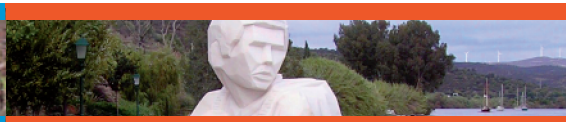
Rota
das
Árvores Monumentais

Rota
da
Geologia

Rota
da
Água

Rota
do
Contrabandista



Preface

In order to increase the attractiveness of Via Algarviana (GR13) there were created new products and infrastructures to enrich this Long Distance Path! One of those products was the creation of a set of 4 thematic Routes distributed by 3 Municipalities partners:

- Rota do Contrabandista (Alcoutim)
- Rota da Água (Loulé)
- Rota das Árvores Monumentais (Monchique)
- Rota da Geologia (Monchique)

The themes and the municipalities in question were not randomly selectect, as they are full in harmony! This is a way to increase the diversity of Via Algarviana, allowing people with very specific interests or just plain curious to move to these places and travel the routes that we propose, some on foot, others on mountain bike or even by car.
For each Route there is a Digital Guide, which can be downloaded for free, to help you and to find out more information along each Thematic Route!

Dare to discover the complementary offerings we have for you!
Enjoy all that the Inland Algarve has at your disposal!

Signalling

Colour / Symbolic element

Logo /Name of the Route

Logo of Via Algarviana

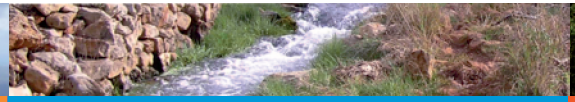
Rota das Árvores Monumentais

Rota da Geologia

Rota da Água

Rota do Contrabandista






INTRODUCTION

This itinerary visits the major trees in Monchique, it offers three alternative routes. They all start in the "São Sebastião" Square, at the tourism office, where visitors can park their car in the free underground car park. It is not far from the bus stop from Portimão, Alferce and Marmelete.

General information

- Discovery of several gold, silver and copper coins and an inscribed stone at Caldas de Monchique provide evidence of Roman occupation.
- The Pedra Branca Castle in Alferce dates back to the Arab period.
- King D. João II visited the thermal baths in Caldas around the 20th of October 1495 to treat a serious illness.
- Monchique was declared a municipality by royal decree in 1773, the same year the urban area was declared a town.

The landscape

By the late 19th century, about 80 to 90% of the hills were covered in scrubland.Slash and burn agriculture was common, and fire was used to rejuvenate pastureland for the roaming herds of goats. At the beginning of the 20th century, the mountains were still covered with abundant vegetation, and the Serra de Monchique was heavily forested. Rockrose thickets (Cistus ladanifer) were dominant across the landscape. Some of the western slopes were covered in woody scrubland, dominated by Arbutus unedo strawberry trees (a fruit bearing shrub). Cork trees and Iberian oaks were also abundant.

During the 20th century, the south-western mountain range underwent deep changes. These have been well documented in the photographs of Antonio Maria Callapez and the monograph by J. Malato Beliz.

In the first decades of the 20th century, extensive deforestation took place and becoming widespread after 1929, as a result of the government subsidies promoting the "wheat campaign". By 1949, only 10 to 30% of scrub cover remained. The few remaining wooded areas at that time covered just 10 % of the land area, on the western shale slopes of the Monchique hills.

The resulting soil depletion lead to the abandonment of cereal crops during the mid-20th century. This was followed by a widespread rural exodus. From the 1960s, large extensions of scrubland started growing back. In the Serra de Monchique/ Espinhaço de Cão ranges, the landscape suffered a new metamorphosis due to the rapid spread of eucalyptus plantations grown for the production of paper pulp. During the 1970s and 1980s, vast plantations of Eucalyptus globulus replaced cereal crops and the remaining natural vegetation. Eucalyptus forests now cover some 50% of the Serra de Monchique.

Finally, in the 1980s and 90s several other forestry programmes were initiated, which resulted in a total of 13.459 hectares of plantations of different species, especially native oak and conifers.

Eucalyptus plantation in exploration

Natural Heritage

The Serra de Monchique, which part of the Nature 2000 Network, is a Mediterranean habitat strongly influenced by the Atlantic, with heavy rainfall. Thanks to these conditions, the whole area has an immense botanical wealth. These hills are also the habitat of the most endangered cat species in Europe: the Iberian Lynx.

Orange, cherry, peach and chestnut trees grow on terraced hillsides. Rare species can be found near the hilltops, such as the Rhododendrum ponticum ssp baeticum, the Paeonia broteroi and the Neotinia maculata orchid species. The present day tree cover mainly consists of oaks, pines and large eucalyptus plantations for pulp. Strawberry trees also grow abundantly among the oaks and pines.

Snowfall in the Algarve is very rare, and when it does occur snow is most likely on Fóia. The last time it snowed on the Algarve coastline was in February 1954. In February 2006 snow fell on the Serra do Caldeirão, and in January 2009 it snowed in Monchique. On Fóia, it is said that it snows every seven years. Frost is much more common on the northern side of Fóia, and every year there are enough low temperature days to allow a good apple harvest.

Those who plant trees grow roots, so do those who cultivate friendships.

THE FLORA OF THE SERRA DE MONCHIQUE

At 902 metres above sea level, the Monchique range includes the highest peak south of the river Tagus. It is located in the northwest of the Algarve, in the south-western tip of continental Portugal. The landscape reflects the effects of the contrasting cold climate of the heights of Fóia and the drier, warmer lower surrounding hills. The Atlantic-European features of the upper slopes continue along the more humid hillsides, whereas the lower lying shale hills around the central nucleus demonstrate more typical Mediterranean conditions.

On the mountaintops, the annual rainfall is more than double the amount recorded in much of the Algarve. The altitude, cold and humidity have resulted in a flora that is quite distinct from the vegetation in the rest of the region. The Atlantic and Sub-Atlantic characteristics make the Serra de Monchique the south-west limit of many European species and specie associations.

The Atlantic character of the higher regions of Serra de Monchique can be seen in the existence of species such as the dwarf gorse (Ulex minor Roth.) and the mountain sandwort (Arenaria montana L.). The presence of Plantain-leaved Leopard's-bane (Doronicum plantagineum L.) in the understory of the few remaining chestnut groves is also noteworthy. Monchique is the southernmost point in Portugal where this flower can be found. Similarly, the flower, Senecio lopezii Boiss, endemic to the southwest of the Iberian Peninsula, can only be found in this particular area of Portugal.

Oak trees of the species Quercus canariensis Willd still survive in humid areas, but in Portugal they only grow spontaneously in these mountainous landscapes. They are commonly known as the Monchique oak. Finally, the common rhododendron [Rhododendron ponticum L. subsp. baeticum (Boiss. et Reut.) Hand.-Mazz.], is an Iberian endemic species, perhaps the most remarkable survivor of the laurissilva forest on the continent, which was almost completely destroyed by the glaciations of the Pleistocene (a period that started almost 2 million years ago and ended about 10.000 years ago). In Portugal, it is now only found in the Serra de Monchique and the northern side of the Serra do Caramulo.

In the study by Jose Malato Beliz on the flora of Monchique, dating back to the beginning of the 1980s, there are 492 different taxa, divided into the following taxonomic ranks: 310 genera and 92 families. Among these taxa, the majority are typical of Mediterranean type habitats (35% of the total). Most of these are concentrated in the mid-to-lower hillsides. Nonetheless, it is still worth noting that 8% of the taxa are typical of Atlantic or sub-Atlantic habitats.

The diversity of Monchique's flora is a result of the interactions between the different climatic conditions found in the area, as well as human impact. This has lead to a pronounced differentiation in plant groups. According to Jose Malato Beliz's study, the following groups make up the vegetation that covers Monchique:

- Cork Oak Woodlands:

The type of understory in cork oak woodlands depends on the level of humidity. Some cork oak forests in the Serra de Monchique, typically those in the highlands with sub-Atlantic characteristics, include species that are common to deciduous forests in central and northern Portugal and to woods that result from their degradation.

- Residual forests of Monchique Oak: This type of forest community is now limited to very small areas; originally they were extensive oak forests. These residual forest patches share some features with cork oak woodlands. However, there are enough differences to form a botanical community of their own. In these forests, the endemic flowering species Titímalo-de-Monchique (Euphorbia monchiquensis Franco & P. Silva) can be found.

