

KS3 Geography: Ecosystems and biomes

Wildlife adaptations of the Mediterranean

When you think of the Mediterranean you might think of holidays involving sandy beaches, crystal clear seas and glorious sunshine. And as idyllic as this is for tourists it does make very difficult living conditions for the plants and animals here. So how do they cope with the long, hot, dry summers?

I'm here in the beautiful sunny province of Malaga in Spain. It's in a climatic region and biome called the *Mediterranean*. This biome gets its name from the nearby Mediterranean Sea, but it can also be found in other places around the world like South Africa, Western Australia and California. Other *European* Mediterranean countries include Italy, Croatia and Greece.

As you can see, the sun is quite high in the sky even though it's winter. This, coupled with the prevailing winds, means that the weather is warm but often stormy. The prevailing winds means the summer months are hot and dry, with little cloud cover.

With this climate you get very little grass growing, due to the dry, long, hot summers. Instead you get bushes and scrubland made up of lavender, thyme, juniper and rosemary. Many of these plants have waxy leaves to help retain moisture and extensive root systems to help reach underground water supplies. While other plants have a fine network of hair-like roots that grow horizontally, close to the surface, to obtain water as it falls on the ground. But these are not the only plants that have adapted to live in this region.

Olive groves, almond trees and citrus fruits are grown by farmers in the mountains and around this region - and this is an olive tree. The leaves feel waxy and this helps to retain water during periods of drought. And their stout, little trunks enable them to tolerate strong winds. The long, hot growing season is ideal for ripening fruits and olives are a very important part of industry here in Malaga and elsewhere in the Mediterranean. And olives, from farms like this one, are used to make olive oil.

The availability of natural resources - such as olives and cork oak trees - have helped to shape settlement and economic activity. The demand for these resources, coupled with the growth in the tourist industry, have created interdependence amongst the inhabitants. Tourism is needed to boost the local economy but at the same time growth of resorts and hotels have created problems for the natural environment, by reducing local water resources for crops and by deforestation.

The bark of the cork oak trees has an important commercial function: it can be stripped from the trees and used to make corks, that act as stoppers in bottles of wine. This process does not harm the tree as the bark re-grows and is harvested again after 9 to 12 years later. Cork oak trees can live from 150 and 250 years! The bark is really thick and helps to protect it from wildfires that can breakout during the hot, summer months. If a wildfire does breakout it can be very destructive to wildlife.

Speaking of animals and wildlife... This is a gecko - a small reptile with a relatively large surface area, that's well adapted to losing heat. It has light colouration, so it doesn't absorb too much sunlight and overheat. They're adapted to live in scrublands, so they're very agile and great at burrowing. They spend the hottest parts of the day underground and come out to feed at night.

Settlements in the countryside of Spain tend to be on the hillsides, as opposed to the valley floor, as this is because the hillsides tend to have more fertile soils. You often get terracing along the hillsides and this creates flat land for people to farm.

Another way that people have adapted to the hot Mediterranean climate is to avoid working during the hottest part of the day by taking a little afternoon *siesta* and then working late into the evening as it's cool. And on that note - I'm off to take a little *siesta* myself!