

## The identification of missing elements of the cultural, architectural, and natural heritage linked to the urban river Monelos (Spain).

Amal Nnechachi Bounous<sup>(1)</sup>, Daniel Lucas Teijeiro Mosquera<sup>(2)</sup>, Francisco Alberto Varela García and Puertas Agudo, Jerónimo<sup>(4)</sup>

<sup>(1,3)</sup> University of A Coruña, Advanced Visualization and Mapping Group, Department of Civil Engineering, A Coruña, Spain  
amal.nnechachi@udc.es, alberto.varela@udc.es

<sup>(2)</sup> University of Santiago de Compostela. Research Group History of Art, Architecture and Urbanism. Department of History of Art, Santiago de Compostela, Spain  
daniel.lucas.teijeiro.mosquera@usc.es

<sup>(4)</sup> University of A Coruña, Water and Environmental Engineering Group, Department of Civil Engineering, A Coruña, Spain  
jeronimo.puertas@udc.es

### Abstract

In common with many other rivers that flow through urban and peri-urban environments, Monelos River has been subject to urban development pressures in recent decades due to the growth of residential, industrial, and commercial areas. This work identifies the heritage elements that have been associated with Monelos River, through a spatio-temporal journey through the river and its history. The aim is to comprehend the processes that have led to its hiding underground, as well as to its oblivion. The different stages of transformation of the river have been studied, linked to the historical context and urban planning of the time, from the 18th century to the present day. All of this is supported by interdisciplinary historical research based on written and graphic documentation preserved in different Spanish archives. Using Geographic Information Systems techniques in combination with the analysis and interpretation of historical archives, a reconstruction of the history of the river is carried out. The missing elements of the historical, architectural, and industrial heritage, which were identified, continue to form part of the city through its toponymy, such as the water mills, or its physiognomy, such as the streets through which the river runs underground or the bridges that are still standing, although they no longer have a river to cross.

**Keywords:** River Heritage; Ecosystem Services; Intangible Value; Disappeared Architecture.

### 1. INTRODUCTION

The appreciation of a river in an urbanised environment is not only based on its consideration as an element of nature that offers many benefits, but the relationship between the elements of this natural heritage and the citizenry is also built through a sense of belonging and cultural identity. A river within a city therefore encompasses much more than the watercourse.

The residential, industrial, and commercial growth that the city of A Coruña has experienced in the Contemporary Age has given rise to the different actions on the river Monelos that began in 1778 and ended with its piping in 1967. Consequently, the river was hidden from society, its surrounding landscape was modified, the architecture that identified the river was demolished and its intangible values disappeared.

The aim of this work is to recover the historical memory of the river Monelos, and to this end we have defined the relationships that have existed between the material elements of the historical heritage that were built on the riverbed of the river or on its banks and the river itself. Although these elements modified the course of the river, they did not make it disappear, but rather coexisted for many years, during which time immaterial elements were also generated.

### 2. STUDY AREA

This paper analyses the transformations that have occurred on or in the vicinity of the Monelos riverbed. This stream is one of the seven main tributaries and is the lower course of the basin.

The original Monelos river basin consisted of seven main tributaries: Monelos, Meicende-Pastoriza, Mesoiro, Vio, Elviña, La Grela and Feans, although these names have changed in some stretches or depending on the period.

### 3. MATERIALS AND METHODS

In this research, the methodologies of the disciplines of art history and cultural heritage, water engineering and cartographic engineering have been applied in a coordinated way to improve the results that would be obtained individually.

The first phase involved the search, analysis and interpretation of the available historical information related to Monelos river. To this end, a bibliographic search was carried out, focusing on the actions that have been carried out on Monelos river and the architecture of historical interest that was located on its banks or on its course. We searched for projects, minutes, newspaper archives, plans and images in both public and private collections. The information obtained was organised in chronological order and the most significant architectural elements in the transformation of the river were selected.



