

## MÁLAGA'S RIVER BASINS

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Most of Málaga's river basins are characterised by having their headwaters and springs in the main mountain chains, and for running a short distance before flowing into the sea, which gives you an idea of the steepness of the slopes they flow down. They all flow into the Mediterranean, except for the Arroyo de Montecorto stream which flows into the Guadalete River, belonging to the Atlantic District.

In La Axarquía, the easternmost region of the province of Málaga, two distinct environments can be discerned. The first is the wide valley of the Vélez River, the sources of which lie in the eastern sector of Málaga's Subbaetic System. It crosses an area of broad metamorphic hills covered in olive trees, almond trees and vineyards, eventually reaching the Embalse de la Viñuela reservoir shortly before ending at Torre del Mar, in an estuary fed by a coastal detrital aquifer considered a special habitat for birds. The other environment consists of the rugged mountains of the Sierras Tejeda, Almijara y Alhama Natural Park, a chain of north-south facing mountains on the border between the provinces of Málaga and Granada, and giving rise through its powerful aquifers to a good number of frenetic watercourses. From the east, the Vélez River is joined by waters from the Sierra Tejeda, including the rivers Rubite, Bermuza and Almanchares, although the Algorrobo flows into the sea. Meanwhile, further south in the Sierra Almijara, another series of distinct watercourses arise, which have given rise to interesting cahorros, the local term for karst canyons. The most important ones are those of the river Chillar River and its tributary, the Higuerón, and Barranco Moreno, in the river Torrox. Before meeting the sea, these small rivers water the terraces where new tropical crops now proliferate, although they once supplied numerous sugar and molasses mills.

The river of the city of Málaga, the Guadalmedina, like the Vélez, is joined by the waters of different springs located in the





Charco de la Barranca. Río Guadiaro.

Sierra de Camarolos (in Malaga's Subbaetic System). Some authors have nicknamed it the invisible river, since much of it runs practically hidden below the motorway from Málaga to Granada. Until recently, and after strong storms, it caused serious floods in the capital, although the situation was improved by building waterside structures, such as the Agujero and Limosnero reservoirs and, most importantly, preserving the watercourse and reforesting part of the river basin, in what is now the Montes de Málaga Natural Park.

The Guadalhorce is the most important river in Málaga, both in terms of its length and the size of its catchment area. The source of the river lies in the Puerto de los Alazores pass, in the heart of the Arco Calizo Central. After winding through mountainous terrain, it relaxes in the plains of the Intrabaetic Basin before overcoming the obstacle that the Sierra de Huma represents. From here, it flows flanked by soft hills of woody plants and irrigated farmland and meadows where citrus trees proliferate. One of its most important tributaries is the river Grande, which flows from a Vauclusian spring fed by the aquifers of the Sierra de las Nieves Natural Park. Along its upper course, the planting and irrigation methods inherited from the period of Islamic rule have been preserved. Two other important tributaries of the Guadalhorce are the rivers Guadalteba and Turón. The former is joined by incipient streams that spurt from the easternmost foothills of the Serranía de Ronda and, from this point on, it flows through another part of the Intrabaetic Basin, surrounded by small limestone mountains and non-irrigated land, representing one of the most interesting agricultural landscapes of the provincial geography. The Turón River, on the other hand, feeds on some of the waterfalls from Ronda's Spanish fir forest, in the heart of the Sierra de las Nieves Natural Park, and flows through very different environments before lending its waters to the Conde de Guadalhorce reservoir. The somewhat neighbouring mouths of the Turón and the Guadalteba on the Guadalhorce, did not go unnoticed by the engineers who during the 20th century designed one of Andalusia's most important hydroelectric complexes in these surroundings. The river



Desfiladero de los Gaitanes.  
Río Guadalhorce.

Campanillas is the only important river that appears on the other bank. It is a watercourse that acts as a ravine and finally opens out into the alluvial plains. The Casasola reservoir was built in the municipal district of Almogía to prevent or reduce flooding, although it also supplies the population with water and irrigates the valley's vegetable gardens.

