

A photograph of a deep blue ocean under a clear sky, viewed from a balcony. The balcony's railing, consisting of vertical wooden slats, is visible on the right side of the frame. The water shows some white foam from waves breaking near the shore.

RAMON MARGALEF ROUTE LA SELVA

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.

NOTICE:

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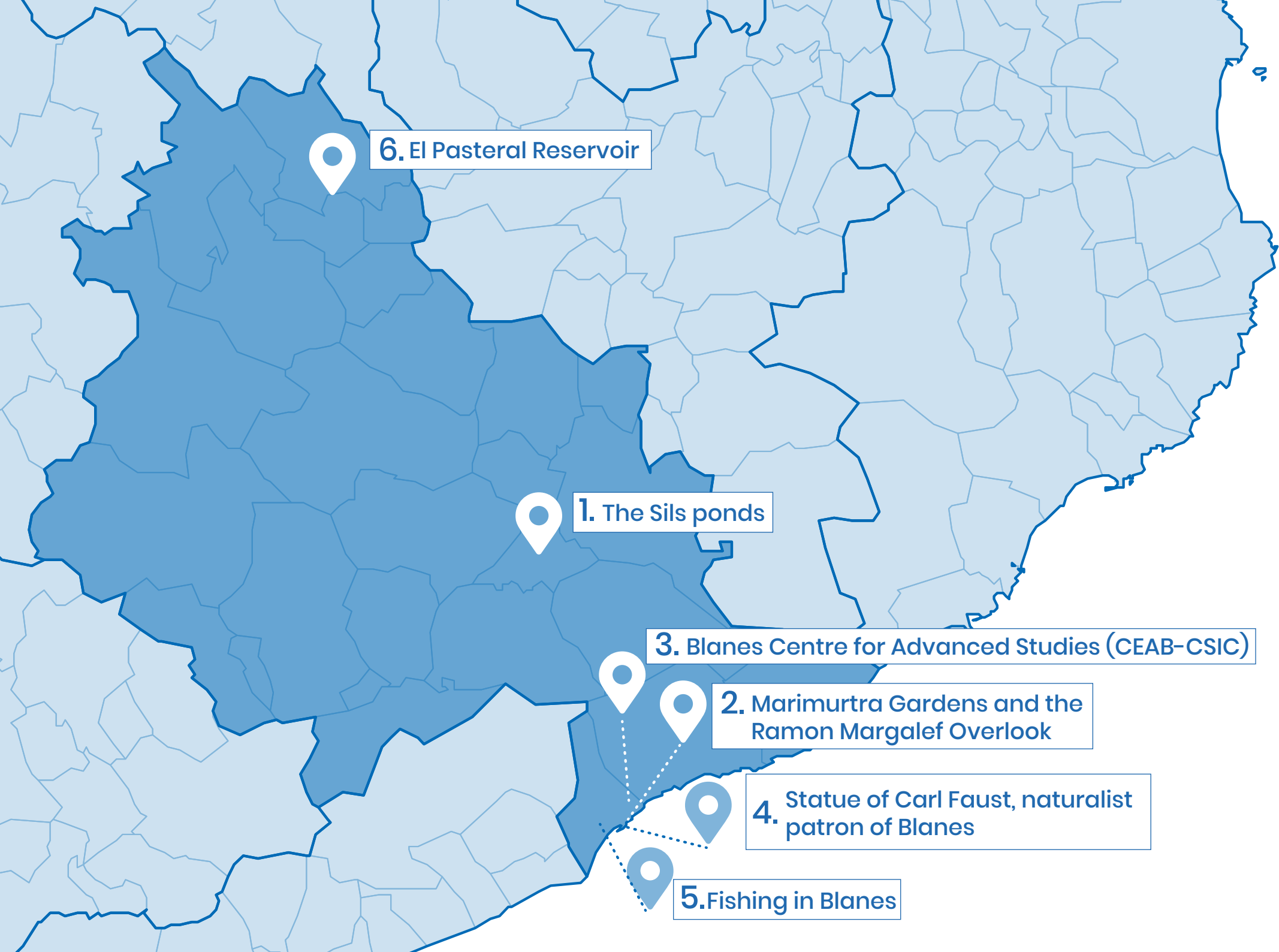
“L’home no és només un problema per si mateix, sinó també per la biosfera en què li ha tocat viure”

**Ramon Margalef
(1919–2004)**

RAMON MARGALEF ROUTE LA SELVA

Ecologist and naturalist Ramon Margalef worked part of his career in the comarca of La Selva. This itinerary will let you travel in time through the eyes of a great scientist, following his initial research in a rather unknown reservoir; enjoying the wildlife from an observation tower in a natural setting; being impressed by the scenery from a very special vantage point; discovering ingenious ways to take advantage of sea water to conduct scientific research; or even learning first-hand of the life of fishermen on a boat. This route aims to pay homage to one of our country’s most important scientists.