**Figure 1.** Sample of georeferenced maps on historical cartography and current situation.

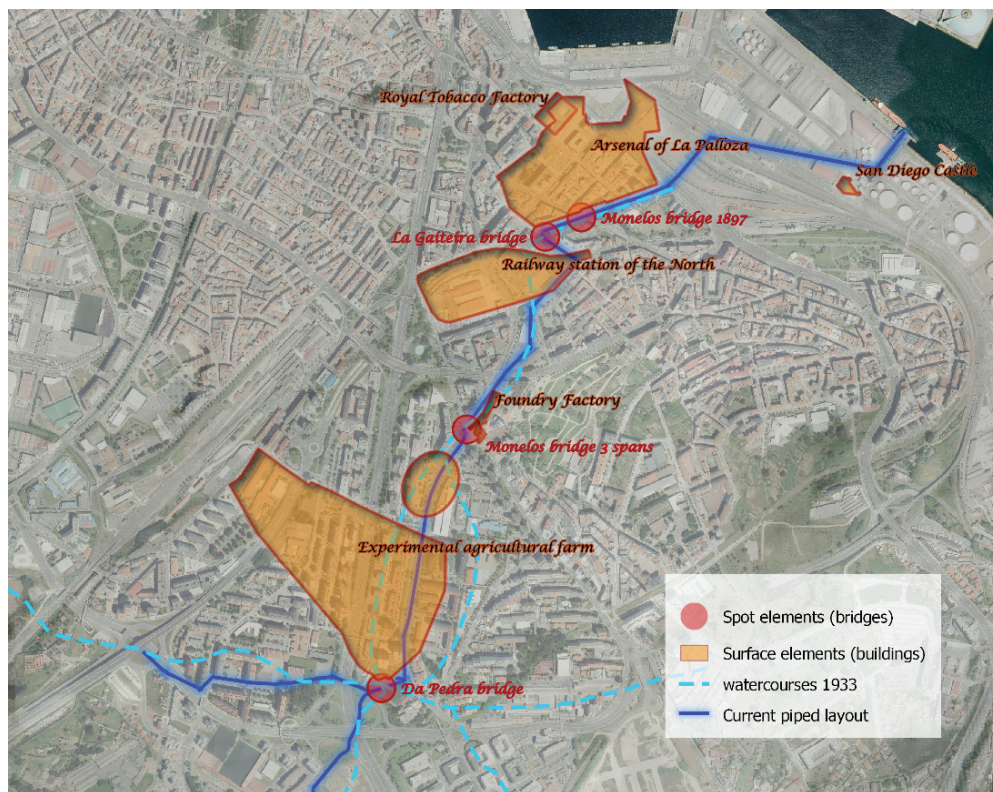
Gis tools have been used for the georeferencing of the localised plans and for the digitalisation of the river's historical routes for the different periods. This result offers greater precision for the location of the architectural elements of interest and their geographical relationship with the river, since only the written archives and the few cartographic references made interpretation complicated.

In order to identify the current route, we analysed, on the one hand, the drainage network in GIS format of the City Council of A Coruña, and on the other hand, we carried out a review of several projects relating to the most recent channelling works of Monelos river.

In addition, the compilation of the oral memory of the river has been transcendental, through interviews with people who lived through the process of channelling and consequent urbanisation of its banks in the 1960s. To this end, contact was made with the technical staff of the City Council of A Coruña, Waters of Galicia (Aguas de Galicia), the Municipal Water Company of A Coruña (EMALCSA) and former neighbours, whose work resulted in the making of the documentary film "Monelos. Forget No River", released in 2017.

### 4. EVOLUTION OF MONELOS RIVER AND THE ASSOCIATED HERITAGE ELEMENTS.

The selected buildings of historical interest that have disappeared or have been modified by the urban transformation that led to the concealment of the river are analysed below.



**Figure 2.** Architectural elements of historical interest related to Monelos river georeferenced and represented over current orthophotography.

#### 4.1 The Arsenal of Maritime Post Office (ca. 1778)

Before the great urban transformations outside the walls of A Coruña, the mouth of the river Monelos was located at the place known as Aceñas, a place name that alludes to the hydraulic flour mills located on the riverbed.



**Figure 3.** Detail of the map of the vicinity of La Coruña. Engineer Francisco Montaigú 1726. Cartographic Archive of Geographical Studies, Ministry of Defence (Spain) (Left). Map of the initial setting out of the Arsenal of Maritime Post Office of La Coruña. Engineer Benito de Irazabal. 1803. General Military Archives of Madrid. (Right).

