

# **GATEWAY TO INNOVATION ROUTE ALT EMPORDÀ**

**SCIENTIFIC ROUTES IN GIRONA**





Diputació de 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.

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## NOTICE:

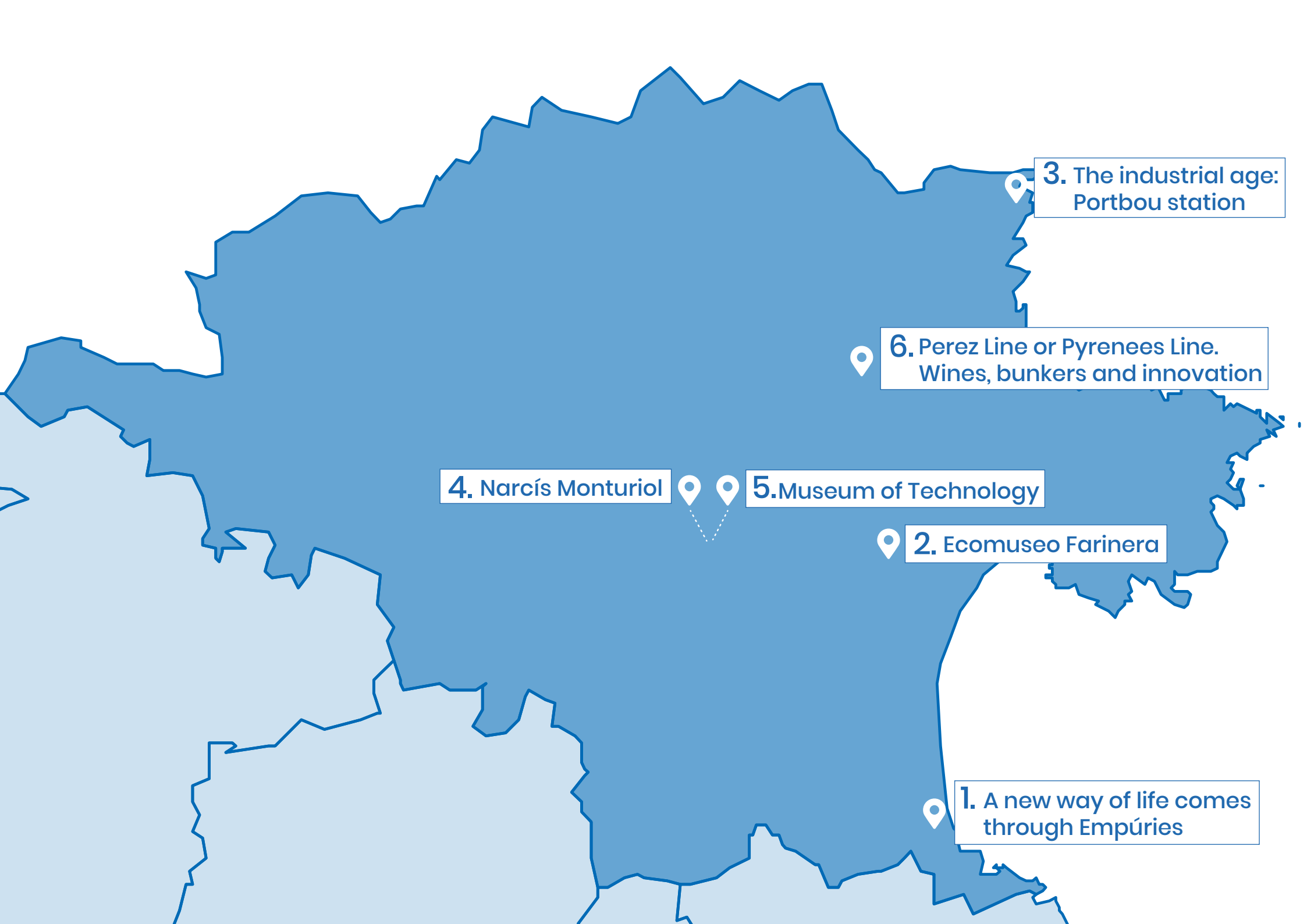
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**Marcada per la terra on he nascut,  
Oberta com és ella, vull ser clara.  
No pretenc posseir altra virtut.  
Tot el que tinc m'és prou. Adés i ara  
Somnio obrir camins entenedors,  
Els que tothom podrà seguir algun dia.  
Retinc als ulls la força dels colors,  
Respiro de la terra l'alegria,  
Avanço enmig dels versos, que són flors  
Tallades al jardí de la poesia.**

