

Wine making in Colares



The traditional vines of the region grow on sandy soil, although they are planted down to the underlying clay subsoil. It is believed the vine comes from France and was introduced to the region by King Afonso, but it was only in the 16th century that export began. It was somewhat later, in the late 19th century and during the twentieth that this particular Colares vine stock came into its own, particularly during a period when the vineyards of Portugal which had been planted in the so-called “hard ground” were hit by an epidemic of phylloxera (vinepest), the Colares vines being resistant because the sandy ground is a hostile environment for the propagation of this particular insect. The lineage of the genuine vines can be traced back to Ramisco stock, and was responsible for the right to use the title *Região Demarcada de Colares* on the wine, conferred by Royal decree in 1908. Ramisco and Malvasia, red and white respectively, with their unmistakable citrinous shading, are the most popular varieties.

Legislation

Decree-law no. 292/81 of 15 October, 1981 accorded the area the status of Protected Landscape, and the Decree-Regulation 8/94 of 11 March 1994 reclassified it as a Natural Park, with the almost simultaneous approval of a Land-Use Plan (currently under revision) under Decree-Regulation no. 9/94 of 11 March 1994. Then in 1997, under Resolution of the Council of Ministers, no. 142/97, the coastal and mountain zones, 57% of the total area of the Natural Park, were declared part of the Sintra-Cascais Site of Community Importance and thus appeared in the National Site List, under Community directive no. 92/43/EEC covering the conservation of natural habitats and wild flora and fauna – the Habitat Directive. In addition, a part of the northern coastal region of the Sintra Mountain Ridge was in 1995 added to the UNESCO List of World Heritage Sites, in the Cultural Landscape category.



Chimneys of the Sintra National Palace framed by a Moorish window

The centre-piece of the town of Sintra, this palace bears clear signs of the Moorish presence of former times, its construction having come about as a result of various building campaigns in the eras of Kings D. João I, D. Manuel and from the early 16th century. The large twin chimneys symbolize the preparation of food.

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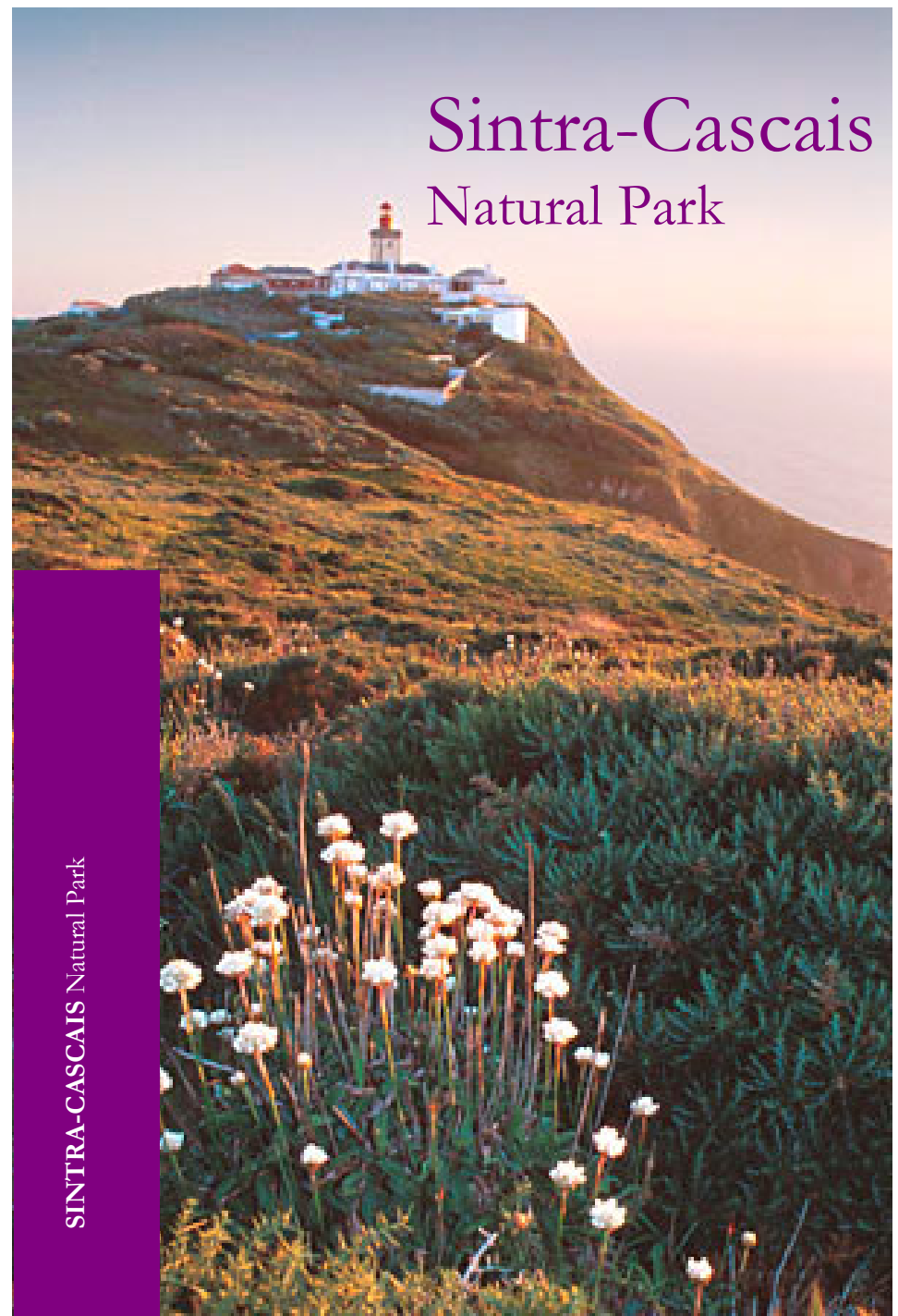
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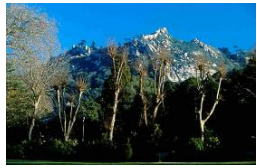
Sintra-Cascais Natural Park