- Strawberry Tree Woodlands: The strawberry tree (Arbutus unedo L.) woodlands are the result of the degradation of cork tree woodlands, due to fire, over grazing, or simply felling. The strawberry tree woodlands are now managed for harvesting of their fruit to produce the spirit, known as Aguardente de Medronho. Continued damage from fire, over grazing and firewood harvesting prevents the natural evolution of these habitats and makes them prone to further damage. This can result in degradation to a landscape dominated by smaller shrubs, such as gum rockrose (Cistus ladanifer L.).

- Low scrubland: As a result of the progressive degradation of cork oak forests, there are now extensive areas of low scrublands dominated by gorse bushes [Stauracanthus bovinii (Webb) Samp.]. These low-lying shrubs can be found on dry and rocky south-facing, or otherwise protected, soils.

- Artificial forests of exotic species: These forest types are dominated by eucalyptus trees (Eucalyptus sp.) and mainly occupy former cork oak forests. Tree density is high, but the same cannot be said about the diversity of the understory in mature forests. Newly planted or recently thinned eucalyptus forests have a more diverse understory, more similar to that of natural forests.

- Sweet Chestnut stands: The plant communities associated with chestnut stands (Castanea sativa Mill.) have much in common with those of deciduous oak forests. Today, stands cover a much smaller area than in the past. This is due to forest fires, eucalyptus plantations and, since the 19th century, ink disease.

- Southern Heather scrubland: Scrublands of southern heather (Erica australis L.) are found mainly on stony soils, in the transition area between the Mediterranean and the Atlantic climate zones. These scrub communities are also often fragmented due to the destructive effect of fire, overgrazing and clearance.

- Dwarf gorse thickets: Dwarf gorse (Ulex minor Roth.) thickets occupy approximately the upper one hundred metres of the highest mountains, where the Atlantic and sub-Atlantic influence is felt most strongly. Frequently, the destruction of these dwarf gorse (Ulex minor Roth.) thickets results in occupation by invasive Mediterranean type vegetation.

- Rhododendron stands:

The common rhododendron [Rhododendron ponticum L. subsp. baeticum (Boiss. Et Reut.) Hand.-Mazz.], a member of the Ericaceae group of flowering heathland plants, is a remnant of the Cenozoic Era that has survived through to the present. In Monchique, this species can be found only in humid soils with a sub-Atlantic climate. However, at lower elevations Mediterranean species have occupied degraded areas.

- Vegetation on peat soils: The vegetation found on water-logged peat soils above 700 metres altitude on the highest slopes of Fóia, are clearly representative of sub-Atlantic moor land habitats.

- Riparian vegetation: Along the river banks, the riparian vegetation has been profoundly altered by human influence and the torrential character of many of the watercourses, both factors retard establishment by typical riparian species. On the other hand, the riparian areas can be invaded by species from the surrounding areas. Such influences result in very heterogeneous communities, including examples of Mediterranean, Atlantic and sub-Atlantic habitats.

The natural heritage of Monchique, especially its flora, is of extraordinary value and wealth due to the overall diversity as well as the uniqueness of certain areas. Over the years, this national wealth has suffered much damage, in some cases irreparable, due to the growth of cereal crops on inadequate soils, urban growth, granite exploitation, and especially eucalyptus plantations, not forgetting the devastating forest fires that have resulted in the rapid, uncontrolled spread of invasive species such as acacias of Australian origin.

Adapted by Pedro Nuno Teixeira Santos from the study by Malato Beliz, J. (1982), The Serra de Monchique – Flora and Vegetation, National Service for Parks, Reserves and Countryside Heritage, Lisbon.

The principal trees of Monchique

The enormous wealth in terms of biology and landscape serves as the natural framework for the series of spectacular trees that this itinerary allows us to visit. Some of the trees are located in agricultural land or forests, whilst others are found in urban settings, bordering roads or in public and private gardens.

The specimens included in this route belong to the following species:

Norfolk Island Pine [Araucaria heterophylla (Salisb.) Franco]

This evergreen tree can grow up to 50 metres in height, occasionally even more. The upper crown is pyramidal and the tree has distinct branches set in whorls. The symmetrical branches grow from the same node, giving it a rather elegant appearance for which it is also known as the 'living Christmas tree'. (Note: the species has previously been named Araucaria excelsa).

The Araucaria heterophylla is endemic to Norfolk Island, in the Pacific Ocean, east of Australia, between New Caledonia to the north, and New Zealand to the south. The species is used as a symbol on Norfolk Island's flag. It is an autonomous territory, independent from its neighbour, Australia.

The tree is widely used as an ornamental plant, both outdoors and indoors, in colder climates. However, Araucaria heterophylla has been categorised as a vulnerable species due to its reduced habitat and the introduction of several invasive species onto the Island of Norfolk. The Araucariaceae family is relatively small and only includes three genera. The species are all native to the southern hemisphere, South America, and especially Oceania. A third of all species are concentrated on the island of New Caledonia.

Holly (*Ilex aquifolium* L.)

Holly is an evergreen species, and it is more common as a shrub than a tree. It can reach the size of a tree; occasionally exceeding 20 metres in height. Holly is easily recognised by its leathery leaves, with a light green undulating leaf rib and smooth or serrate margins. It is a dioecious species, meaning that there are male and female plants, and it is only the latter that bears the distinctively red, round, fleshy fruit.

Holly is native to Portugal, and another two species can be found on the islands: Ilex perado (in the Azores and Madeira) and Ilex canariensis (only on Madeira). Some botanists believe that holly is probably an ancient paleotropical or subtropical flower that survived the last two ice ages and then adapted to new conditions of the Atlantic and Mediterranean areas. Nowadays holly is very common in the understory of oak forests, on riverbanks, and it can also be found as a pioneer species in temperate zones.

Holly is used in folk medicine, despite the toxicity of the leaves and fruit. It is associated with Christmas, especially in Anglo-Saxon culture, and entered British tradition during the Christian era, despite its bad reputation during pagan times for being a magic plant, due to its toxicity. In Portugal, holly is protected under the law, and random felling or thinning, especially during the Christmas period is prohibited.

The Aquifoliaceae family is medium-sized, with over 400 species, all of which belong to the Ilex genus. All species are dioecious and produce bright fleshy berries (drupe). These plants are quite peculiar in as far as they possess a type of metabolism that leads to the production of caffeine.

Monchique Oak (*Quercus canariensis* Willd.)

This semi-deciduous or marcescent (dropping its leaves in the spring) tree can grow up to 30 metres in height. It has a broad ovoid shaped crown. The leaves are irregularly shaped between 5 and 20 centimetres in length, characterized by protruding secondary ribs (6 to 18), which are parallel and very straight, the underside of the leaf is sometimes hairy, especially the secondary ribs branch.

In Portugal, this oak is indigenous, although very rare and it is only found in the Serra de Monchique (hence its local name). It grows in areas covered with cork oaks, on moist and cool hillsides, often near a watercourse. This species also occurs in Spain, especially in Andalusia (in the area surrounding Gibraltar) and in the north of Africa (Algeria, Morocco and Tunisia).

The leaves can last for more than an annual cycle, and it is not uncommon, especially in warmer and more humid areas, for the leaves to survive throughout the winter. Thus, in spring, these oaks can be covered in young green leaves as well as dry leaves from the autumn and slightly yellowed leaves left over from the winter months.

The genus Quercus is part of the medium-sized Fagaceae (beech) family that comprises six genera and about 600 species. Most originate in temperate zones in the Northern Hemisphere, except for the species Nothofagus, which only grows in the Southern Hemisphere. Fagaceae are mainly trees, characterized by simple leaves, unisexual flowers, and nuts enclosed in a husk (chestnut and beech) or with a scaly cup at their base (the acorns of different species of oak).

Sweet Chestnut (*Castanea sativa* Mill.)

This deciduous tree can attain a height of up to 30 metres and is characterized by the trunk, which spits into vertical furrows, and by the production of reddish-brown nuts (chestnuts) that develop in groups of 2 to 4 encased in green husks covered with many soft spines.

It is not thought to be native to Portugal, although, according to recent studies, fossil pollen discovered in the Serra da Estrela has been identified as belonging to a chestnut of about 8000 years ago. The chestnut tree may have become extinct during the first half of the Holocene Epoch (that began about 10.000 years ago) and may have been reintroduced in later prehistory (first millennia BC). It is believed that the current chestnut tree population in Western Europe originated in the Eastern Mediterranean region.

The chestnut tree is also known as the “bread-tree”. It has historical and cultural importance in Portugal, especially in the north and centre of the country, due to the fact that the chestnut was a main sources of carbohydrates for southern European populations, at least until the potato was introduced upon the arrival of the Spanish in the Peruvian Andes. The chestnut population had a severe set back in the 19th century, due to ink disease and to a lesser extent chestnut blight. These diseases decimated many chestnut stands and killed some of the best specimens in Portugal.