**Els pobles de l'Empordà, Montserrat Vayreda. 1984**

## **GATEWAY TO INNOVATION ROUTE ALT EMPORDÀ**

Alt Empordà is not oblivious to the world that surrounds it. Being a crossroads, a borderland located between different cultures, infuses this region with a unique, curious and bold spirit. This route aims to provide an insight into all the changes that have taken place in these lands, changes that resulted in innovations. By following the steps of this route, you will learn about the changes brought about by the arrival of distant civilisations from Greece and Rome, how industrialisation transformed manual labour and the region's entire lifestyle, how a simple train station became an icon of modernity and distinction, and how innovation took hold of people who came to be recognised worldwide, and how to this day, this character is breathed into new projects that seek to provide a turning point in the current sustainability paradigm. We invite you to cross this gateway and discover how innovation made its way through Empordà.



3. The industrial age:  
Portbou station

6. Perez Line or Pyrenees Line.  
Wines, bunkers and innovation

4. Narcís Monturiol

5. Museum of Technology

2. Ecomuseo Farinera

1. A new way of life comes  
through Empúries



# 1. A new way of life comes through Empúries



If you travel to L'Escala, before arriving at the village, you'll find a sign pointing the way to an impressive archaeological site. Hidden on a hill that leads to Sant Martí d'Empúries is an enormous stretch of land full of archaeological remains. If you really want to get an idea of how life was in Greek and Roman times, this is the place to go.

The Greeks arrived in the Iberian Peninsula between 575–550 BC and founded the city of Empòrion, a word that means “market”. This entailed a change in how people lived since until then, the native population only produced enough for its own needs. The Greeks also brought with them a new language, medicine (the remains of the statue of the Greek god of medicine, Asclepius, are still there for you to enjoy), new government institutions and a new religion. Empúries, that first colony, was founded there and thanks to huge economic growth based on local products like ceramics, weapons and fabrics, it became a full-fledged city-state.

Located in the town of Sant Martí d'Empúries (L'Escala), at the southern end of the Gulf of Roses, it is not only the gateway to classical culture, but also a unique space to understand the evolution of Greek and Roman city planning that, over ten centuries, forever transformed the

ancient Iberian people who lived there (to this day you can still see, without leaving the region, the Iberian site of Mas Castellar, in Pontós).

The current Greek ruins are from the city of the Hellenistic period. During your visit, you will find the buildings of Asclepius and Serapis, the small industry where fish preserves and sauces were prepared, the Agorá, or public square, and the remnants of the floor from a banquet room with an inscription in Greek.

The way of life changed with the arrival of the Romans in the second century AD (with the Second Punic War). From the layout of the city (it was designed in a checkerboard pattern), to the lifestyle and leisure – they built an amphitheatre for their shows – the Romanisation that infiltrated the peninsula via Empúries marked a change in the established order.

Of note from Roman times are Domus 1, with the mosaics that decorated the floor, Insula 30 (area occupied by the city's public hot springs), the Forum, the remains of the Basilica and the Curia, and the tabernae, or shops.

Empúries is currently one of the sites of the Museum of Archaeology of Catalonia. Making a stop in Empúries is simply essential if you want



to understand how, following the great empires and occupations, their remains are the only legacy of their greatness.

Oh! An important fact: only 25% of the Roman city has been excavated, the rest remains buried. This highlights the importance of this site.





## 2. Ecomuseum Farinera



The capital of the county was moved to Castelló d'Empúries from Sant Martí d'Empúries because the former was better protected from pirate attacks. The 10th and 11th centuries were the golden age of the county, where a feudal system was in place. Agriculture and livestock were the main sources of wealth in the region. The main crops were olives and grapes, and, in the low-lying areas, wheat, corn and alfalfa, with horticultural areas and fruit trees. At that time there were three flour mills that were powered by water drawn from the Muga River. Of those three mills, only one is preserved, which was adapted to new technologies and new times. In the late 19th century, the traditional hydraulic mill transitioned to the Austro-Hungarian system, which yielded more and better flour production. From that moment on, the mill was turned into a flour factory. Bearing the name of "La Confianza' Flour Factory", it industrialised flour production. Grain was purchased and sold as flour. Industrialisation had forever changed the world of agriculture and how raw materials were transformed into final products.

As you step inside the flour mill, you will see a complex system of pipes that were used to raise, lower, condition, grind and classify the flour. The original factory still remains, with wooden machines that are no longer used in the industry due to their costly maintenance.

A visit to the flour mill will help you understand how innovation during the industrial era affected all sectors of the population, even the most basic ones. Industrialisation transformed our life, making it easier.

