### SUBMERGED ROUTE EL GIRONÈS SCIENTIFIC ROUTES IN GIRONA



### Ready to satisfy your infinite curiosity?

These routes through the *comarcas* (similar to counties) of Girona aim to provide an alternative to conventional tourism, offering a proposal that has the added bonus of providing scientific and sustainable knowledge. These routes have been designed based on a specific science-related theme, around which a weekend outing can be planned. There's something to explore in every comarca! Through this guide you will learn, for example, among other things, who Professor Margalef

was; how the cannons on the ships that sank in the Mediterranean are recovered and restored; the chemical process that lurks behind the making of a simple cheese; why wetlands were important to the Greeks and Romans; how long to wait before recorking an oak tree; which animal skull is the most sought-after at the Archaeological Museum of Banyoles; or where the Romans mined gold in Cerdanya. When tourism and science go hand in hand, the result is spectacular.

#### NOTICE:

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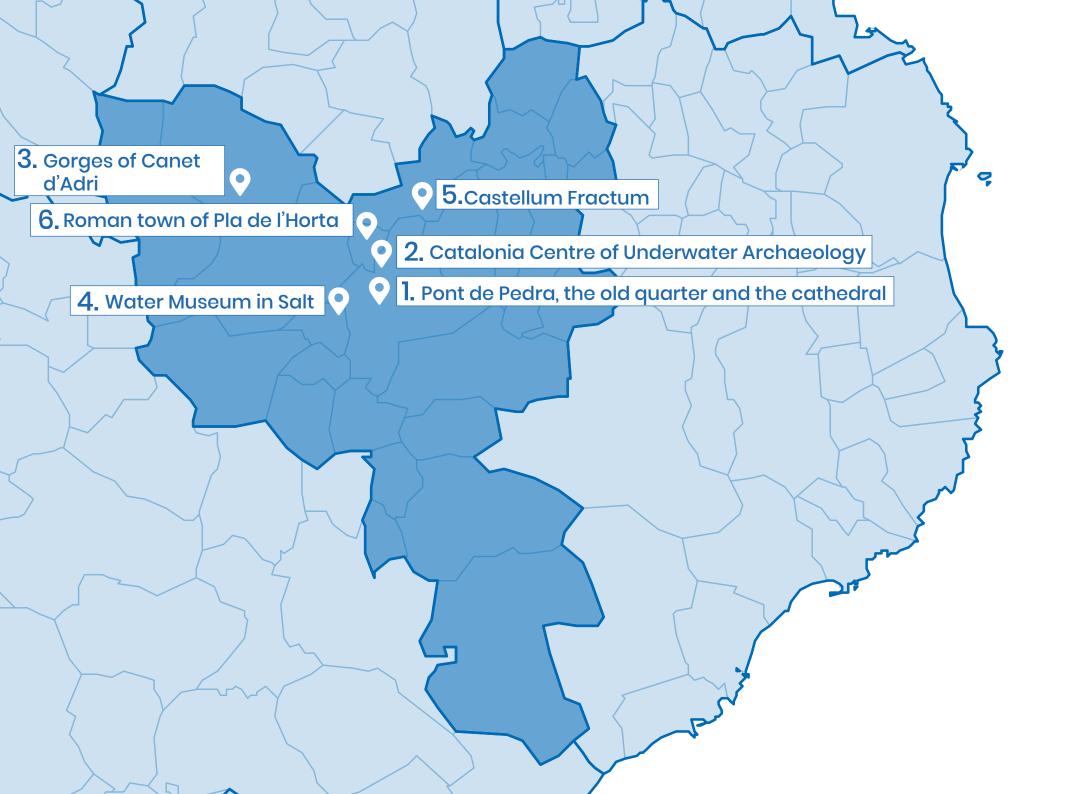
#### SUBMERGED ROUTE EL GIRONÈS

"Havíem llambregat, des del tren, Girona, dreta vora el riu. Pedres grises, ribes de malenconia. Havíem travessat la Devesa, i el seu brancam espès remorejant d'ocells i de fulles verdes, vestia la ciutat amb un altre prestigi. L'home que guaita, de la finestrella estant, les viles i els paisatges, s'enduu un triple record de Girona: el repòs enyorat del riu; la flama freda de les pedres; la senyoria de la Devesa. Tot, mesclat, us estremeix i fa un ressò etern."