Thanks to the plan of the engineer Montaigu, we can clearly see the estuary into which the river flowed, which was crossed by the old and disappeared Gaiteira Bridge, an engineering architecture whose date of construction is unknown, but there is evidence of its existence since 1525 (Martínez, 2004). The connection between the estuary and the sea was made by means of an elevated surface on which more mills were built (González, 1984). (Tengberg et al., 2012)

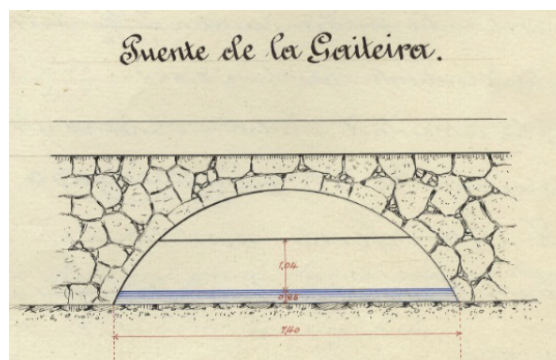
Towards the end of the 18th century, the city experienced the age of the Enlightenment and during the reign of Charles III it enjoyed a period of prosperity because the maritime mails between Spain - A Coruña - and America - Havana - were established by Royal Decree of 6 August 1764. It then became necessary to establish suitable



facilities in the city and in 1788 Miguel Ferro Caaveiro, one of the most important architects in Galicia at the time, designed the Maritime Post Office Arsenal on the waters of the estuary. This project was never carried out, although the appearance with which the Arsenal was finally configured had the same idea as the original, as it consisted of using the estuary as a dock for the reception of postal ships.

This was the first work that drastically transformed the course of the river, as its construction involved successive fillings of the old estuary and the mouth of the river was channelled from the Gaiteira Bridge to the southern end of the site by a river corridor.

In any case, the Arsenal gave up its activity in 1802 to move to the port of Ferrol. From 1804, premises that had been abandoned after the Arsenal's departure were reused, possibly to store tobacco shipments to the tobacco factory in Seville (Alonso, 1984) and from 1808 there is evidence of the operation of the facilities as the Royal Tobacco Factory (Romero, 1997). The building of the former Tobacco Factory currently houses a Justice Department.

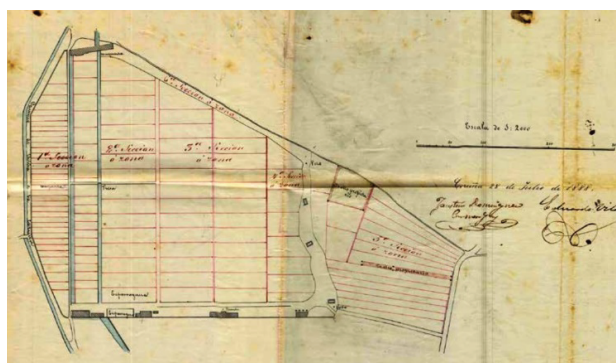


**Figure 4.** Plan of the disappeared La Gaiteira bridge, first half of the 20th century. Port Authority of A Coruña.

## 5. The General's Orchard

Upstream, there was a large estate owned by Pedro Martín Cermeño y García de Paredes, Captain General of the Royal Court of Galicia. He arrived in A Coruña in 1779, to contribute to the city's booming maritime commercial expansion, and by 1780 he must have established what would become known as the Huerta del General (General's Orchard). Although this extension bordered the river, it did not include any notable canalisation for its use.

After Cermeño's death, the orchard remained in different hands throughout the 19th century until 28 July 1888, when it was acquired by the Provincial Council of A Coruña to establish an Agricultural Experimentation Farm (Sánchez, 2021). To formalise the purchase, the architect Faustino Domínguez Coumes-Gay and the engineer Eduardo Vila y Algorri drew up the plan for the valuation of the land and it can be seen that at the southeast end of the orchard there was a system for channelling the river, which must have been carried out at some point in the mid-19th century.



**Figure 5.** Valuation plan of the General's Orchard, future Agricultural Farm. 28 July 1888. Archive of the Provincial Council of A Coruña (left). Location on 1931 cartography (right).

This river channelling through the interior of the General's Orchard continued throughout the existence of the Agricultural Farm. In 1963, the project for 2,000 dwellings in the first phase of the Elviña industrial estate was approved and consequently the demolition of the building and the channelling of the river was planned, in a context in which, as we will read further on, it was also decided to pipe the river.