In 1997, the flour mill was bought by the town. Since then it has been turned into a museum that aims to raise awareness of the flour mill's industrial past. However, the desire to innovate and promote the territory has resulted in the recovery of indigenous varieties of flour that were no longer used, such as Anza and Florence Aurora. An active collaboration has also resulted in the preparation of a variety of bread called Tramuntana, that we can't get enough of.

To find out where you can buy this bread, you can check the website of artisanal bakers in Girona's comarcas, which lists the bakeries where this variety of bread is available.







### 3. The industrial age: Portbou station



This point on the route represents the arrival of a new way of life and a new imperialism. The region of Alt Empordà did not escape industrialisation. One of the most controversial buildings of the time, as it overshadowed the county capital, Figueres, and took away business from ports, like the one in Roses, was the station of Portbou.

Located near the border with France, this railway line united Catalonia and France in 1870. But in less than 20 years, Portbou went from being a small place to becoming one of the main urban centres in the region, with more than 2,000 inhabitants and substantial economic activity. By 1929, the first station had gotten too small, so an imposing station was designed, with an iron and glass roof that still covers the platforms. The workshops of Joan Torras i Guardiola, known as the Eiffel of Catalonia for his mastery of iron structures, were responsible for the roof of the immense international freight and passenger station (suburban, regional, medium and long distance services) on the Barcelona-Perpignan line.

At present, on the maritime side, there are two international gauge tracks, and on the other side, the Iberian gauge tracks. Its large size, in a rectangular building three floors high, was also designed to house a space that could accommodate large freight train and passenger traffic.

The grandeur of the station contrasts with the current use of the station, which has been relegated to the RENFE commuter line.

This point on the route offers a way to visit the last traces of 19th century industrialisation in the Alt Empordà region, which left behind some magnificent “remains” of what it was and what it meant for the region.







## 4. Narcís Monturiol



When talking about innovation in the Alt Empordà region, we can't leave without visiting Figueres and giving voice to one of the illustrious figures of the town, the region and the world: Narcís Monturiol.

First a student of medicine, and then of law, he is remembered for being a Catalan engineer, intellectual, publisher, editor, politician and inventor. This restless personality has gone down in history as the inventor of the first manned submarine, the *Ictineo*, powered by an early form of internal propulsion with an anaerobic chemical engine.

If you walk through downtown Figueres, the capital of the region, you will find different reminders that link the city to this illustrious figure, such as the monument on the Rambla, a large bronze statue by Enric Casanova (1918) decorated with two flying fish that symbolise Monturiol's feat of sailing underwater like a fish. You'll also find a plaque that identifies his birthplace on the street that bears his name. If you want to know more, then a visit is in order to the space in the Museo de l'Empordà, located at the beginning of the Rambla, that is dedicated to the inventor.

The current building, from 1971, was designed as a museum of archaeology, history and art for the city and the region, but inside,

the collections from important benefactors such as Frederic Marés are most prominent. On the second floor, among the works of contemporary art, there is a space dedicated to the life of Monturiol. It contains various portraits by Ramon Martí Alsina, a good friend of Monturiol's, and even a portrait painted by Monturiol himself, who learned to paint to earn a living during his years in Cadaqués, where he was inspired to build the first submarine.

Opposite the wall of the portraits are the prints and documents that were needed to get that invention to navigate underwater. You can also see various publications from his phase as a politician and publisher.

Narcís Monturiol is an example of the Empordà character. Brave and self-taught, he managed to go down in history with an innovation that changed the art of sailing. It's no surprise that Figueres requested that his body be laid to rest in the pantheon dedicated to its illustrious sons and daughters. And so, if you drop by the cemetery of Figueres, you can see this pantheon, the work of Venanci Vallmitjana Barbany, which contains the remains of Narcís Monturiol i Estarriol, inventor and politician (Figueres, 1819 - Sant Martí de Provençals, 1885); Josep M. Albert Arnau, priest (Cistella, 1897 - Figueres, 1987); Joan Arderius Banjol, veterinarian and politician (Figueres 1841-1923);



Marià Pujalà Vidal, tailor and politician (Figueres 1866 - 1949); Josep Puig Pujades, writer and politician (Figueres, 1883 - Perpignan, 1949); Pep Ventura Casas, musician and composer (Alcalá la Real, 1817 - Figueres, 1875); and Ramon Canet Condorní, bookseller (Figueres 1905 - 1982).