The chestnut (the Castanea genus comprises 12 species, all of which can be found in the northern hemisphere), the beech (Fagus genus) and all the oaks (Quercus genus) belong to the Fagaceae family. Fagaceae are often used as decorative ornamental trees and they are a commercially important source of hardwood as well as, in the case of chestnut, for their fruit.

Eucalyptus (*Eucalyptus globulus* Labill.)

Eucalyptus is a fast growing evergreen tree and it can grow to more than 50 metres in height. The bark peels off in long longitudinal strips, which may remain hanging for a long time. On older trees the bark becomes permanent at the base of the tree. Mature leaves are sickle-shaped or spear-shaped, shiny, and have a long stem that can be up to 30 cm in length. The flowers are borne singly, and the fruit is a hard, woody globose capsule 2-2.5 cm across.

The Eucalyptus globulus species is native to Australia, more specifically to the southern state of Victoria and to the island of Tasmania, where it is considered the official symbol of the region. It produces durable timber and its aromatic oils are used for manufacturing perfumes. It is also a medicinal plant and yields honey.

It was introduced into Portugal in the 19th century, along with other species of eucalyptus. The main goal was to drain wetlands, but eucalyptus was also highly valued for its timber and other applications. During the second half of the 20th century, Portugal was a pioneering country in the manufacturing of paper pulp from this species, hence the area occupied by eucalyptus increased from approximately 150.000 hectares in the 1960s to over 600.000 hectares today, making it one of the most cultivated trees in Portugal. Almost two thirds of the area occupied by eucalyptus in the world is now found in the Iberian Peninsula.

Eucalyptus belongs to the large Myrtaceae family, with over 80 genera and five thousand species, distributed mainly in tropical and subtropical climates, especially in Australia, although some species also grow in temperate climates, such as the Myrtus communis (myrtle), which is native to Portugal. Given the diversity of species that make up this family, it includes plants with many different applications, from ornamental to medicinal, and from timber to paper pulp.

Magnolia (*Magnolia grandiflora* L.)

This evergreen tree can grow up to 30 metres or more in height. The leaves are simple and broadly ovate. They are dark green, stiff and leathery, and often scurfy underneath with yellow-brown pubescence. Another distinctive feature of this species is its large striking flowers with white petals that grow alone on the tip of the branches and can be up to 30 cm wide (the largest in this genus).

Magnolia grandiflora is native to south-east USA; it grows from Texas, in the west, to South Virginia in the east. The magnolia flower is a symbol of the states of Louisiana and Mississippi. In the latter, the magnolia has been the official tree since April 1938.

The magnolia was introduced into Europe via England and France in the 18th century. The Gardeners Dictionary (1731), written by the Scottish botanist Philip Miller, is one of the oldest works to mention this species. One of the oldest existing examples on the old continent was planted in 1807 in the Jardin des Plantes in Nantes.

The Magnoliaceae family comprises hundreds of species that are native to the American and Asian continents. The Magnoliaceae flower, according to some botanists, is a model example of the first angiosperms (plants with flowers) that emerged when dinosaurs were still roaming the planet millions of years ago.

London Plane (*Platanus orientalis L. var. acerifolia* Aiton)

This deciduous tree can grow up to 30 metres tall or more, and it is easily recognised thanks to its palmate deeply lobed leaves and its marbled trunk. The outer bark naturally peels off, revealing a camouflage pattern of browns, greys and yellows. It produces dry fruits (achenes), which are grouped in globular blossoms.

The plane is the most planted ornamental tree in Portugal and in several other countries in Europe, due to its resilience to pollution and the dense shade provided by its impressive canopy. However, its resilience to pruning makes this species a frequent victim of abusive felling. Despite the wide dissemination of this species, there is still no consensus on the place of origin, and some botanists believe that the plane is a hybrid resulting from the cross-pollinating of European and Asian planes (Platanus orientalis) and north American planes (Platanus occidentalis), which could have taken place in France or Spain, during the 17th century. There are other references on this cross-pollination being attributed to an English botanist, John Tradescant (the younger), in the 17th century. However, the discovery of populations of these trees in Turkey, with an identical morphology to those planted as ornaments, lead to its reclassification as a variety of the Platanus orientalis, native of south-east Europe and some regions of the Middle East.

The Platanaceae family is quite small (1 genus and 10 species), and is distributed across North America, southeast Europe and Asia Minor. It comprises deciduous trees, which yield quality timber. They are also much appreciated for the shade they provide.

Cork Oak (*Quercus suber* L.)

The evergreen Cork Oak has a rounded canopy and can grow up to 20 metres tall. The leaves are characterized by the contrast between the green upper side of the leaf and the whitish dense hairy side beneath. However, compared to other oaks, this species is easily recognisable thanks to the remarkably thick cork-like bark, which regenerates completely after the outer cork layer is removed.

This species is native to Portugal and happens to be the most emblematic of all tree floras on the mainland. It can be found mainly in the typical Iberian montado (mixed forest and pasture) habitats (almost 70% of the total), as well as in Mediterranean eco-zone forests, although it is much rarer on moist calcareous soils. The cork oak is confined to the western Mediterranean (Iberian Peninsula, southern France, western coast of Italy, north of Africa and the Mediterranean islands such as Corsica, Sardinia and Sicily). In Portugal it grows throughout the whole country and it is particularly abundant in the south. It flowers between April and May and acorns mature from September to January. The climate in the southwest of the peninsula is ideal for cork oaks, which explains why over 30% of this species is located in Portugal. That is why Portugal is the leading country in cork production, with an annual production of 200.000 tonnes per year; that is over 50% of the overall production.

Given the importance of these trees, in Portugal cork oaks are protected by law. In 2001, following a civil society initiative, the Portuguese parliament decreed the cork oak as the *National Tree of Portugal*.

Like all other oaks (*Quercus genus*), the cork oak also belongs to the *Fagaceae* family. Trees belonging to this family are particularly dominant in forests across temperate zones in Europe and North America. Quercus trees dominated the primitive plant landscape on the mainland until at least the Iron Age.

See you not how Allah sets forth a parable? - A goodly word as a goodly tree, whose root is firmly fixed, and its branches (reach) to the sky.
14 SURAH. IBRAHIM 24

THE TOWN CIRCUIT

The Town Circuit allows you to visit the five trees that have been classified or are in the process of being classified as protected trees, as well as other examples of the typical Serra de Monchique forest landscape. The circuit follows two separate routes. The first route is 4 km long, and the second route is 2 km long. This circuit is the most family-friendly, as it follows a path close to the town, allowing for detours and stops according to everyone's wishes. The route takes you through gardens and forests and it is an opportunity for appreciating the town's architecture and traditions.

Total Distance: 6,3 km

Altitude: 145 m

Difficulty: Easy

Time: 3 hours

Type: Walking route

Circuit Map

Height Graphic

URBAN TREES - NORTH AND SOUTH

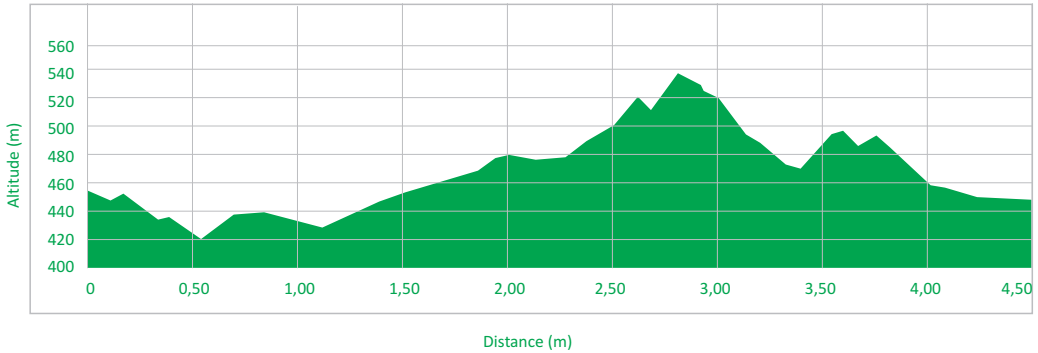
Key:

- Arvores da Vila - North
- Arvores da Vila - South

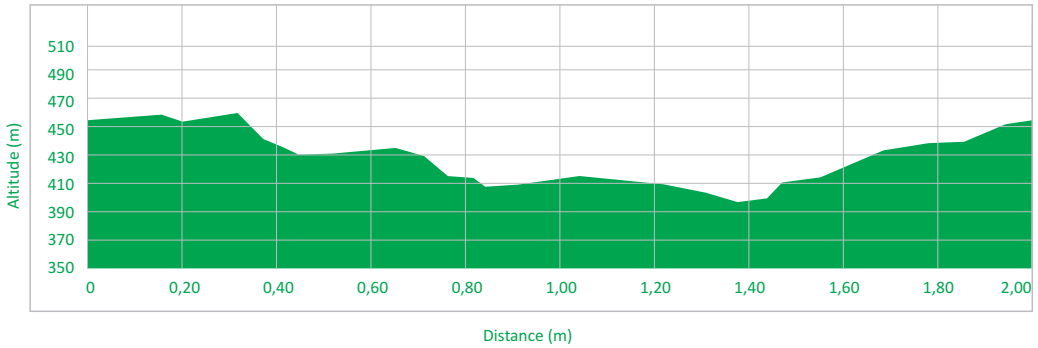
1. Araucaria Quinta da Vila
2. Eucaliptos - Centro de Saúde
3. Araucaria - Quinta do Viador
4. Sobreiral do Convento
5. Magnólia do Colégio Santa Catarina
6. Magnólia do Convento
7. Carvalho de Monchique - Pomar Velho
8. Alameda dos Plátanos - Pé de Cruz

1. Posto de Turismo
2. Quinta da Vila e Piscinas
3. Bombeiros
4. Centro de Saúde
5. Segurança social
6. Convento
7. Igreja de S. Sebastião
8. Pé da Cruz
9. GNR

Topographic profile VILA NORTE



Topographic profile VILA SUL



1 -Araucária Quinta da Vila

Age: 150 years
Last measurement: 2006

Process Nº: KNJ1/235
Classification: D.R. nº 190 II Series 14/08/1993
Scientific Name: *Araucaria heterophylla* (Salisbury) Franco
Vernacular Name: Norfolk Island Pine
Family: Araucariaceae
Circumference at the base: 10,2 m
Circumference at 1,30 m: 4,1 m
Crown width North/South: 19,0 m
Crown width East/West: 20,0 m
Height: 36,5 m

Heritage Interest: The tree trunk is broad and cylindrical, the tree is large and tall, and can be seen from throughout the town of Monchique. It is a landmark in the landscape and in local memory. It is extremely beautiful and of high heritage value. It is located on a small terrace in the Municipal Park.

Facts and Curiosities: There is a long tradition of planting a tree to celebrate social events in the Mediterranean region. The Jewish community planted a tree to celebrate the birth of a son (a cedar) or a daughter (pine or fir). The wood from both trees was then used to build the wedding ceremony pavilion. In this case, it is said that the Norfolk Araucaria in the Quinta da Vila was planted to celebrate a wedding.

In the mid-20th century, a young boy wanted to prove his courage and skill to the local girls and so climbed up the tree, cut off the growing tip, and returned safe and sound. The tree survived the damage and the two tips that subsequently grew, can now be see from the viewpoint at the Miradouro in the Largo de São Sebastião.

Once a private property, the "Quinta da Vila" was bought by the City Council. This Araucaria was turned into the main piece of Christmas decoration in the town – a real living Christmas tree.

On a walk through the gardens of the "Quinta da Vila", you can see a wide variety of trees that are important to the economy of the region: the strawberry tree, morello cherry, lemon and orange trees, as well as other trees typical of the river banks, including weeping willows.

The authorities of the First Republic changed the names of seven streets in the village. The *"Largo dos Chorões"* (Weeping Willow Square) became *"Largo 5 de Outubro"* (5th of October Square). It is rumoured that every time a plaque with this name was put up, it quickly disappeared. The weeping willows can now only be found in the gardens of the "Quinta da Vila". The square is now becoming known as the *"Largo da Nora"* after the traditional water wheel installed in the fountain, in English a "noria".

2 - Eucalyptus Trees by the Health Centre

Classification: Underway
Scientific Name: *Eucalyptus globulus* Labill
Vernacular Name: Eucalyptus
Family: *Myrtaceae*
Circumference at the base: 5,8 and 5,5 m
Circumference at 1,30 m: 4,9 and 6,1 m
Height: 37,6; 38,0 and 40,0 m
Crown width North/South: 23,5 and 27,5 m
Crown width East/West: 24,1
Last measurement: 2010

Heritage Interest: pair ofsin the of heritage

Notes: These were, until recently, a group of three large eucalyptuses. On 26 January 2013, a week after a series of strong storms felt throughout the country, the central tree fell. The two largest survived, and await classification as Trees of Public Interest.

Just across the road, in the Health Centre's garden, you can find a fine collection of camellias and hydrangeas. Local residents often use these shrubs and flowers for decorative purposes in their homes.

Facts and Curiosities: In the Municipality of Monchique, 68% of the land is covered in forests and 80% of these forests are planted with eucalyptus. At the end of the 20th century, forestry dedicated to paper pulp production was one of the municipality's main economic activities.The transformation of woodlands into forests of intensive production has had a negative impact on the serra's ecology. During this period, the golden eagle, Iberian Imperial Eagle and the Iberian lynx disappeared. Studies have shown that biodiversity is lower among eucalyptus plantations than among *"montados"* (mixed forest and pasture) and chestnut stands. There are 40 % fewer species of springtails (small animals, between 0,25 mm and 8 mm in size, that have an important function in soil ecology) and half the amount of butterfly species. Only 13 species of bird nest in eucalyptus plantations; compared to 30 to 35 species that nest in *"montados"*.

At the same time, the introduction of the eucalyptus has had a positive impact on the Bonelli Eagle. The Bonelli Eagle normally nests in rocky areas, but there is now a population nesting in tall trees in southwest Portugal. Most nests are found in common eucalyptus *(Eucalyptus globulus)*, but also in maritime pines *(Pinus pinaster)*, monterey pine *(Pinus radiata)*, cork oak *(Quercus suber)* and river red gum *(Eucalyptus camaldulensis)*. Only one nest has been found among production eucalyptus plantations in this region.

Under certain environmental conditions, fires in eucalyptus plantations may be more difficult to control as eucalyptus produce and store inflammable oils and resins. In the forest fires of 2003, 40.000 hectares, i.e. the equivalent of 70%, of the forest, burnt in the Serra de Monchique. The impact of these fires can still be seen in the forests. Strawberry trees and cork oaks have adapted to fires and are able to recover within weeks, but the introduced species, eucalyptus and acacia, are even more resistant and start showing signs of recovery just a few days after a fire.

3 - Araucaria in the Quinta do Viador

Process Nº: KNJ1/234
Classification: D.R. nº 190 II Series 14/08/1993
Scientific Name: Araucaria heterophylla *(Salisbury)* Franco
Vernacular Name: Norfolk Island Pine
Family: Araucariaceae
Circumference at the base: 6,3 m
Circumference at 1,30 m: 4,8 m
Crown width North/South: 18,0 m
Crown width East/West: 17,0 m
Height: 44,0 m
Age: 150 years
Last measurement: 2006

Heritage: impressive wide, Monchique's history.

Notes: At the entrance of Quinta do Viador, there is a public washhouse that is fed with spring water and is still in use. A little further upstream, on the cooler hillsides, we find chestnut groves *(Castanea sativa Mill.)*. Chestnut trees are of great importance for the production of edible chestnuts (at harvest time, popular local chestnut roasting festivities are organised in all the parishes of Monchique).

The araucaria at Quinta do Viador is the largest in Monchique. In the Mediterranean regions, there is a long tradition of planting trees to celebrate a special social event. In this case, the family Pacheco planted this tree to celebrate their son's birth.

The Mata Porcos valley, where this araucaria is located, has a specific microclimate, as it is protected from cold northerly winds and bathed in morning sun that melts away the winter frost. In this protective microclimate, both a Canary Island date palm *(Phoenix canariensis Hort. ex Chabaud)*, native to the Canary Islands, and a Washingtonia palm, native to the Americas grow nearby.

4 - Cork Oak Forest by the Convent

Scientific Name: *Quercus suber L*
Vernacular Name: Cork Oak
Family: *Fagaceae*
Cork Oak 1 (First on the left as you walk down from the convent)
Circumference at 1,30 m: 3,55 m
Height: 24 m
Cork Oak 2 (Second on the left as you walk down from the convent)
Circumference at 1,30 m: 3,20 m
Height: 17 m
Cork Oak 3 (next to the magnolia)
Circumference at 1,30 m: 4,81 m
Last measurement: 2006

Notes: In the woods surrounding the convent it is quite common to come across a Butcher's Broom *(Ruscus aculeatus)*. This small evergreen shrub can grow up to one metre tall. It occurs virtually in all types of terrain but it prefers cool and dark places, yet it cannot survive the cold and frost at higher altitudes. It is quite frequent in cork oak, holm oak and English oak forests and it is reasonably drought-tolerant.

