic necessity, water, people were able to congregate and contribute to the advancement of the empire. The aqueducts were the first of many architectural creations found in Mérida, each of which contributed the advancement of Mérida and the empire.

Analysis and Conclusion

After Roman rule

During Roman rule Mérida became a symbol of urbanized Roman life in Spain. However, by the late fourth century A.D. the Western Roman Empire had dissolved. Blessed with urban luxury, the people of Mérida were still able to maintain their way of life.

After Roman rule, the Visigoths, a Germanic people from the Western Gothic tribe, controlled Spain.[53] Although Rome was no longer responsible for the region, its influence on Mérida and Spain in general continued to be extensive.

Legacy of Roman Architecture in Mérida

The Romans left behind an extensive number of ruins in Mérida. The two aqueduct remains that survived the years have become a notable part of Spanish history. Mérida is also home to many other architectural wonders including the *Puente Romano*, a bridge over the Guadiana River that is still used by pedestrians.[54] The architecture found in Mérida is a homáge to the Roman Empire and ancient technology. The Temple of Diana sits in the center of town, and there is an extensive Roman Art Museum, which opened in 1986. The Roman Theater, the amphitheater and the circus are also impressive historical sites located within Mérida.

Despite the unsanitary conditions of the Dark Ages, Europe again acquired high standards of water supply and sanitation in the 19th century. This made way for the current Mérida water system. Based on an advanced and urban waterway of antiquity,

Mérida can boast a fully functional water system today. Although the town no longer uses the aqueducts surrounding the city, the old waterways still serve as a wonderful tourist attraction.

Cultural Meaning of the Aqueducts

In Mérida the aqueducts served as a building block of society. Agriculture blossomed with easily accessible water. With an increase of agriculture, more people were able to move to the area and integrate their customs with the locals. They were also able to contribute to the construction of the intricate Roman house, the Mithraeo, known for its intricate mosaics. Trade and the influx of settlers helped to romanize Spain.[55]

The aqueducts symbolize the Roman the mastery of engineering. Technological advancements during antiquity meant fortifying the cities and providing luxuries that we find commonplace today. To have water piped into a common area was unheard of until the Romans perfected what they had learned from the Etruscans. The idea had been around and incorporated as early as the time of the Egyptians; however, the Romans took building to another level. The massive scale and use of ingenious tools went far beyond anything other ancients had conceived when constructing aqueducts. By inventing things such as the groma and the chorobates the Romans made large-scale construction projects possible. The Romans gave great impulse to public works of all kinds, in which they displayed their artistic culture.[56] Were it not for the aqueducts providing the staple in every human life, *water*, people would not have planted roots in such dry areas as Mérida. Aqueducts made it possible for people to establish permanent homes. The cultural impact of these permanent settlements was one that cost a great deal. Originally

the cost of building the aqueducts fell upon the Emperor. However, over time the price was paid by the state and thus by the people and their taxes. [57] For many who study the Roman aqueducts the response is quite the same. The architectural genius behind their structure is something we can marvel at today. They are admired as builders in stone and concrete whose work has survived the centuries.

The well-preserved remains of the old city include, in particular, a large bridge over the Guadiana, an amphitheatre, a theatre, a vast circus and an exceptional water-supply system. Mérida is an excellent example of a provincial Roman capital during the empire and in the years afterwards.

Aqueducts Around the World

It was the creation of concrete and the design of the arch that made possible the creation of the aqueducts. Roman aqueducts were built throughout the empire, and their arches may still be seen in Greece, Italy, France, Spain, North Africa, and Asia Minor. [58] They show the vast impact the Empire had not only on Mérida, but also much of the ancient world.

Roman aqueducts have been adapted over time. Some still provide cities with water. In Segovia, Spain, the aqueduct still delivers water to the city.[59] The trend of modernization that began with the Romans has expanded around the world. Today aqueducts can be found in California, New York, Colorado, Scotland and many other places.[60] The aqueduct is a technology that has survived the test of time. An example of the Los Angeles aqueduct is shown below.

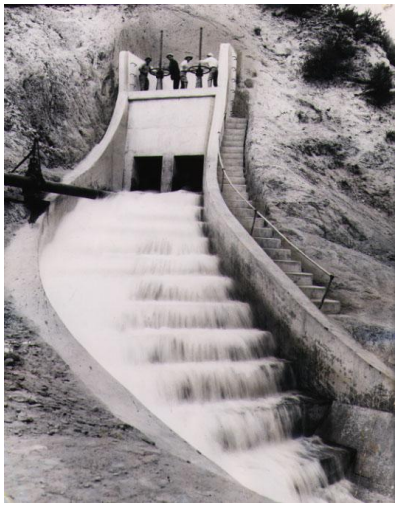


Image of the Las Angeles Aqueduct: Image 8

Since the early 1900's the rapid growth in the population of California has required the building of an enormous aqueduct system to supply water.[61] One of the longest aqueducts in use today, the Coolgardie aqueduct in western Australia, extends 563 kilometers. The Apulian aqueduct in Italy carries water 245 kilometers from the Apennines to Taranto.[62]

Mérida's economy is based today on agriculture, trade, and tourism.[63] It is an economy that is dependent on its water resources. Although there are existing portions of the aqueducts in Mérida their primary importance is for tourism. But they do not serve the human population alone as a water source: they have also become home to the native stork population.

Ruins in Mérida: Image 9

The picture above is just one example of “stork living” in Mérida. Perched high above eyesight, these birds make their nests on the aqueducts. The aqueduct remnants serve as a part of their eco-system. Aqueducts served and continue to serve many uses. From waterway to bird haven to tourist attraction, the aqueducts are a reminder of Roman glory and human ingenuity. They illustrate the importance of Mérida and the role of aqueducts in building an empire.

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