The Sierra de Alpujata, on the coastal mountain belt and on the western area of the Costa del Sol, is the birthplace of the river Alaminos or de las Pasadas. Although these rock masses are of a plutonic origin, the most interesting part of the river begins in the Barranco Blanco natural reserve, a beautiful canyon carved through a marble rock intrusion, much frequented by swimmers during the summer. Before flowing into the Mediterranean, it is joined by the river Ojén, from which point it takes the name of Fuengirola.

The Serranía de Ronda has the fastest-flowing and most interesting watercourses in the province. The most significant of all is the Guadiaro River, born from the confluence of the rivers Guadalcoacán and Guadalevín. The latter is known for sculpting the natural monument of the Tajo de Ronda (Ronda's famous gorge). Both take shape in the foothills of the Sierra de las Nieves Natural Park and irrigate the best crops in the region. The Guadiaro River has a significant flow after being joined by the cold waters of the Gadaúres, a river born in the Sierra de Grazalema Natural Park, the infiltrated waters of which created the Sistema Hundidero-Gato (both caves are natural monuments of Andalusia) and gave rise to the construction of the Montejaque reservoir, which fell into disuse because of its inability to retain water. A little further south, the strong current has created one of the most attractive geomorphological features of the Iberian Peninsula: the natural monument of the Cañón de las Buitreras, about 2 km in length and with drops as high as 200 m. It was the first place equipped for canyoning in Andalusia. Various waterside structures can be found on the banks of this river, including the Buitreras hydroelectric power plant or the Guadiaro-Majaceite interbasin transfer, built to supply the countryside populations of Jerez de la Frontera and the Bay of Cádiz. The two most



La Sauceda.



Charco del Moro. Río Guadiaro.

important tributaries of the Guadiaro are the Genal and the Hozgarganta. The Genal springs from a cave in the Nacimiento de Igualeja natural reserve, declared a natural monument, and it is the backbone of the Valle del Genal sub-region, consisting of 15 white villages that date back to the period of Islamic rule in Spain, perched at medium altitude where limestone meets metamorphic terrain. The Genal Valley is the paradigm of the Mediterranean Forest and a clear example of sustainable forest grazing. These hills host a plethora of different north-facing trees, such as Portuguese oak, pine trees and chestnut trees, as well as south-facing vegetation, namely cork oaks, vineyards and olive trees. Like in the rest of Malaga's river basins, milling virtually no longer takes place. The Hozgarganta, the other great tributary of the Guadiaro, is born from the confluence of the streams of Pasadablanca and Pasadallana (within the municipal district of Cortes de la Frontera), in the heart the Los Alcornocales Natural Park. After taking its first baby steps among willows and alder trees, the river enters the province of Cádiz, like the Guadiaro itself.

The great peridotite massif of the Sierra Bermeja, in the western part of the province, is a great sanctuary for Málaga's rivers, both in terms of the number of watercourses, its virgin waters and the importance of the ecosystems it hosts. Most of the streams that flow into the Genal pour down dramatic gorges that end up at the river Almárchar. The short but intense watercourses that flow into the sea constitute a unique river network, with two distinct parts: the upper and middle courses, which flow through an unspoilt landscape, and the lower courses, which have been thoroughly distorted by human activity. All these rivers flow through igneous rock areas hosting an array of unique flowers, which is why they have been declared as SACs (Special Areas of Conservation) and why it is so important to protect them. The most outstanding rivers are the Padrón, Castor, Velerín, Guadalmanza, Guadalmina and Guadaiza. The last three transfer water to the Concepción reservoir, in Río Verde, the main supplier of this precious liquid to the western part of the Costa del Sol.



Río Genil, on its way through Cuevas de San Marcos.

To conclude this journey through Málaga's river basins, all that remains is to mention that the river Genil, the main tributary of the Guadalquivir, makes a short intrusion into the north of the province of Málaga, separating it from the province of Córdoba. The proximity of the Iznájar reservoir, which is used to irrigate agricultural land in the summer, gives rise to a strong flow that Adventure Tour Operators make the most of by offering river kayaking and rafting. Both Cuevas de San Marcos and Cuevas Bajas have their own jetty from where to practice these sports.