Facts and Curiosities: The circuit joins up with the Via Algarviana inside the cork oak forest nearby the convent "Nossa Sr.ª do Desterro" (Our Lady of the Exile). This convent was founded in 1631 by Pêro da Silva, and legend has it that it was the result of a vow taken by two sailors, who were in distress out at sea. The Franciscan convent was destroyed by the 1775 earthquake and is now partly in ruins. Following the dissolution of religious orders in 1834, the altarpieces and figures were distributed among other churches in the vicinity. The tenant's family still live in the convent and their privacy must be respected, but they sometimes offer visits around the house. In 2011, the theatre group Karnart performed a play inspired by this convent at the municipal Theatre Maria Matos in Lisbon.

5/6 - Magnolia at Santa Catarina by the Convent

Process Nº: KNJ1/077
Classification: DG nº 105 II Série de 08/05/1947
Scientific Name: Magnolia grandiflora L.
Vernacular Name: Southern magnolia
Family: Magnoliaceae
Circumference at the base: 6,7 m
Circumference at 1,30m: 5,54 m
Crown width North/South: 24,0 m
Crown width East/West: 30,0 m
Height: 27,0 m
Age: 200 years
Last measurement: 2006

Heritage Interest: Unfortunately, it is a poor state and is suffering severe decline.

Notes: The small palace belonging to the Mascarenhas family, on Rua do Castelo, was built upon the request of the military and political figure José Gregório de

Figueiredo Mascarenhas (Silves, 1843 - Monchique, 1904). It dates back to 1895. The late 19th century revivalist architecture is inspired by Baroque and Neoclassicism. There was supposedly an old castle on this site, which makes much sense considering this was an ideal spot for controlling the mountain pass from the Algarve to the Alentejo.

Facts and Curiosities: This magnolia *(Magnolia grandiflora L.)* is thought to be the tallest tree of its species in Portugal and can be found close to the ruins of the convent "N. Sra. do Desterro", which was founded in 1631. However, this tree is no longer accessible to the public. In 2011 the tree lost all its leaves and it is now being monitored whilst it receives the necessary treatment for its recovery. In the school gardens of the now demolished "Colégio da Santa Catarina", there is supposedly a descendant of this tree. There are others to be found at the entrance of the Lar da Misericórdia on Rua de Calouste Gulbenkian and in the Quinta Grande in Cruz de Madeiros.

7 - Monchique Oak (Pomar Velho)

Process Nº: KNJ1/320
Classification: D.R. nº 81 de 07/04/1997 com post. rect. no D.R. nº 129 de 05/06/1997
Scientific Name: *Quercus canariensis* Willdenow
Vernacular Name: Monchique Oak
Family: *Fagaceae*
Location: Pomar Velho
Circumference at the base: 7,0 m
Circumference at 1,30 m: 3,78 m
Crown width North/South: 23,0 m
Crown width East/West: 21,0 m
Height: 28,0 m
Age: 200 years
Last measurement: 2006

Heritage: both

Facts and Curiosities: Saint Sebastian Chapel and the cypresses – King Sebastian issued an edict that chapels be built at the entrance of all towns in Portugal to show gratitude for the end of the Great Plague. On the stone above the front door of the chapel there is the symbol of Saint Sebastian, a heart pierced by arrows. Inside, the decoration is very simple. The elaborate columns that make up the altarpiece and the 17th century image of Our Lady of the Exile (transferred from the convent) are worth viewing.

The cypress tree is native of southern Europe and the Mediterranean. It can grow up to 45 metres tall. The crown is narrow and slender, the horizontal branches have foliage growing in dense sprays, dark green in colour. The leaves are scale-like, 2–5 mm long, and produced on rounded shoots. . This evergreen species can grow to be very old. In fact, some live for up to a millennium.

Cypresses have been used as a recurrent symbol of sadness, melancholy, death or eternal life. Nonetheless, this tree is especially appreciated for its decorative purposes. The Egyptians already used its aromatic wood for building sarcophagi, and the Greeks highly valued its homogeneity for furniture. The Romans used the wood during funeral rites, and it is also the most common tree to be found in both Christian and Muslim cemeteries.

8 - Avenue of Plane Trees *("Alameda de Plátanos")*

Process Nº: KNJ3/021
Classification: D.R. nº 190 de 14/08/1993 com post. rect. no D.R. nº 1 de 03/01/0/1994
Scientific Name: *Platanus x acerifolia* (Aiton) Willd.
Vernacular Name: Hybrid Plane (17 specimens)
Family: *Platanaceae*
Circumference at the base: 4,5 m
Circumference at 1,30 m: 3,75 m
Crown width North/South: 24,0 m
Crown width East/West: 21,0 m
Height: 30,0 m
Age: 100 years
Last measurement: 2006
Description: Avenue

Heritage: This mof treeshasat é,to trees

Observation: The measurements refer to the most northern tree on the western side of the avenue.

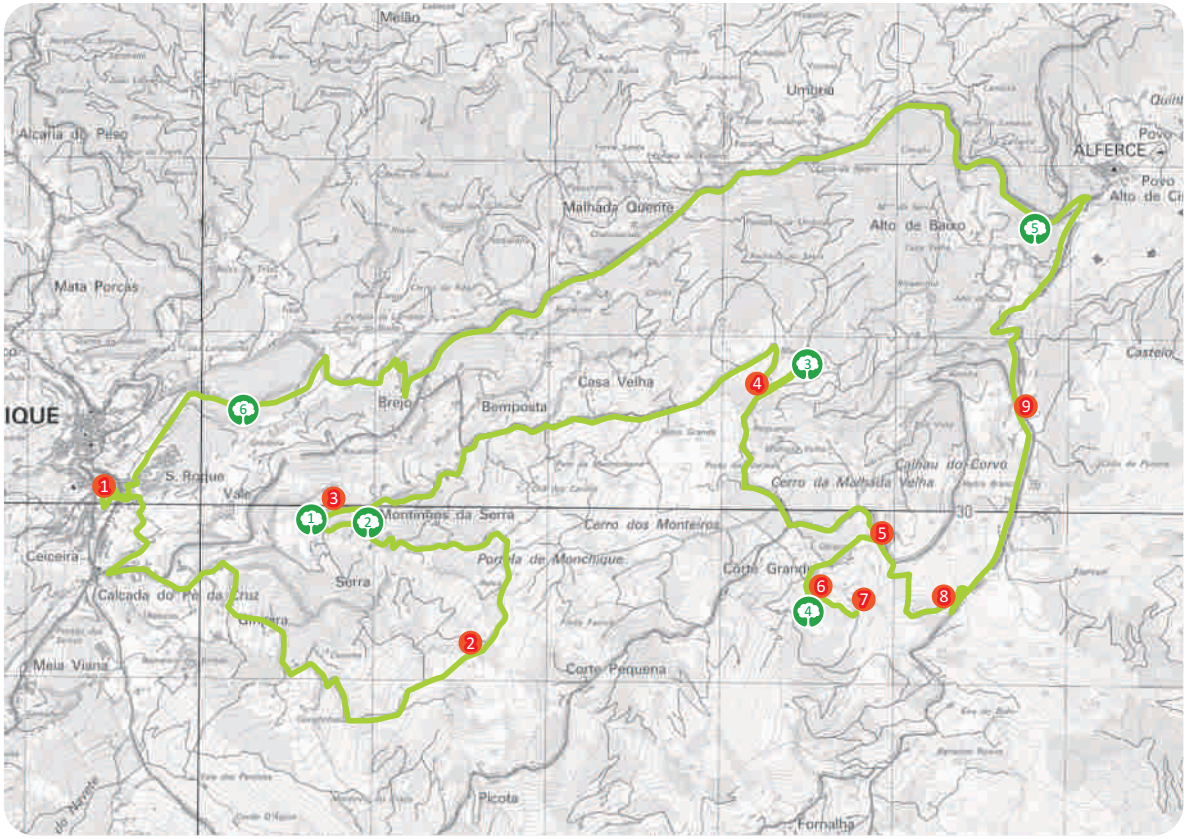
Legend: The heart of the Plane Tree in Caldas de Monchique. Legend has it that there were so many hearts drawn on the old plane tree, that the tree eventually developed its own soul and fell in love with a bee-eater. One day, the bird took flight and never came back. The plane broke into tears and found refuge in the ground. But time heals everything, even the wounds of love, and the tree turned into a fountain. Locals say that the water from that fountain saves lives and mends broken hearts.