Tomàs Garcés (1901-1993)

We often walk on land without being aware of what it hides or who has walked on it before. Layer by layer, its history piles up right up to the present. Gironès, a comarca located between rivers, is also subject to this legacy. This route aims to bring to the surface everything that life has hidden beneath rivers, seas and mountains, because Gironès is home to great treasures of history, nature, matter and humanity.

With this route, we invite you to immerse yourself in the experience of discovering Gironès and to enjoy it from a different perspective that you're sure to enjoy.



# **1.** Pont de Pedra, the old quarter and the cathedral



50 million years ago, what today is Girona was a shallow tropical sea, inhabited by various organisms. The skeletal remains of these organisms were fossilised in stones that were later used to construct buildings, but that were also highly valued as ornamental rock due to the presence of nummulites.

Nummulites, so called because they are shaped like coins (nummulus in Latin), were unicellular marine organisms that reached their apex some 40 million years ago. They have a maximum diameter of 6 centimetres and are common in marine rocks formed during the Tertiary, especially around the Mediterranean. As a result, they are also commonly found in countries like Egypt and Turkey. They are valued in geology as guide fossils, meaning those that are used to date a specific geological period.

This stone is called "Girona stone", because it was quarried around the city of Girona, and it has been used in many of the city's emblematic buildings, such as the Pont de Pedra, the Cathedral, the former courthouse and the Palau dels Agullana. If you walk through the old quarter of Girona, be sure to look at the facades, railings and columns of all the buildings. You'll notice the stone right away. You can start the route at the end of the Rambla de la Llibertat. There, you'll find bronze pieces from the Barberí foundry that refer to this stone and its ties to the city. Who would've guessed that the most iconic buildings in Girona contain visible remains of marine zooplankton?

If you're fascinated by all the things that lived underwater millions of years ago, we propose a side trip to Racó de la Thalassa, in Sant Gregori. This space houses a collection of sea snails (malacology) and contains some 3,000 specimens of sea snails from around the world, including some rare and curious exemplars.













# **2.** Catalonia Centre of Underwater Archaeology



The CASC, or Centro de Arqueología Subacuática de Cataluña (Catalonia Centre of Underwater Archaeology), is a must stop on this route of Girona's underwater past. Not only because it is directly related to what is beneath Catalonia's Mediterranean coast, but because it represents one of the city's most curious and least known scientific discoveries.

To visit the CASC is to relive the Mediterranean empires that have visited Catalan lands, as it contains all kinds of archaeological remains from different periods, styles and uses that have been recovered from the sea. But it also lets visitors learn about different methods for preserving and restoring organic materials.

Although visits have to be made in a group (if possible, avoid bank holidays!), a trip to the CASC will let you see objects from thousands of years ago, such as daggers from the Hellenistic period and everyday objects like a medieval comb, amphoras, ropes, mining tools, pumps, etc. Visits are currently offered depending on the timeline of the remains, so you can discover artefacts from the Roman world or from the War of Independence, and the impact they had on the history of Catalonia.