## FRESHWATER POOLS AS OUR NATURAL HERITAGE

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Reading this book you will notice the interchangeable use of the terms “charca” and “poza” (freshwater pool and swimming hole). In this respect, the Royal Spanish Academy defines the first as “a considerable body of standing water, either natural or artificial” and the second has the following two meanings: “a pool or body of standing water” and “a stretch of a river in which the water depth is above average”. Therefore, and in view of the similarity of the two expressions, the use of these terms in this guide is determined by the way they are referred to locally or purely for stylistic reasons in an effort to avoid repetition.

Since ancient times, rivers have been surrounded by superstition in Western cultures, especially deep freshwater pools and backwaters, which were believed to be gateways to the underworld and places where evil dwelt.

In ancient civilisations, in spite of this negative press, it was customary to go down to the river to fish or to hunt the wild animals that came to quench their thirst. The enormous resources of the riparian forest, unmercifully massacred for different mundane uses, did not go unnoticed either. The living organisms of these ecosystems: fish, amphibians, reptiles, waterfowl and other “vermin” (as referred to in the municipal ordinances), despite providing food, were persecuted and decimated because, as a result of utter ignorance, they were considered harmful to people’s health or as disease carriers.

The arrival of the 20th century brought the worst and the best to our lives. Despite world wars, all kinds of revolutions and geopolitical changes, the culture of leisure and recreation was born. I am sure you will have heard your parents and grandparents talk of how they waited for the summer festivities with great expectation, when the whole family would make a pilgrimage to the nearest river, with the happy idea of spending a pleasant day in the countryside in which

there were plenty of tortillas, breaded fillets, watermelon and the subsequent swim in the river after the two hours traditionally set aside for digestion.

In the last quarter of this intense century, with the decline of the rural environment and the migration of the population to the cities, a new type of citizen emerged: the urbanite, who, perhaps from longing, would eventually feel the need to rediscover his roots and the landscapes of his childhood. Similarly, it began to dawn on people that they had a responsibility to protect their natural environment, which gave rise to a number of wildlife protection organisations that began to instil in society a new concept of their relationship with the natural world around them. Public institutions, although lagging behind citizen demands, are gradually becoming aware of the wonderful natural heritage of our territory's rivers, and we should be grateful that part of the budget is allocated to promote environmental education campaigns and to take measures to alleviate and restore damaged ecosystems. However, more effort is required, and the European Union, which Spain has been a part of since 1st January 1986, now demands that water treatment plants be built in our villages so that wastewater no longer goes untreated. The truth is that the guidelines are not fully complied with and some of Málaga's river basins are still lacking these water treatment plants today.

In the countryside, traditional methods have been used to water crops and to provide the necessary driving force to operate waterside structures such as mills, presses, fulling mills, waterwheels, etc., which, until relatively recently, were in constant use. Currently, the proliferation of intensive crops pushes the limits of sustainability.

In conclusion, freshwater pools and other riverine environments, beyond hosting immensely biodiverse habitats, are vital spaces for human leisure. Due to the increasing popularity of hiking and other outdoor activities, some parts of our geography, such as the Cahorros del Río Chillar, the narrows of the Guadalmina or Barranco Blanco, are overrun by visitors during the summer, creating a negative impact which calls for fair regulation. While we wait for these measures to be implemented, it is up to all of us to keep our rivers and streams clean and to help to protect them to the best of our abilities. We should do everything within our power to guarantee this legacy for future generations.

## **RULES FOR USE OF BATHING**

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Andalusia does not have a specific register and ordinance that regulates inland bathing areas, although there are different guidelines on the matter and health inspections are carried out in the most frequented pools. Currently, the departments of Equality, Health and Social Policy, together with the department of the Environment and Spatial Planning, are the competent bodies concerning these matter, and it is the town councils' responsibility to inform the public of the characteristics of the pools and to keep such areas in the conditions of cleanliness and hygiene required by law. Consequently, it should be very clear that anyone using the bathing areas, freshwater pools and swimming holes referred to in this guide shall do so entirely at their own risk.