Facts and Curiosities: With the arrival of autumn, during the months of November and December, the Monchique hills acquire a brownish tone as the deciduous trees change colour. It is an ideal time for a visit or walk. When it was planted, the avenue consisted of two rows of 14 trees each. The number of trees may well be related to the 14 Stations of the Cross of the Via Crucis. At the time of the planting, there were no other buildings around the avenue, which perfectly framed the chapel of Pé da Cruz (the Foot of the Cross). According to the lintel over the front entrance, the chapel dates back to 1680. It is an example of the town's architectural heritage. The Via Crucis (Way of the Cross) was the path followed by Jesus when he carried the cross from the judgement hall to Calvary. Only 17 trees have survived the last 100 years. In 2010, three trees were felled due to risk of falling branches and replaced by new ones. There is no longer enough room to replace the other eleven missing trees, due to the construction of buildings close by.

THE PICOTA CIRCUIT

The Picota Circuit is the longest, and it is most appropriate for experienced hikers or mountain bikers. The circuit can also be done by car. Part of the route follows the Via Algarviana, going up towards Picota from Monchique. Hikers can shorten the distance by taking the bus from Alferce to Monchique. There is the chance to view beautiful cork oak forests and some of the largest cork oaks in the Algarve. On this route, you can also see gall-oaks (*Quercus lusitanica Lam.*), a native species to Portugal and a good example of a Monchique Oak (*Quercus canariensis Willd.*), which, in Portugal, can only be found in the Serra de Monchique.

Total Distance: 27 km
Altitude: 460 m
Difficulty: Medium
Time: 8 hours
Type: Walking and Mountain Bike

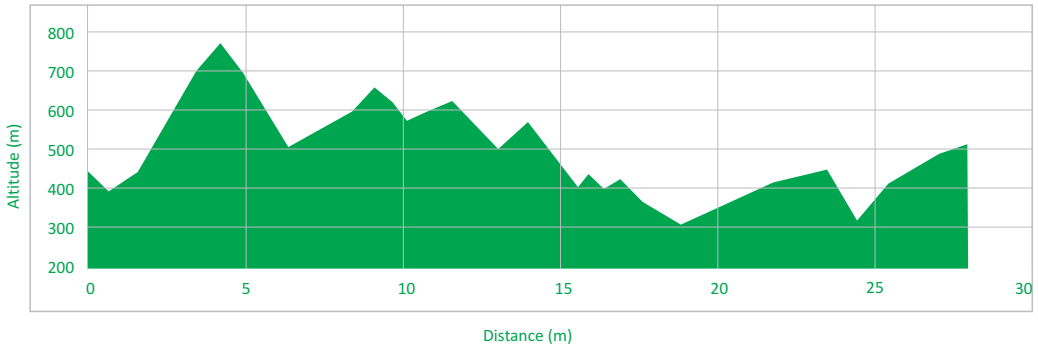


Key

- 1 Sobreiral
- 2 Sobreiral
- 3 Sobreiro de Maia
- 4 Sobreiro de Corte Grande
- 5 Parque merendas
- 6 Magnólia

- 1 Posto de Turismo
- 2 Picota estacionamento
- 3 Sinalética Picota
- 4 Desvio para o Sobreiro de Maia
- 5 Desvio para Sobreiro
- 6 Ponto de observação
- 7 Vista panoramica
- 8 Parque de Merendas
- 9 Castelo de Alferce

Topographic profile PICOTA



1 - Cork Oak - Montinhos da Serra 1

Scientific Name: *Quercus suber L.*
Vernacular Name: Cork Oak
Family: *Fagaceae*
Circumference at 1,30 m: 3,32 m
Height: 19,5 m
Mean Crown diameter: 20 m
Last measurement: 2007

Opposite this tree, on the other side of the road, is another impressive 20m high cork oak.

2 - Cork Oak -Montinhos da Serra 2

Scientific Name: *Quercus suber L.*
Vernacular Name: Cork Oak
Family: *Fagaceae*
Circumference at 1,30 m: 3,10 m
Height: 18 m
Mean Crown Diameter: 25 m
Largest Branch: 17,5 m
Last measurement: 2007

3 - Cork Oak, Maia

Scientific Name: *Quercus suber L.*
Vernacular Name: Cork Oak
Family: *Fagaceae*

Although this tree suffered in the forest fires of 21005, it did not die and now appears to be recovering. Despite the poor nature of its crown, it has been included due to its size, especially of its trunk that has a circumference of 4,80m, when measured in 2009.

4 - Cork Oak - Corte Grande

Scientific Name: *Quercus suber*
Vernacular Name: Cork Oak
Family: *Fagaceae*
Circumference at the base: 8,1 m
Circumference at 1,30 m: 5,9 m
Height: 17,5 m
Height of trunk: 1,35 m
Crown width (N – S): 33 m
Crown width (E – W): 30,6 m
Inspection: 2010

This cork oak is part of a group with three other large oaks, which have trunk circumferences of 3,45; 3,4; e 2,8 m.

Facts and Curiosities: The “Corte Grande” oak is, at the moment, considered to be the largest in the Algarve and one of the largest in the country. The tree is located on the southern slopes of Picota, at Corte Grande. It can be seen from the road, but is on private property. It is currently being classified as a tree of public interest.

Walking a further 300 metres south, beyond the end of the tarred road, you will find a spot with a spectacular view of the Odelouca Dam.

5 - Monchique Oak (Alferce road)

Process Nº: KNJ1/236
Classification: D.R. nº 190 II Series of 14/08/1993
Scientific Name: Quercus canariensis Willdenow
Vernacular Name: Monchique Oak
Family: Fagaceae
Location: EN 267, km 32, Alferce - Monchique
Circumference at the base: 9,0 m
Circumference at 1,30 m: 3,1 m
Crown width North/South: 23,0 m
Crown width East/West: 24,5 m
Height: 25,0 m
Age: 150 years
Inspection: 2006

Heritage Interestis a of Monchique Oak

Facts and Curiosities: The specific name "canariensis" for the Monchique Oak could lead to error, since this tree does not grow naturally in the Canary Islands. This name was due to an error in labelling during the expedition undertaken by the 18th century French botanist Pierre Broussonet to the Canaries and North Africa. Although it is now rare in Portugal and unknown by the majority of Portuguese residents, the Monchique Oak is used as an ornamental species in places as far away as Australia.

Uses and customs: Despite its rarity in Portugal, it plays a crucial role in protecting the soil. These oaks provide favourable conditions for the occurrence of other species, resulting in a high level of biodiversity. There are reports that its wood has been used for staves, charcoal and firewood.

6 - Magnólia - Quinta Grande

Classification: Underway
Scientific Name: *Magnolia grandiflora L.*
Vernacular Name: Southern Magnolia
Regional Name: Magnolia
Circumference at 1,30 m: 4,1 m
Height: 18,9 m
Height of Trunk: 6,4 m
Crown width (N - S): 18,4 m
Approximate Age: 100-200 years
Last Measurement: 2010

Facts and Curiosities: Just a few metres after the Monchique Oak, continuing in direction of Monchique, you reach a clearing where you can see the other side of the river. This is the best spot to appreciate the size of the magnolia next to the "Quinta Grande" house, near the ruins of the "Santa Brigida" chapel. This is the second largest magnolia in the municipality, and it is probably a descendant of the magnolia that can be found near the convent.

No one cuts down a tree planted with love, nor a true friendship.

Notes: On the way to Alferce, on the right side of the road, you come across the Castelo de Alferce. This castle was built strategically on the hilltop with views to the castle in Silves, and has a typical Islamic military architecture. Studies indicate its geostrategic importance for monitoring and safeguarding, providing warning signals in case of invasion. Locals say that the castle in Alferce is linked to the castle in Silves through extensive underground passages and tunnels.

The name "Alferce" possibly derives from the Arabic word "alfaraç" (knight) and may well be related to the Muslim presence in the castle at Pedra Branca, which may have been an outpost of the capital at Silves.

In Alferce, be sure to walk up to the viewpoint at *"Barranco do Demo"*. The streams flowing into this canyon eventually discharge into the Monchique River. Bonelli eagles fly here; one of the few rare breeds that is on the increase in this area. Fable says that a huge treasure is hidden in the "Barranco do Demo", but it is guarded by "o Maligno", the Evil One, who transforms into a goat to protect it.

The parish church, dedicated to Saint Romanus, was built at the end of the XV century and was refurbished in 1578. The date is engraved in the triumphal arc. The ogival door is also noteworthy, as is the primitive image of the patron saint in stone, the chancel ceiling and the carved altarpiece. There is a small museum of sacred art annexed to the church. Alferce was probably founded in the 16th century, during a liberation movement that led to the emergence of new parishes. Every year, Saint Romanus is celebrated in a local festivity.