### 5.1 Foundry factory



During the first half of the 19th century, Monelos river hardly saw any changes to its course, only the appearance of small dams and the installation of water wheels for the first industries that settled on its banks. In this sense, it is worth mentioning the water wheel with the Poncellet system installed by the civil engineer Joaquín Galiacho in 1838, located next to the Monelos Bridge, and which from 1844 was used by the foundry and earthenware factory La Victoria, which he built in the immediate vicinity.



**Figure 6.** Invoice letterhead of the La Victoria Foundry. 1852. Municipal Archives of Betanzos See the water wheel over the river next to the Monelos Bridge.

## 6. The North Railway Station

In 1858 the need arose to bring the train to A Coruña. Emblem of progress, the railway was to be located in the area of A Gaiteira as it had the largest surface area and would soon be urbanised with the advance of the construction of the expansion of the future Coruña. However, its construction was delayed for various reasons, but mainly due to the death of its promoter, Juan Martínez Picabia.

Previously, the architect Juan de Ciórraga had drawn up a preliminary project in which the underground channelling of the river in this section was already contemplated. This idea was continued in 1871 by the engineer Melitón Martín, who drew up the construction project. In June 1872, Eduardo López de Letona y López modified it, enlarged it and eliminated some details, making it the definitive one for its execution. It was finished in 1883 and was inaugurated by Alfonso XII and Queen María Cristina on 1 September of the same year at 5 pm<sup>1</sup>. The river would be definitively buried under this section forever.

For the first time, Monelos river was hidden for a section of it, due to a work of major interest and without popular discussion. The channelling of the river would last even after the destruction of the station due to a fire on 27 January 1964

## 7. The harbour landfills

In 1877, the Port Works Board was created, a body that proved to be transcendental in promoting the commercial and industrial maritime growth of the city. The main objective of this institution was to enlarge the port facilities, for which several landfills were planned that would eventually last until the middle of the 20th century.

In this context, the civil engineer Eduardo Vila y Algorri, who had been director of the Board since 1882, proposed three projects at the beginning of the 20th century that involved a large filling of the area that included the mouth of the river: the Project for the wall and embankment on the San Diego beach (1911); the same reformed project (1914); and the Project for the Pavement and Railways for the Linares Rivas and Santa Lucía Docks (1914)<sup>2</sup>.

<sup>1</sup> Municipal Archives of A Coruña, C-7493, files on the promotion of the railway.

<sup>2</sup> A Coruña Port Authority Archives



**Figure 7.** Former San Diego Castle 1914. A Coruña Port Authority Archives.

The filling works covered a wide area, from the Linares Rivas quay to the San Diego Castle. To solve the problem of the mouth of the river, the straight course of the river was widened by building two culverts to channel it to its mouth at the sea.

The contract was awarded in November 1917, although the works were not completed until the 1960s, with the construction of the San Diego Quay. This meant the loss of an element of the city's unique architectural heritage: the castle of San Diego. This 16th century fortification was demolished, and its remains were used as fill material for the port area between 1962 and 1965, locating the Maritime Terminal of the PETROLIBER Oil Station on the new site (Nárdiz et al, 1998). With this action, the mouth of Monelos river is no longer visible.

## 8. The channelling projects

In 1936, the City Council proposed the canalisation of the river due to the problems that had been generated. It was a seasonal river that flooded in winter and, due to spillage, gave off strong odours. This proposal could not be carried out, partly due to the economic difficulties that arose during the Civil War.

This idea was taken up again in 1955 and in March 1956, the Project for the channelling of Monelos river was finally presented, which proposed a channelling with a total length of 1863 metres and divided into three zones: the first, from Ponte da Pedra to the Agricultural Farm; the second, from the Agricultural Farm to the Northern Railway Station; and the third, from the Station to the sea.

After the necessary procedures between the different bodies, in December 1964 the Ministry of Public Works entrusted the works to the Sociedad General de Obras y Construcciones, S.A. Throughout 1965 the works were carried out very quickly, although two extensions were needed for the complete completion of the works, which lasted until 30th June 1967.



**Figure 8.** Old Monelos Bridge with 3 spans, buried at present.

As a result of the channelling works, the social visibility of the river was hidden, but the opportunity was also taken to convert the whole area around it into a residential estate, called Polígono de Elviña, the construction of which was integrated as several partial plans in the municipal Urban Development Plan of 1967. It was to be expected that the new channelled area would be developed, as the demographic growth of the city required the construction of new residential estates, and the most immediate and convenient area was this one. Therefore, the channelling project must be related to the desire for the urbanisation of the surrounding area, which was protected by the 1956 Land and Urban Planning Law.