### **3.** Gorges of Canet d'Adri

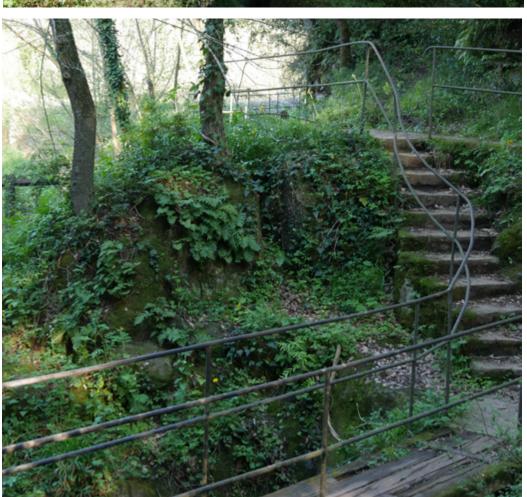


We now go outdoors to take in nature and enjoy a bucolic landscape in Canet d'Adri, a small town located near Girona, which hides a precious treasure: its volcanic gorges. It is a curious, beautiful and unique location, a natural setting where you can enjoy nature, but where swimming is not allowed, so as to protect the gorges from damage. The Canet d'Adri gorges were formed as lava from volcanoes in the area solidified. The erosion caused by water and the materials contained in it resulted in the formation of holes of different sizes and depths, which have turned this location into an oasis of peace and fresh air, with abundant vegetation, walkways and access bridges. A place of great scenic beauty that you simply must see.



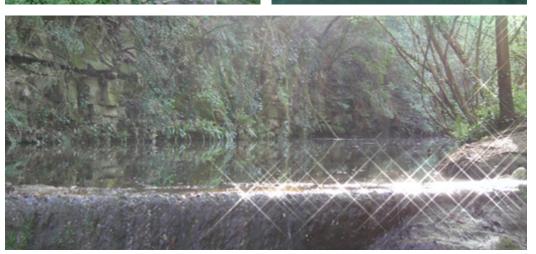












### 4. Water Museum in Salt



As we journey through Girona's underwater past, we would be remiss not to mention one of its most important centres devoted to the culture of water throughout its history: the Museo del Agua de Salt (Water Museum of Salt). This new museum, opened in 2011, replaces the old water installations located in Mas Llorens, in the old quarter, which had become obsolete.

Now located in an old textile factory, its purpose is to introduce visitors to the importance of water, from its chemical composition, to current research on other planets, to the different states in which it is found. During the tour, which is very educational and enjoyable, you can also learn about the different uses of water throughout history, from the most basic uses to industrial uses, such as in basketry, which relied on water to soften the cane.

This museum also illustrates, in an educational way, how Salt's unique nature resulted in the town being founded next to the regional capital. This was made possible by the use of the resources provided by the water, specifically the Monar canal and the Ter River, which led to a booming agriculture and, later, to the establishment of textile factories and power plants.

We recommend visiting the Water Museum of Salt to discover one of the main and most valuable natural resources available to mankind: water!



#### **5.** Castellum Fractum



Submerged in the Mountain of Sant Julià, the digs of Castellum Fractum have unearthed a late Roman fortress built on an Iberian settlement, back when Girona was called Kerunta. The location of the site serves to highlight the views afforded by this enclave, which in the past were ideal for monitoring goods traveling on the Via Augusta. Since 1996, both the Iberian and Roman settlements have been systematically excavated, until, in 2012, they were declared a National Cultural Landmark. The Castellum had various purposes, and its location, near a source of water and a thick forest, was perfect for said purposes, primarily surveillance and monitoring, but also for defence and provisioning.

Although this site is true to its name ("castle in ruins"), it has been refurbished and is today a museum that can also be enjoyed by children. Informative posters use a comic format to help children understand life in the Roman and Visigoth fortress.



### 6. Roman town of Pla de l'Horta



This point on the route provides yet another example of the many Roman sites buried throughout Gironès. The remains of the Roman town of Pla de l'Horta, in the municipality of Sarrià de Ter, were declared a National Cultural Landmark by the regional Catalan government. This archaeological site, which was discovered by accident, has unearthed a small part of the Roman town. It is located on the left bank of the Ter River, just over 600 m from the bridge of l'Aigua and about two hundred metres southwest of the d'en Xuncla creek bed, where an underground aqueduct supplied water to the town. Mosaics, paintings on the walls, an industrial furnace and an assembly consisting of a pressing room and two large tanks for the production of wine comprise this piece of heritage that is well worth exploring.

A visit highlights everything that remains to be discovered in a region bathed by water and mountains.