A stroll through the centre of Alferce will take you on an architectural journey of over 500 years. In the main square, at the foot of the parish offices, you will find a tiled panel that represents all the economic activities practised in the parish.

Other species of interest

On this route, as well as the principal trees mentioned above, there are other botanical associations that are worth mention.

Strawberry Tree

The strawberry tree (*Arbutus unedo L.)* can be found throughout mainland Portugal, except at very high elevations of the mountain systems in the North and Centre and in some of the drier inland areas.

The strawberry tree is evergreen, can reach heights of up to 10 m, but in Monchique is normally no higher than about 5 m. The species flowers from October to February

and the globular, reddish fruits, generally 2 to 3 cm in diameter, ripen duringIt prefers full light, and prospers in association with holm oak and cork oak and in mixed woodlands, on cliffs and in fluvial gorges. As mentioned previously, in the Monchique hills degradation of cork oak woodlands results in strawberry tree stands.

The leaves and bark contain tannins that are useful for tanning hides. In folk medicine, it is used as an astringent, a diuretic and also as an antiseptic for the urinary tract. The fruit is fermented to produce the spirit "aguardente de medronho". This has become an important economical activity in Monchique. As a result, the strawberry tree stands are managed by their owners, preventing the recovery of the cork woodlands.

Lusitanian Oak scrublands

The Lusitanian or Gall Oak *(Quercus lusitanica Lam.)* along the western coast from the Ria de Aveiro of the country to the western Algarve Along the Tejo valley its range extends further inland.

The Lusitanian Oak is an evergreen shrub that forms dense carpets and rarely grows over 50 cm in height. It is thus one of the smallest of the oaks. The species flowers from April - May, and like the other oaks the fruit is an acorn that ripens in the autumn. It prefers dsThe Lusitanian Oak scrublands can occupy the degraded soils previously dominated by other oaks, such as the Monchique Oak (*Quercus canariensis Willd.)* or the Portuguese Oak (*Quercus faginea Lam.).*

As a result, it is easy to confuse Lusitanian Oak scrubland with regeneration of Portuguese Oak, even though they are distinct species. It was once used as bedding for livestock.

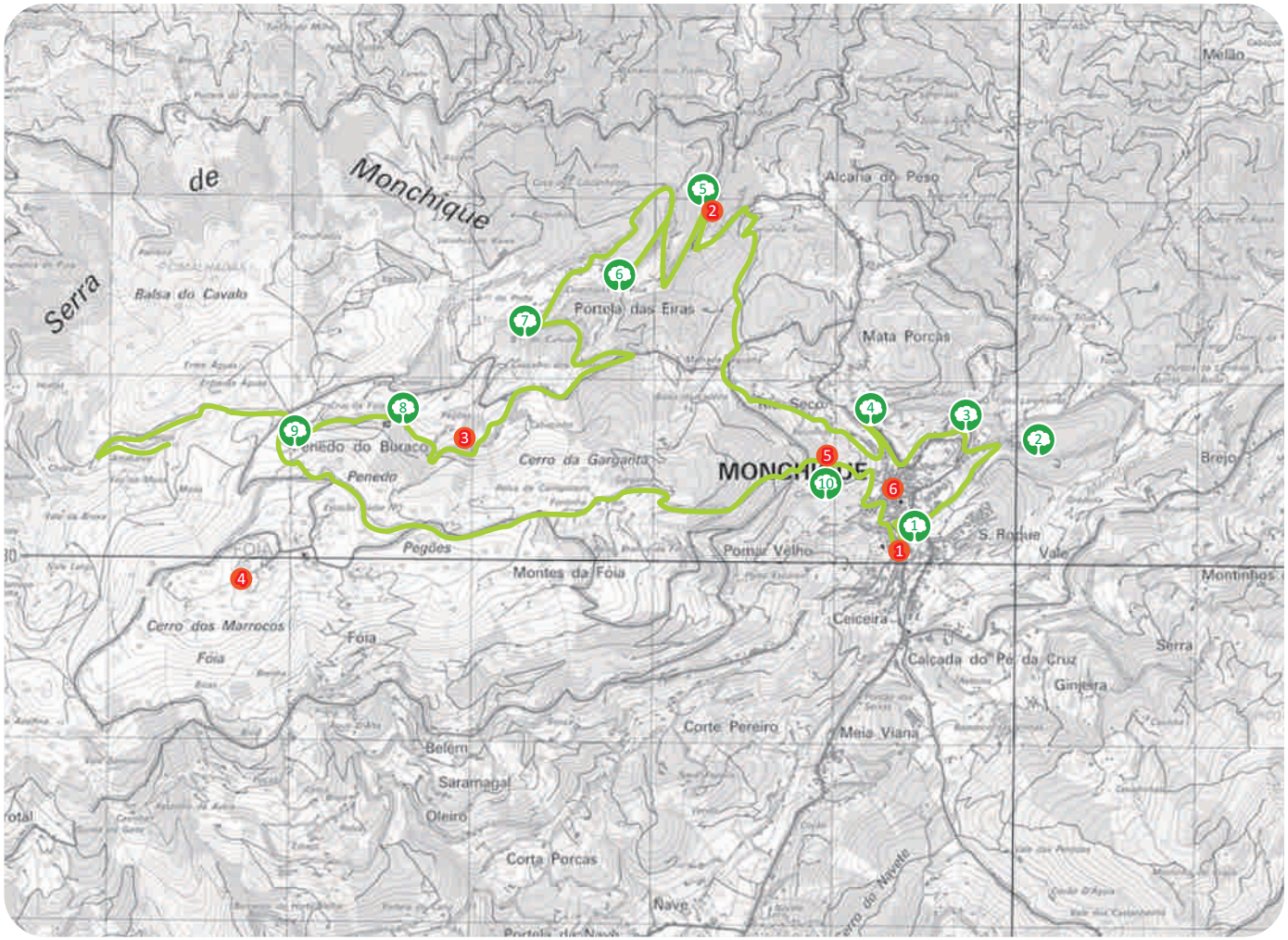
The Serra de Monchique is home to almost all the Quercus species natural to Portugal. As well as Lusitanian Oak *(Quercus lusitanica Lam.)*, there is Holm Oak *(Quercus rotundifolia Lam.)*; Kermes Oak *(Quercus coccifera L.)*; Monchique Oak *(Quercus canariensis Willd.)*; Portuguese Oak *(Quercus faginea Lam.)* and Cork Oak *(Quercus suber L.)*. In addition, some botanists (1) have located relic stands of the English Oak *(Quercus robur L.).*

(1) Jorge Capelo e Filipe Catry in Sande Silva, Joaquim (Coord.) (2007), Os Carvalhais, um Património a Conservar, Público, Lisboa.

FOIA CIRCUIT

The Fóia Circuit is 17 km long and it is suitable for more experienced hikers or mountain bikers. It is highly recommended to take a picnic and a lot of water for this route. The route passes some of the town's classified trees, and then continues along unpaved or rarely frequented country roads, visiting other classified trees on the route that gradually climbs to the peak of Fóia. There you can enjoy spectacular views, and in the months of June and July the unique flowering rhododendrons. The return to the town follows the Via Algarviana, taking a descending forest track that eventually crosses a well-preserved cork oak forest next to the ruins of the Convent of a *Senhora do Desterro.*

Total Distance: 17 km
Altitude: 840 m
Difficulty: Medium
Time: 5 hours
Type: Walking and Mountain Bike

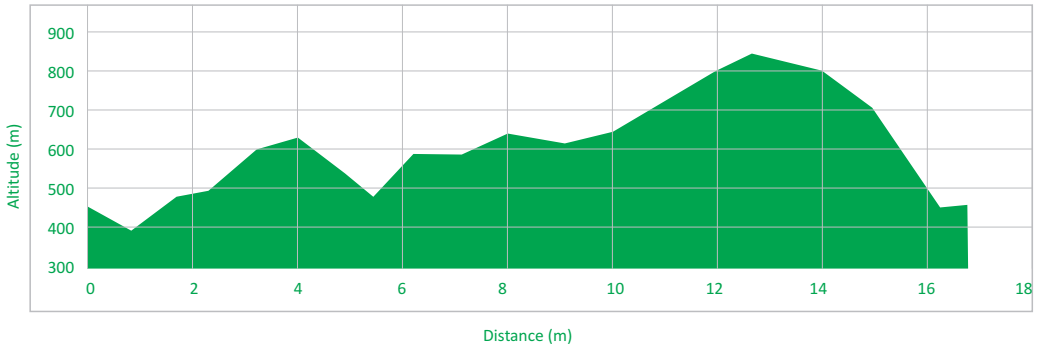


Key:

1. Auracária Quinta da Vila
2. Magnólia da Quinta Grande
3. Eucaliptos Centro de Saúde
4. Araucária Quinta do Viador
5. Plátano Pisões
6. Sobreiro Barranco dos Pisões
7. Azevinho
8. Castanheiro Penedo do Buraco
9. Adelfeiras da Fóia
10. Magnólia Convento

1. Posto de Turismo
2. Moinho do Poucochinho
3. Estação de tratamento de água
4. Fóia
5. Convento N.Sr.ª do Desterro
6. Povoação de Monchique

Topographic profile FÓIA



London Plane - Barranco dos Pisões

Process Nº: KNJ1/078
Classification: DG. nº 105 II Series 08/05/1947
Scientific Name: *Platanus x acerifolia* (Aiton) Willd.
Vernacular Name: London Plane
Circumference at the base: 7,0 m
Circumference at 1,30 m: 5,1 m
Crown width North/South: 26,0 m
Crown width East/West: 30,0 m
Height: 41,0 m
Age: 150 years
Last measurement: 2006

Heritage Interest: great

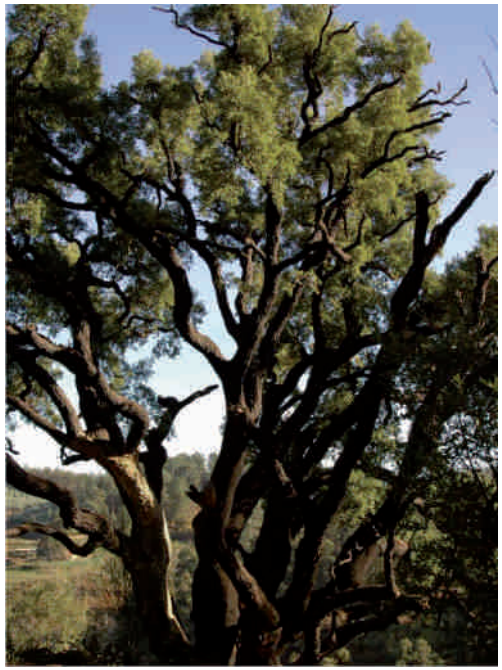
Other Notes: The valley of "Barranco dos Pisões" is of one of the principal tributaries of the river Seixe. The lower reaches of the river mark the border between the Algarve and the Alentejo. Itflows into the Atlantic near Odeceixe. There is a series of large water mills along the Barranco de Pisões for grinding wheat and corn, several have been converted into homes, and one of them, "o Poucochinho", was rehabilitated by the Monchique Parish Council and now functions as a museum.

The name "Barranco dos Pisões" comes from the time when Monchique was very active in the wool production industry, linked to spinning and weaving. Wool was prepared at the fulleries (primitives mills with a huge wooden hammer, raised by the water and dropped onto the cloth) and the river would become murky, hence the alternative name of "Ribeira da Tinta Negra" (Black Ink River). Some mills may have used the same water wheel to power the millstone and the fullery. The name could have arisen even earlier. Monchique also produced a lot of flax, which was used for sacks and for manufacturing rope. The flax was left to steep in the streams, beaten with rocks and left to dry. This activity became so widespread in Portugal, that the monarchs found themselves forced to ban the practice of steeping in the streams, as it sullied the water, which could then no longer be used for any other purposes.

Let a little water, I pray you, be fetched, and wash your feet, and rest yourselves under the tree; Genesis 18:4

2- Cork Oak - Barranco dos Pisões

Process Nº: KNJ1/414
Classification: D.R. nº 115 II Série de 18/05/2002
Scientific Name: *Quercus suber L.*
Family: *Fagaceae*
Vernacular Name: Cork Oak
Circumference at the base: 4,65 m
Circumference at 1,30 m: 4,65 m
Height: 15,0 m
Age: 200 years
Last measurement: 2004



Facts and Curiosities: London Pand, but has so far managed to survivefire blackened the whole mountain again its normal of vegetation

Holly - Barranco do Carvalho

Scientific Name: *Ilex aquifolium L.*
Vernacular Name: Holly
Family: *Aquifoliaceae*
Age: Approximately 50 years
Height (approximate): 10 m
Inspection: 2010

Facts and Curiosities: Next to the picnic area in the Barranco do Carvalho, there is one of the springs that feed the Monchique drinking water system. The system was built in the early 1950s, and was inaugurated and brought into operation in 1953. The spring was fenced in with a hedge of hollies. Some of these specimens are unusually tall, and they are currently being considered for classification.

Notes: In these steep yet green valleys, it is easy to understand why such a wide range of habitats and microclimates occur here naturally. It is also easy to see the effect of human occupation. On the low lying slopes and where it is easier to irrigate, the lack of levelled ground limited production. The tenant farmers and the land owners thus constructed extensive terraces to increase the productive area. This investment altered the landscape considerably, giving the land the aspect of a drawing with contours. Similar techniques are now used in eucalyptus plantations, to facilitate mechanisation for planting, felling and harvesting.

On the steep and rocky slopes you come across springs flowing with precious water. Many of these springs have been improved by human intervention; deepened by construction of adits or with storage tanks to facilitate irrigation.
a facilitar a rega.

Sweet Chestnut - Penedo do Buraco

Classification: In progress
Scientific Name: *Castanea sativa* Mill.
Vernacular Name: Sweet Chestnut
Family: *Fagaceae*
Circumference at the base: 4,9 m
Circumference at 1,30 m: 4,0 m
Height: 20 m
Height of Trunk: 1,8 m
Crown width (N – S): 24 m
Crown width (E – W): 22,9 m
Inspection: (2010)

When managed throughpostsroofs

In Portugal, the sweet chestnut stands create products of direct economic value such as timber, fruit, mushrooms, hunting, pasture, and a location for relaxation. They are also important for the other services they provide, such as protection of the hydrological regime, carbon fixing, and the landscape and biodiversity.

Normally, the chestnut stands are managed to provide short term crops (such as the chestnut fruit) as well as long term crops (such as the timber). In this system, the spacing recommended between the trees is 7m x 7m up to 10m x 10m. This spacing allows the trees to develop their canopy enough to provide a good crop of nuts. Under this type of management, the trees are pruned from young to form a single, straight, conical 3 - 4m trunk to ensure a good final timber crop.

Common Rhododendron Barragem da Fóia

Scientific Name: R*hododendron ponticum* L. subsp. *baeticum* (Boiss. et Reut.) Hand.-Mazz.
Vernacular Name: Common Rhododendron
Família: *Ericaceae*
Height: 5 m - 8 m
Leaves: 6 to 18 cm by 2 to 5 cm
Flowers: 3,5 to 5 cm diameter lilac, between April and June
Reproduction: sexually or vegetatively

This circuit includes an opportunity to view a botanical community of particular scientific interest that creates a unique landscape - the common rhododendron.

In the land we now call Portugal, the dominant vegetation in the early Tertiary (70 to 2 million years ago) were similar to those now found in Madeira.

Sthe.O,, managed to survive the Pleistocene glaciations (between 2 million years and 10 000 years ago) and can still be found here.

These relics from the Tertiary only survived in sheltered enclaves, such as for instance the Common Rhododendron in the Serra de Monchique. They are believed to have survived thanks to their capacity to reproduce both by seed and by vegetative propagation. Recent experiments have proved that rhododendron can be multiplied by micro-propagation, a technique that is being implemented to reintroduce the species in the protective area surrounding the dam at Fóia.

This naturally occurring Iberian species is found naturally in the Serra de Monchique and in the Serra de Caramulo, as well as on the Maciço de Aljibe in Andalusia, Spain. Due to its poor distribution and the isolation of the remaining populations, the rhododendron is an endangered species in its native habitat. There is a separate population in the Caucus, but it belongs to a different subspecies (subsp. Ponticum).

In the 18th century, the rhododendron was introduced to England and Ireland as a decorative plant. In these countries it naturalised and, without its natural predators, has spread alarmingly. It is now considered an invasive species that is difficult control and to eradicate.

The rhododendron contains alkaloids poisonous to cattle. In Monchique, the plant is famous for being the main ingredient in “mother-in-law’s tea”, the subject of a local popular song.

FOOTNOTES AND BIBLIOGRAPHICAL REFERENCES

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Information on classification of trees:
http://www.afn.min-agricultura.pt/portal/gestao-florestal/aip

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