Sintra – Cascais

The Natural Park extends from the northern boundary of the Sintra *concelho* (local authority area), along the estuary of the Falcão River as far as the Cascais Citadel to the south. It takes in a total of 14,583 hectares of land lying within the *concelhos* of Sintra and Cascais. Sintra Mountain Ridge, with a height of 528 metres, is its most dominant feature, and this is set off by a varied and delightful landscape which takes in an extensive rural area and a pretty but at times dramatic coast.

Official classification



The park's unique natural features, ranging from geomorphological phenomena to an abundance of floral and scenic beauty, all of which are increasingly under threat from a variety of factors – chief among which ranks an increasingly intensive urban development – led to the area being accorded legal protection, initially with Protected Landscape status in 1981, and later, in 1994, as a Natural Park, in acknowledgement of its importance to Portugal's national heritage. Its designation as a protected area is seen as a measure to safeguard the unique scenic, cultural and natural features found in the area and also as part of a policy of economic development in harmony with nature.

The Habitat Directive

The Sintra-Cascais Site includes a considerable diversity of habitats – thirty four in all – of which nine are considered a conservation priority; these include fixed dunes bearing herbaceous vegetation of crucianella maritime, *Crucianellion maritimae*, littoral scrubland with juniper thickets, *Juniperus spp.*, dune areas covered with coniferous woodland of stone pine *Pinus pinae* and maritime pine, *Pinus pinaster*, alluvial residual forests and also include bay groves, *Laurus nobilis*, the Park being one of the very few areas in the country where this latter is found. The site is extremely well endowed with flora, containing a number of species that are endemic locally and others which are endemic to Portugal or to the Iberian Peninsula, all of which are under threat. Likewise, among the local fauna, there are a number of threatened species including the peregrine and the Bonelli's eagle, which nest in the Park.



Physical features

Generically speaking, the Natural Park can be said to be made up of low altitude mountainous land and coastal cliffs, rising out of the neighbouring calcareous plateau. The geological substrate here includes a range of formations which are quite distinct in their nature, origin and time of formation and reveal a diversity which is unusual in the context of the country as a whole. Dating back to periods from Upper Jurassic and Quaternary, the

three principal rock types found here are sedimentary, magmatic and metamorphic. Syenite and granite predominate in the Sintra eruptive massif, which first began to emerge about 80 million years ago.



Throughout the shore area we find a number of geological phenomena which are of particular scientific and didactic interest, such as the Magoito consolidated dune, the signs of marine erosion on the cliffs of Azenhas do Mar, the vertical calcareous rock faces at Praia Grande do Rodízio with visible trails of dinosaur footprints, the intersecting veins of granite and sedimentary rock to the north of Abano beach, the Guincho-Cresmina dunes system. Further, it is home to one of only two examples of coastal karren or *lapia* fields in the country.

The climate, of moderate temperatures, with fairly abundant rainfall in the winter but little in the summer, varies from semi-arid (Cape Roca) to moderately humid (Sintra Mountain Ridge).

The hydrographical network is characterised by courses with a relatively low water flow, both permanent and seasonal. The Colares river, the largest of these, flows towards the northeast and discharges into the sea to the north of Sintra mountain, as do the Falcão and Samarra; two other small rivers, the Foz do Guincho and Vinhas rise on the coastal side of the mountain and flow into the sea at the Cascais coast.

Coastal Lapia



The only two significant examples of this phenomenon in the country are the field on Cape Espichel coast and that which extends from Cape Raso to the Santa Marta lighthouse on the Cascais shoreline, traversed by various veins of eruptive rock. This type of karstified modelling is the spectacular result of a natural process occurring when limestone rock is eroded by rainwater. Sedimentary rocks mainly made up of calcium carbonate can be gradually dissolved by the action of acidic water, such as the carbon dioxide-containing rainwater. The rains infiltrate the cracks and fissures in the rock, gradually dissolving

away the surface to leave large openings which are gradually enlarged. The action of the wind and thermic variations also play their part in this phenomenon of karstification which proceeds in a heterogeneous fashion: some more resistant areas of rock become gradually isolated creating the naturally sculpted shapes which are characteristic of *lapia* fields.



