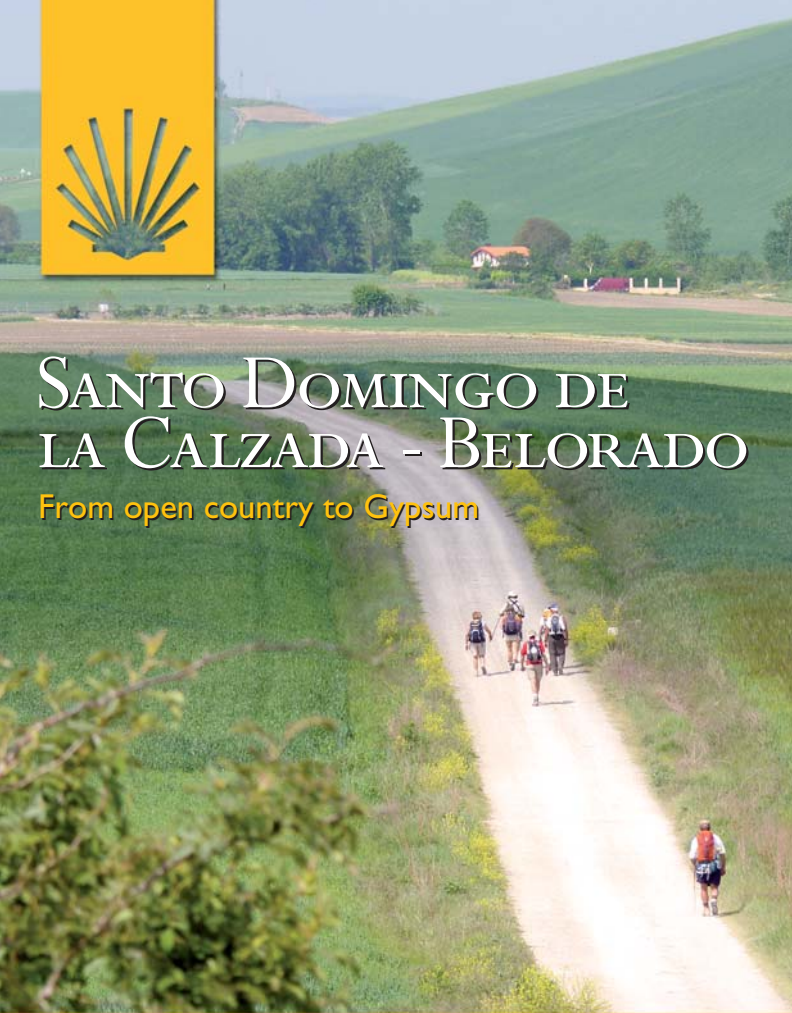




SANTO DOMINGO DE LA CALZADA - BELORADO

From open country to Gypsum



NATURE
ON THE WAY
OF ST JAMES





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From open country to Gypsum

On the 22 Km. of this leg you will walk in the Ebro River Basin close to its south eastern border. After crossing the river Oja and just before Grañón, the Way passes a mere 500 m. from a remarkable Oak forest, just before entering Burgos province in Redecilla del Camino and leaving La Rioja.

You will cross several small streams and on the left, towards the south, the foot hills of Sierra de la Demanda will accompany you and in the distance its highest peak: the rounded mount of St. Lorenzo, 2.271 m. high.

After passing through some villages of La Rioja Burgalesa and seeing some gypsum in the landscape, you will get to Belorado, end of this stage.

*This series of pocket guides: **Nature on the Way of St James**, is fruit of the collaboration agreement between the Social Work Programme of Caja de Burgos and the Natural Heritage Foundation of Castilla y Leon.*

The object of these pamphlets is to give pilgrims, hikers and inhabitants of the Jacobean area some interesting notes on the nature and landscape of the Way.

The stages described are part of the the French Way as it passes through Burgos: Santo Domingo de la Calzada-Belorado; Belorado-San Juan de Ortega; San Juan de Ortega-Burgos; Burgos-Castrojeriz and Castrojeriz-Frómisa, covering the approximate 132 km of the Way in Burgos.

We hope that the reader will be able to appreciate and, above all, respect what Nature has to offer and thanks to these simple notes will enjoy and understand the Way a little better.