Ramon Margalef was the first professor of ecology in Spain. More than 15 species are named in his honour, and his extensive work has contributed to our knowledge and understanding of ecosystems and of concepts such as biodiversity. An outstanding limnologist and oceanographer, many believe that he was the most influential marine ecologist since Darwin.



6. El Pasteral Reservoir

1. The Sils ponds

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1. The Sils ponds



The study of continental waters was one of the specialties of Ramon Margalef, with lake Sils being one of the places where he studied limnology. This lake in Girona provided a reference for Margalef in his observation and interpretation of the history of ecosystems.

You can get to the Sils ponds by train and car. If you drive, we recommend leaving it in the car park at the station. In a few minutes you'll be walking along the paths that will take you to the lake. The route is marked so you can learn how the species and natural spaces have been transformed over time. The lake was an important area of wetlands in the past. The water was pumped out to grow crops, which you can still see, and some spaces have been recovered. We recommend visiting the area of grasslands and prairielands being reclaimed, and the filtering reed beds. You will understand how reclaimed water is used to restore wetlands.



2. Marimurtra Gardens and the Ramon Margalef Overlook



Science is not at odds with beauty, and this point on the route is a perfect example. The Marimurtra de Blanes Botanical Gardens is one of the most beautiful gardens along the Mediterranean shore. Located on cliffs that line the sea, it offers some of the most spectacular views of the coast and more than four thousand plant species, most of them exotic, as well as many specimens, made extraordinary because of their age or size.

The Marimurtra Gardens was created by German patron and botanist Carl Faust to bring species from around the world to scientists, biologists and botanists here, and facilitate their study. Its founder maintained a close and continuous relationship with Ramon Margalef, whose scientific career he helped.

Although initially it was only open to scientists, it currently welcomes more than a hundred thousand visitors (not surprisingly, it is considered the best Mediterranean botanical garden in Europe). Faust's project included a marine laboratory in St Francis cove, which is located just below the garden and which is visible from the spectacular overlook bearing Margalef's name. This laboratory seeks to provide an example of the personal relationship that the patron and the scientist enjoyed during their lives. Its name comes from the words "mar" (sea) and "murtra" (from "murtra", myrtle), the Catalan name for a Mediterranean plant.



3. Blanes Centre for Advanced Studies (CEAB-CSIC)



En route to the cove of St Francis, at one of the curves in the road that surrounds the cliff and that leads to the beach, you will find the Blanes Centre for Advanced Studies. It can only be visited by appointment. Sometimes, such as during Science Week, you can take a guided tour of their laboratories, the immersion area and the aquarium area.

Margalef's early scientific career had close ties to the former aquarium of the Council of Scientific Research (CSIC), the current Blanes Centre for Advanced Studies (CEAB), whose general objectives are to identify the diversity of organisms and understand their functions and interactions in nature, as well as to apply this knowledge to the rational use and management of our planet's resources and to predict responses to environmental modifications.

[Cala Sant Francesc \(Cove of St Francis\)](#)

Although you won't always be able to visit the Centre for Advanced Studies, you can get an idea of the scope of its research if you continue on the road to Cala Sant Francesc, also known as "Cala Bona". From there, the water is collected through pipes that reach 150 m out into the sea and that transport the water to the centre's laboratories, where it is used for research.

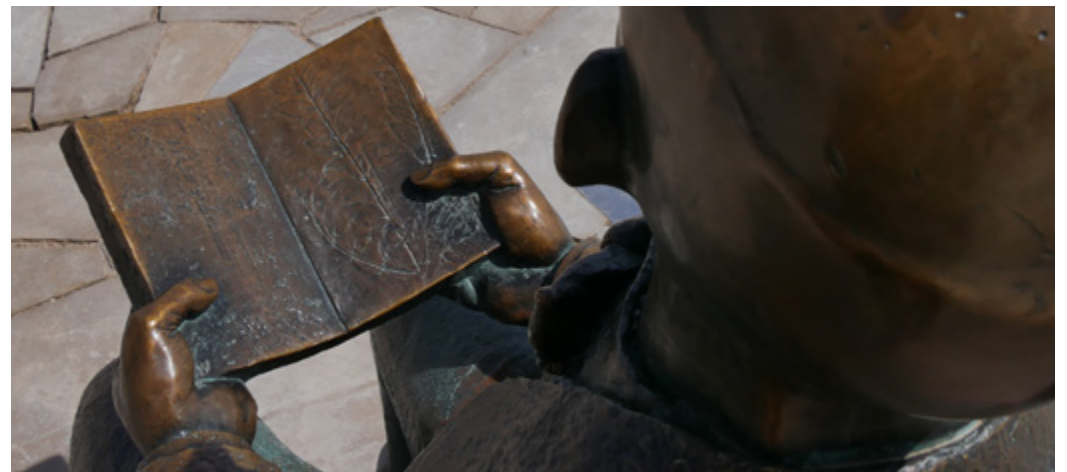
Cala Sant Francesc is one of those places that captivates you as soon as you see it. A seaside path provides access both from the Botanical Gardens of Marimurtra and from Sant Joan. This golden beach is ideal for families, due both to its size and to the services available there. For us, the best thing is being able to see the essence of the Costa Brava coastline from a true paradise.