## 5. Museum of Technology



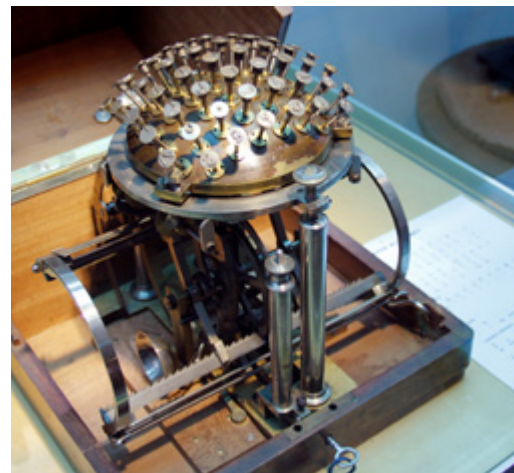
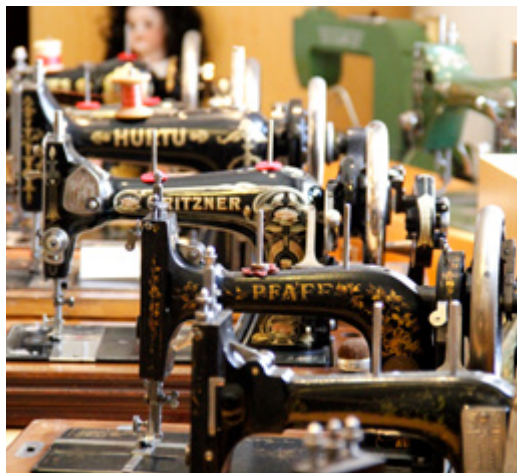
Innovation consists of making changes to something. Therefore, innovation is a concept that varies over time, depending on the eras and their needs. We also know that one innovation precedes another, which is what makes this point on the route so interesting. The Pere Padrosa - Puignau Margarita Pierre Mallol private foundation, also known as the Empordà Museum of Technology, is a space that allows visitors to learn about the innovations that have made our lives easier. Although it is a private collection, a visit to this museum is a must. The objects housed there are sure to astonish anyone who gazes at its glass cases. This 2-floor space contains one of the most important collections of typewriters of all time. In fact, you can see one of the two ONLY typewriters of the 93 that were made in the form of a sphere, a system based on a learning method for the blind and on the position of the hands at the piano, and the first sewing machine manufactured by Peugeot, the current car manufacturer. As an aside, Peugeot does not have any samples of this machine and uses the one in the Empordà Museum of Technology whenever it stages an exhibit of the firm's history anywhere in the world.

Whether you are more interested in sewing machines or typewriters, the visit will show you how innovation has often been a failure in itself, but how it nevertheless yielded an improvement at the time.

On the ground floor the theme is more chaotic, but also more entertaining if you don't have a specific interest. You can enjoy curious spy gadgets and kitchen utensils that we'll never use again, such as a cork stopper retriever that returns them to their original shape so they can be used again. If you're more into transport, you will be amazed with the second car to be used in the province of Girona, a Hispano-Suiza, or be surprised to learn that before the dynamo became popular, bicycles had a space to hold candles and light the path of cyclists.

The museum is only open in the afternoon, and the visits are guided by people close to the collector, Mr Padrosa. This is a great incentive, since every object hides an anecdote or personal story that attaches value not only to the object, but to an entire era.







## 6. Perez Line or Pyrenees Line. Wines, bunkers and innovation



This point on the route seeks to provide an example of how innovation and the region's openness to change persist to this day. Garriguella is a 21-km<sup>2</sup> town near the border, with a wine-making tradition. In fact, Garriguella is one of the points on the DO Empordà route, one of the first to be created, in 1975, to shine a light on the wine of a land that in the past, before the phylloxera plague wasted all the vines in the area, was highly regarded.

Upon reaching the town, you will see that vineyards abound everywhere you look. If you drop by the cooperative on Sunday, you can enjoy a very special visit, because hidden among the vines is a historical treasure from a time when the fear of being conquered was very real. In 1944, during the dictatorship and in the middle of the Second World War, General Franco decided to protect the Pyrenees by building a defensive line of 6,000 bunkers, from Guipúzcoa to Port de la Selva. Half of them were located in Catalonia, with more than a quarter of these being sited in the Alt Empordà region. In Garriguella alone there are 380 bunkers. They are all documented by Adela Geli who, as an architect, catalogued them and offers visits on the second Sunday of every month. On these visits, you can see the inside of the bunkers, learn about their various uses and how they were camouflaged to remain invisible to potential aerial attacks.

The truth is that despite all the work that went into them, the bunkers were never used until four wineries (Cooperativa de Garriguella, Bodegas Trobat, Maset Plana and Grupo Oliveda), plus two companies specialising in using bats to control vineyard pests, Galanthus and Agrassessor, decided to repurpose them and set up bat colonies to improve the biodiversity of the vine and promote the biological control of pests. Geoffroy's bat and the horseshoe are the species of cave-dwelling bats that have found in these bunkers a perfect habitat (very similar to their natural one) to set up their colonies.