*The twisted riverbed indicates the torrential and unsteady character of this river.
A water rise (flood) can perceptibly alter the shape of waterways*



STAGE 1: SANTO DOMINGO DE LA CALZADA - GRAÑÓN

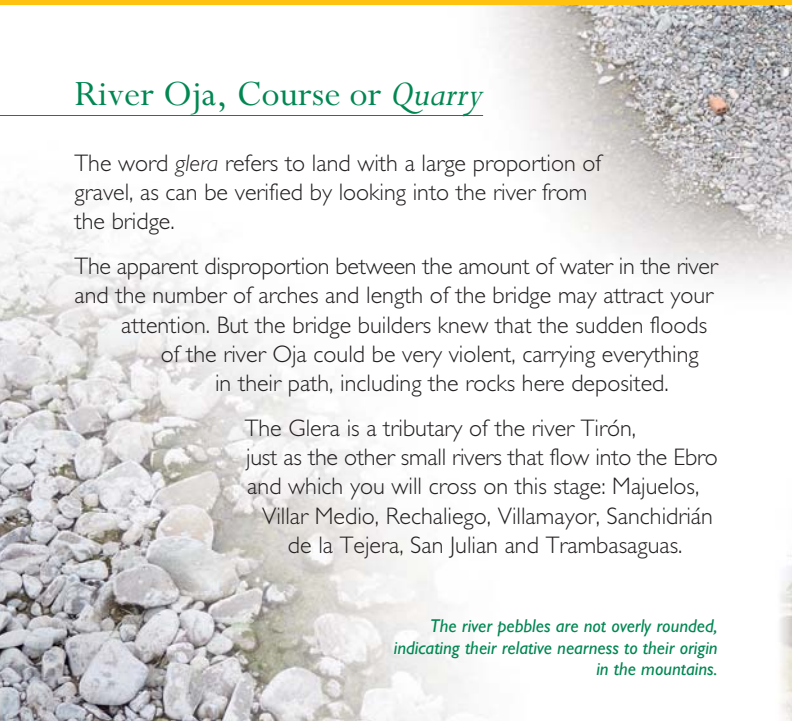
River Oja, Course or Quarry

The word *glera* refers to land with a large proportion of gravel, as can be verified by looking into the river from the bridge.

The apparent disproportion between the amount of water in the river and the number of arches and length of the bridge may attract your attention. But the bridge builders knew that the sudden floods of the river Oja could be very violent, carrying everything in their path, including the rocks here deposited.

The Glera is a tributary of the river Tirón, just as the other small rivers that flow into the Ebro and which you will cross on this stage: Majuelos, Villar Medio, Rechaliego, Villamayor, Sanchidrián de la Tejera, San Julian and Trambasaguas.

*The river pebbles are not overly rounded,
indicating their relative nearness to their origin
in the mountains.*





Where do the stones come from?

The river Oja flows giddily from its source, almost 2000 m. high in Sierra de la Demanda, to 639 m. where you are – in about 30 Km.

In its descent it has been dislodging, dragging and rounding the rocks from the high part of the sierra (among the oldest in the Peninsula) and from the lower zones (more modern), and depositing them in places like this one where the ground is more level.

The energy of countless storms, the river floods and above all, thousand of years of friction have rounded the stones off.

The premise that the etymological origin of La Rioja lies in River Oja is not very clear. There are various opinions and studies, some of which support the theory and others not.



Wagtails and Martins frequent the River Oja

The Wagtails hop over the rolled pebbles while the Martins do acrobatics above the river course. One on the ground, the other in the air, both capture the insects necessary for their diet. They also bathe and drink water.

The Martins, Swifts and Swallows can only be seen in spring and summer. In autumn they leave to spend the winter in Africa.



*Mount San Lorenzo
in the distance*



*Small and brown,
the Sand Martin makes its
nest in earthen river banks*



*The House Martin
has a white body*



*With its red face and
scissor-like tail
the Common Swallow
is easy to identify*



*Swifts are totally dark except
for a small light patch at the throat*



*Pied Wagtails are
easy to find all-
year-round*

*The Yellow Wagtail
spends winter in Africa*



*The Grey Wagtail
likes mountain streams*





White Stork



House Sparrow



Collared Dove

Other birds frequently found in this area

White Storks attract the attention and their nests are easily seen. The Collared Dove, Spotless Starling and House Sparrow make use of the river to bathe and drink. These species have adapted to living in our towns and it is quite possible that you will see them in the next stages.



Spotless Starling

Plant invaders from east and west



Fruit of
the Chinese Sumac



Leaves of
the Chinese Sumac




Flowers of
the False Acacia



Leaves of
the False
Acacia

They resist contamination, hardly suffer from plagues, can stand heat and drought... they are authentic survivors which triumph where other trees fail. Moreover, they grow and spread very quickly. Thanks to these abilities they have escaped our control and can create serious problems for local trees when they leave the edges of the roads.

Although they give an exotic touch to the Way, they are an example of a real threat which is the invasion of species from other places.



These invaders will be seen
on the wayside just after leaving
the river Oja

- The Chinese Sumac or Tree of Heaven comes from China. It was brought to Europe in the middle of the 18th century. It invades sidesides and river banks
- The Robinia or False Acacia comes from the USA and was brought to Europe in the 17th century. We can often see it beside churches. It invades the clearings of local woods.