4. Statue of Carl Faust, naturalist patron of Blanes



Located on Paseo de Blanes is a sculpture dedicated to Carl Faust (b. Hadamar, Germany 1874, d. Blanes, 1952). This patron and friend of Ramon Margalef became a naturalist later in life. Despite showing an affinity for the natural sciences, his family pushed him towards business, which took him to Barcelona, where he and a partner founded the company Faust and Kammann, S.A., which still exists. His love of nature, however, led him to buy land in Blanes starting in 1918. At the age of 50, in 1924, he left his managerial duties and devoted himself fully to creating the Botanical Gardens of Marimurtra. He started laying out the gardens under the guidance of top European and Catalan botanists like Josias Braun Blanquet, Hans Kräinz, Eric Sventenius, Pius Font i Quer, Carlos Pau, Josep Cuatrecasas and others. And, as we already know, he also took the time to help new scientists who worked in his garden and laboratory, like the young Margalef. Carl Faust died on April 24, 1952 in his house in Marimurtra de Blanes, and is buried in that town's cemetery. On February 17, 2007, a statue in his memory, the work of Andrés Ginestet, was unveiled on the seaside road in Blanes, his gaze drawing us closer to his life's work.



5. Fishing in Blanes



Margalef was one of the pioneers in undertaking quality and highly competitive marine research. His studies on managing fisheries to make them sustainable provide one example of the direct relationship between fishing and ecology. The port of Blanes is recognised today as a model for the environmentally sustainable management of fishing and nautical facilities. A few years ago, the City Council and the Fishermen's Association of Blanes launched a unique initiative that will allow you to confirm this first-hand – a tourism experience that involves sailing for a few hours on a boat and taking in a day's work with fishermen while you enjoy the landscapes of the Costa Brava from the sea. This activity gives you an idea of the first outings of Professor Margalef with young Tomàs, which enabled him to conduct his research at sea.

For those who aren't early risers, after four in the afternoon on workdays, you can watch as the trawlers come into port and unload their catch.

An example of Margalef's legacy is the actions taken to preserve the biodiversity near the coast and encourage environmentally friendly and artisanal fishing. Informative panels detail some of these actions, such as the installation of artificial habitats to maintain and regenerate marine ecosystems.



6. El Pasteral Reservoir



Professor Ramon Margalef pioneered the use of organisms that inhabit continental fresh and salt waters to study the “ecological health” of bodies of water. His book *Organismos Indicadores en la Limnología* is a fundamental work that aims to relate organisms and water quality. Along with lake Sils, the Ter River also piqued his curiosity.

Once in Cellera de Ter, you find the village of Pasteral, known for its reservoir, which, together with those of Sau and Susqueda, supplies water throughout the provinces of Girona and Barcelona. At this location you can enjoy extraordinarily beautiful landscapes worthy of admiration. Although the dam is artificial, the adjacent canal that carries the water to Barcelona provides for a spectacular walk near the river. Water, flora and fauna are the protagonists in this area, which we recommended visiting coated in bug repellent to prevent insect bites. In fact, in addition to the enormous chestnut and poplar trees, brooms and other swamp vegetation, you can see a species of fern, *Pellaea Calomelanos*, that is only found in Africa and India, and that did not go unnoticed in the professor’s observations.

This reservoir, which became operational in 1905 thanks to the Burés family, was a catalyst for the region and the province of Girona, as it provided electricity to the towns of La Cellera de Ter, Anglès, Estanyol, Salt, Cassà de La Selva, Llagostera, Palafrugell, La Bisbal d’Empordà, Palamós, Calonge and Sant Feliu de Guíxols.

Ramon Margalef suggested that human pressure on natural water resources should not exceed what he called the “rule of thirds”: one third for human use, and two thirds to support water’s other environmental functions on land and on the coastal shelf. Let’s use this example to reflect on how we use water, emphasising not only its quality but its quantity and the uses we make of it.