## 9. DISCUSSION AND CONCLUSIONS

Awareness of the history of the river, the circumstances and context of its transformation from its origin to the present day, as well as the relationships that the river has had with the elements of the city, is the path that would lead to its recovery with an integrated vision. Different approaches can be used to ensure the protection of the cultural elements of the river.

In the context of ecosystem services, cultural heritage includes not only historical objects or landscape elements (cultural and natural), but also intangible aspects such as stories, knowledge systems and traditions. Both tangible and intangible landscape heritage contribute to maintaining meanings and sense of collective identity, highlighting the intimate link between cultural heritage and identity. (Tengberg et al., 2012)

### 9.1 Tangible values

From a material point of view, the channelling of Monelos river caused the disappearance of a landscape that certainly in the mid-20th century was unhealthy and abandoned. The chronicles of the local press, for example, published headlines such as "Monelos, the disinherited son of a wealthy family"<sup>3</sup>, since the industries in the vicinity of the river had not contributed to a clean environment. This image, however, contrasted with the image before industrialisation, where Monelos river was in a more natural environment.

The tangible values that have disappeared are closely related to the architectural heritage inherent to the river. For example, there were a large number of bridges along the course of the river, the most notable of which are the A Gaiteira Bridge, the Monelos Bridge, the 3-span bridge and Ponte Da Pedra. Nowadays, only the Monelos Bridge, which is still on the surface, and the Monelos Bridge with three spans, which is buried at a depth of 5.28 m, are preserved. It is one of the most interesting points that remain over Monelos river, as it is possible to see its waters flowing, as well as to observe its cutwaters and granite structures.

The other buildings also disappeared as the great urban transformation projects of the city were developed. The most outstanding case is the Castle of San Diego.

### 9.2 Intangible values

The disappearance of the tangible cultural heritage linked to Monelos river may lead one to think that it will also be accompanied by the disappearance of its intangible heritage. However, the intangible values associated with the river should be analysed more broadly.

On the one hand, there were traditional place names that disappeared, such as: Las Aceñas (in reference to the mills located in the port area), Los Molinos (area of location of several water mills) or others related to small geographical landmarks around the river. Although there are currently regulations that consider traditional toponymy as an identity value and as an instrument for the specification of the geographical denomination of the villages and their assets -art. 2.a) Law 10/2015, of 26 May, for the safeguarding of Cultural Heritage: art. 68. 2 Law of 16 May 2016 on the Cultural Heritage of Galicia-, but logically these criteria could not be applied in the context in which the river was channelled because they were simply not of debate either in the administration or in society but are current issues that are debated around the current definition of cultural heritage.

Even so, the toponymy has been preserved in many cases, the area where the Ponte Da Pedra Bridge was located retains this name, there is the Monelos river street through which the underground river flows and also the Monelos avenue. There is also the Monelos neighbourhood and the Monelos secondary school. Everything indicates that Monelos is still present in some way in the daily life of the citizens, although many do not know it. But there are many other immaterial values that can be linked to the river. One of the most famous is its productive use for river fishing. In this regard, the illustrious José Cornide mentions that "in the Postas de la Bahía" and specifically at the mouth of Monelos river, "sardines, horse mackerel, bogue, red mullet and snook, snook and mullet" are fished, but above all "sardines are abundantly fished in their times [...] because sardines are the main fruit" provided by the waters of the Bay of A Coruña (Cornide, 1774).

From the 19th century, there are even testimonies that narrate the surroundings of the river of Monelos as a "place that offers a picture of pleasant animation [...] for those more accustomed to the bustle of the city", because the oyster sellers and sweet sellers used to gather on the banks of the river on feast days to call the passers-by<sup>4</sup>. Likewise, the banks of the river were even a landscape motif for painters such as Villaamil, who made a drawing in 1849 showing the idyllic surroundings of the river.

## 10. ACKNOWLEDGEMENTS

<sup>3</sup> La Voz de Galicia, 1963/09/29, p. 22

<sup>4</sup> El Miño: newspaper of Galicia, commercial, industrial, literary and of news, n. 936, pp. 3-4.



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