Chinese Sumac



False Acacia



Robinia fruit

From the Ebro basin to the country fields

In the valleys and zones near rivers, in the flatter areas, the landscape is characterized by the ancestral use of their fertile soils and the proximity of water. What the rivers have pulled down from the mountains is deposited as sediments, rich in nutrients, on the meadows and alluvial plains which are used for cultivation.

After leaving behind the river Oja you will now enter the landscape of *the lands of the Ebro depression*, always with the northern foothills of the *Sierra de La Demanda* to the south. Here the contours are more rounded.





The *campesinos* are very large and spacious extensions of land given over to agriculture and resulting in an agrarian landscape very widespread in the Iberian Peninsula. The proximity of the mountain ranges gives a certain variety to this country by the cultivation of the low rolling hills.

This landscape will accompany you as far as *Villafranca Montes de Oca*, on the next leg, where we will enter the *Sierras Ibéricas*.



These lands have been cultivated for many centuries

We find ourselves in the *Rioja Alta* (High Rioja), in the area where cereals, potatoes and, depending on the year, sunflowers predominate. The latter two species come from America and since the 19th century constitute an important part of our diet and of the agrarian landscape.

It should be remembered that the Way crosses numerous cultivated lands which seem the same, but if we look closer we will be able to note differences between them.

- *The moving of species between continents has given rise to examples like the Colorado Potato Beetle, which hasn't stopped eating in the potato fields since it arrived in Europe in 1900.*

- *In June it is easy to see Broad Bean crops*



Potato



Colorado Potato Beetle



Broad Bean



Sunflower




In Grañon there is an island of oaks among the crop-fields

One of the most radical changes to the landscape is the substitution of woods for crops. If it were not for small corners like *Monte Carrasquedo* it would be almost impossible to guess what our country was like centuries ago.

This oak wood of Pyrenean and Portuguese oaks is surrounded by crop lands and maintains an interesting representation of forest flora and fauna. It is the **VS.07** *riojano* which means that it is an area of special vegetation and is protected by the Rioja Government.



The Carrasquedo de Grañon can be found only 500 metres from the Way, on your left as you enter the village.

A female Stonechat is perched on a thin, dark branch against a solid green background. The bird has a brown head, back, and wings, with a lighter, mottled brown and white underbelly. Its beak is short and dark.

Stonechat (female)

STAGE 2: GRAÑÓN - BELORADO

A large Red Kite is shown in flight, its wings spread wide. The bird has a brown head and back, with a lighter, mottled brown and white underbelly. Its beak is short and dark.

Red Kite

A Buzzard is shown in flight, its wings spread wide. The bird has a brown head and back, with a lighter, mottled brown and white underbelly. Its beak is short and dark.

Buzzard

A Red Kite is shown in flight, its wings spread wide. The bird has a brown head and back, with a lighter, mottled brown and white underbelly. Its beak is short and dark.

Red Kite

A male Stonechat is perched on a thin, dark branch against a light blue background. The bird has a dark brown head and back, with a lighter, mottled brown and white underbelly. Its beak is short and dark.

Stonechat (male)



Some birds of the fields

Many birds will accompany you on your walk. For example the Corn Bunting share the bushes with Stonechats, Larks run ceaselessly along the Way and Carrion Crows are like black spots in the immensity of the cultivated fields.

There are also birds of prey like the Buzzard which watch the pilgrim's progress from on high whilst the Red Kite hunts food flying over the frozen fields in winter.



Corn Bunting



Corn Bunting



Crested Lark



Crested Lark



Carrion Crow






Burgos receives you in Redecilla del Camino

Municipalities like Bascuñana, Castildelgado, Fresneña, Ibrillos, Redecilla del Camino, Redecilla del Campo, Vitoria de Rioja and others, form the *Riojilla Burgalesa* (Little Rioja of Burgos). A curious name whose origin lies at the beginning of the 16th Century when these lands and a large part of the present La Rioja formed part of the Province of Burgos, heir to the Merindad of Castilla, also covering parts of Palencia Zamora and Cantabria.

In 1833 the Province of Logroño separated leaving the lands of Riojilla definitively for Burgos.

Historical considerations apart, the continuity of the landscape and the influence of the Ebro and Tirón basins continue their importance and you won't notice a change between the two provinces.



Church of
Villamayor del Rio



Gypsums



Sandstones



Sandstones

The churches were built with local stone

You will have noticed that up to now all the churches and hermitages are built of sandstones. Very soon you will see that some have gypsum in their construction. As you advance, the first gypsums will appear, remains of ancient watercourses of the Ebro without access to the sea which in these zones mixed with that of the Duero. After passing Vitoria de Rioja you will clearly see them in the countryside to your right, mixed with marl (lime-clay). The ancient hermits constructed their places of prayer here.



The first church where you'll find gypsums is in Villamayor del Río.