Rivers are living and changing environments; they are the main shapers of the landscape and, therefore, the morphology or depth of pools can fluctuate depending on certain variables: the rains of the season, silting, falling trees, landslides or other natural circumstances.

Please bear in mind that the information about each pool was collected during the summer months, from mid-June through to the end of August. Swimming is therefore not recommended outside these dates, as conditions may be completely different, making it extremely dangerous to swim.

The vast majority of the pools listed in this guide are not artificial and there are no lifeguards to watch over people's safety. Each person is therefore responsible for their own actions.

Whether or not a river is dangerous to swim in depends, among other reasons, on the strength of its current, the presence of rocks or branches on the bottom, the possibility of a sudden increase in the flow rate due to storms and the depth of the pool. In some pools the water is too deep to stand in, or is very cold. Others are so long that swimming the length of them could lead to overexertion. All these factors should be taken into account.

Venturing into pools that you are unfamiliar with is not advised, nor is going off the beaten track. It is also important to respect any areas fenced off or declared out of bounds by the relevant authorities.





Orilla del charco del Chalet.



Río Genal.

Any kind of jumping, whether from rocks or from a considerable height, is dangerous and represents a serious risk. The fact that no accidents have occurred in previous years does not justify such misconduct. As already mentioned, rivers are changing environments and conditions vary significantly each season.

For walking along small rivers where the water usually only reaches your knees, it is best to wear a swimsuit, sports shoes (old ones will do) or water shoes for canyoning with thin socks, a light t-shirt and a sun hat. If the plan is to walk a long distance along the riverbed itself or if you have to swim for a fair amount of time, wearing a neoprene suit such as a windsurfing wetsuit is highly recommended. For swimming across deep areas successfully, a waterproof backpack and a sealed canister for storing things that should not get wet will come in very handy. If you are of pale or delicate complexion, sun cream is a must. It is a good idea to leave a towel, a change of clothes and dry shoes in the car.

Respecting the aquatic environment is a priority and, with this in mind, please do not disturb the wildlife, break branches on the banks, leave rubbish behind or write graffiti on natural objects of the landscape. The regulations for public use of protected natural spaces and any instructions from forest and river guards should always be complied with.



Charco de la Tomilla.

## **INTERPRETING THE FACT SHEETS**

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**T**he fact sheet for each pool contains information describing different aspects of the location of the bathing area. Firstly, it states the **NAME OF THE POOL** and the **WATERSHED**, i.e., the catchment area it belongs to. We also report the **MAIN WATERCOURSE** it is on, the **MUNICIPALITY** it belongs to, together with the **UTM COORDINATES** to locate it on the topographic map. A symbol will tell you if the pool is part of a **CANYONING** descent. Since some of the pools are in the heart of a **PROTECTED AREA** of the Andalusian Network of Protected Natural Areas (RENPA), we specify the name and status. Please note that these areas are governed by specific regulations for public use that you should be familiar with.

Another important parameter is the **LOCATION** of the bathing areas, which can be: easy, convoluted or difficult. For example, the easy ones are those located next to a dirt track, a road, a recreational area or near the village. Some are considered convoluted because they involve taking a medium or long distance path, because there are several forks in the road or because marching cross-country for a long stretch is required. In extreme cases, the location is considered difficult because it requires orienteering skills or the use of a GPS.

Depending on the location of the pools, their **ACCESS** may be: convenient or complicated. The former do not require much effort to reach the pool, and the latter may require a bit of a scramble or may demand some degree of skill. The **SWIMMING POTENTIAL** is low, medium or high, depending on the level of comfort of the place: whether you can sunbathe on your towel or put chairs out, whether there is enough shade, whether there are shallow and deep areas, whether there is enough space to swim, whether it is suitable for the whole family, etc. By no means does this seek to judge the beauty of the pool and its surroundings.

A brief description of **HOW TO GET THERE** is provided, using the Spanish road numbering system as a reference as well as the nearest towns and villages. Similarly, under **INTERESTING FACTS**, the physical characteristics of the pools and their ecosystems are described. Each fact sheet concludes with the section **PLEASE NOTE**, which reflects everything that should be considered to guarantee a risk-free experience.



Río Chíllar.