It is very costly to transport stone a long way and for this reason the churches are built with stone from the area.



Gypsum is easily scratched with the nail

Little trees with goblins and dog grapes

They are the Elders and Dwarf Elders. The former are woody and reach a considerable size. The latter grow anew every year and form dense groups along the edge of the Way. Both have small white flowers which transform into black berries which attract many birds.

The Elder has been considered magic in Europe for being the home of many an elf-like creature. The Dwarf Elder is not so famous, although for its poisonous berries it belongs to the group of plants which produce the non-existent *uva de perro* (dog grape).



Elder Berries



Elder leaves



Elder

The Blackcap visits these plants when they are in fruit

Blackcap



Dwarf
Elder berries



Dwarf
Elder flowers



Elder berries



Elder flower



Elder leaves





Gypsum on the slopes

Just at the entrance to Belorado, to the right of Trambasaguas stream, you will walk beside the gypsums of the hillside which have been on your right as you approached.

These gypsums formed in enclosed lakeside zones where the very arid climate evaporated the water. This caused the different dissolved salts to crystalize into solid form.

But not all of them did so together.



*The Narrow Leaved Bindweed
can grow in the gypsum.*

On hillsides and slopes of gypsum, life is difficult. Plants which live here can resist the hard conditions of these special soils. Also called gypsophiles, you will see a good representation of these plants further on in Castrojeriz.

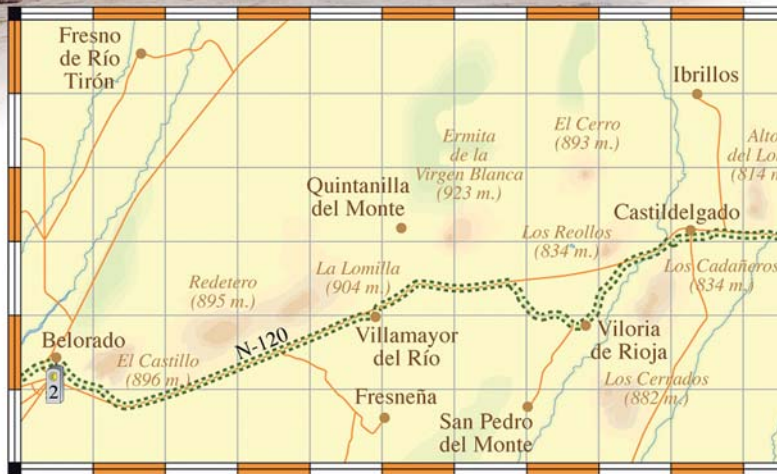


Common gypsum is calcium sulphate with some water. After heating and pulverization we obtain the plaster and cement of our homes which, on adding water, forges and hardens quickly.

Millions of years ago in Belorado and Cerezo del Río Tirón, as the salts crystalized in those hyper-saline lakes, other sulphates were formed, almost exclusive in Europe: glauberite is formed of sodium sulphate.

This mineral is formed after bicarbonates in relation to calcium and magnesium are dissolved in water. Only after the formation of the gypsum is the glauberite created.





Belorado, gypsums and glauberite

Glauberite

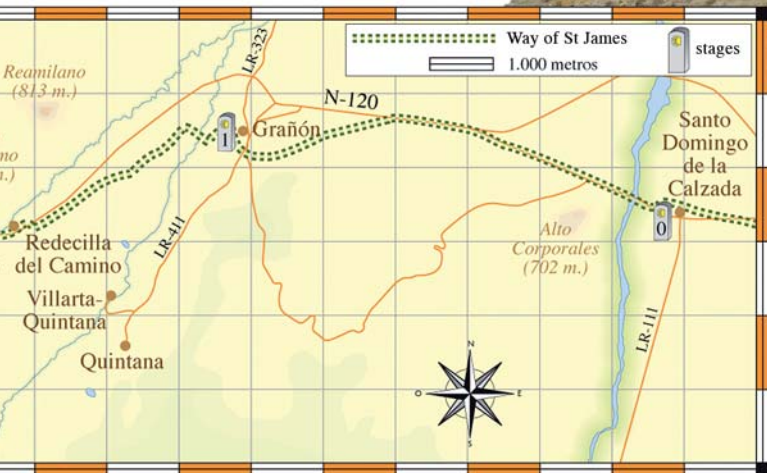
We are European leaders in the production of this mineral, and second in the world after China.

The formation of the glauberite and its preservation during millions of years, thanks to it being covered in limy silt, puts at our disposal a source of wealth unique in the world.

You should know that when you use detergent, glass or paper, as well as other products, glauberite is an essential component in their manufacture.

On your journey to Santiago you can count on the continued company of the wildlife that has evolved in the countryside as a result of the works of Nature and Man.

Good Journey!





For more information:



BURGOS - VALLADOLID - PALENCIA

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