Dinosaur footprints at Praia Grande do Rodízio

To the extreme south of this beach, there is a cliff which is over 120 million years old and contains a vertical calcareous face from the Cretaceous period on which dinosaur footprints can be made out. The prints would appear to be those of quadruped herbivores, most probably sauropods (long neck and tail) and two-legged carnivores

known as called teropods both of which left tridactyl (three-toed) prints. The region at one time featured vast coastal plains with lagoons and the footprints were impressed in fine sediment which was preserved through being protected by successive layers of other sediment and being transformed into sedimentary rock over some millions of years. The rocky covering was later forced upwards due to the magmatic intrusion which gave rise to the Sintra Ridge itself and came to assume its present near-vertical position. The footprints became visible as a result of a gradual wearing away of the sedimentary layers which had been covering them.

Habitats, flora and fauna

Intimately related to the climate, the geology and the nature of the soil in the area, we find a remarkable set of natural and semi-natural habitats which support a wide range of species of both flora and fauna. In addition to those which are listed in the Habitat Directive, the Portuguese Oak (*carvalho cerquinho*) groves are also an important feature.

flora and vegetation



The areas which have been least subject to human intervention – the mountain and some coastal strips – are highly prized for the diversity of their plant life, which includes some endemic species (those which are only to be found in this part of the world), some species under threat such as the holly, *Ilex aquifolium*, and others which are not to be found anywhere outside the park. The canary island davallia fern, *Davallia canariensis* and the *Asplenium hemionitis* fern, representatives of

macaronesian flora, are to be found on the mountain in dense isolated clumps; these are threatened and are under the protection of the Habitat Directive. Of plants which are considered autochthonous to Sintra, there is a total of around ninety species.

Quercus forests



Although very few traces of the original covering of primitive forest remain today, in the Sintra area one can still find almost all the spontaneous species of the *Quercus* family in Portugal: the cork oak, *Quercus suber*, the English Oak, *Quercus robur*, which is to be found in the humid northern slopes, the Pyrenean oak, *Quercus pyrenaica* and the kermes oak, *Quercus coccifera*, which thrives on dry coast where it is found intermingled with the holm-oak *Quercus rotundifolia*. Side by side with these autochthonous species on the mountainside we find mixed woodland of wild pine, *Pinus pinaster*, eucalyptus in the form of the bluegum, *Eucalyptus globulus*, and the Portugal or Buçaco cedar *Cupressus lusitanica* all of which are

currently under threat from imported invaders such as acacia and hakea.

Coastal vegetation

On the coastal strips, the range of flowering plants on display surprises and delights the visitor with its beauty and abundance but at least seven endemic plants are under threat and are receiving special attention to help in their conservation: the Sintra pink, *Dianthus cintranus* and the *Silene longijolia*, endemics to the coast of Portugal centre, the delicate blue eye, *Omphalodes kuzinskyanae*, endemic to west coast of Portugal; the pink ball thrift,



Armeria pseudarmeria, endemic to the Lisbon peninsula; the *Ionopsidium acaule* endemic to Portugal, the Portuguese iris *Iris lusitanica* endemic to the Iberian peninsula. These and other flora is under serious challenge from the Hottentot fig *Carpobrotus edulis*, an herbaceous invader, originally imported from South Africa, which has colonised vast areas of the coastal land.



Penha and Monserrate Historical Parks

These are two examples of botanical gardens of romantic inspiration, renowned examples of the enhancement of landscape heritage by human hand. Penha Park was originally set out for



Ferdinand of Saxe-Coburg-Gotha, consort of Queen Maria II in the 19th century. Paying particular attention to the climate and contours of the area, a number of species from different parts of the world were imported and planted so as to coexist harmoniously with lakes, fountains, mansions and numerous paths, the whole being dominated by the Penha Palace itself. Also dating back to the middle of that century, the Monserrate Park was designed by Francis Cook on the land surrounding the chapel devoted to Our Lady of Monserrate on the northern outskirts of Sintra. As a garden it is equally romantic and exotic with its caves, waterfalls and lakes where species natural to Portugal thrive

alongside a variety of plants brought over from five continents.

Fauna



Throughout the mountain ridge and plateau, seashore and the interior, there is an abundance of wild-life including mammals, reptiles and amphibians. Some animals have already become extinct in the Park, such as the hare and the wolf, and there are a number of others which are in near-extinction such as the rare *Rhinolophus euryale* bat and the wild ferret *Mustela putorius*. Of importance also are the hedgehog, *Erinaceus europaeus*, an isolated population of the Iberian shrew, *Sorex granarius* and almost two dozen rodents and carnivores, including the fox *Vulpes vulpes*, the *Mustela nivalis* weasel and the genet *Genetta genetta*. All of these, in turn, share the territory with a variety of reptiles and amphibians the most abundant of which are the salamander *Salamandra salamandra*, and Bosca's newt, *Triturus boscai*; the Iberian emerald lizard *Lacerta*

schreiberi, endemic in the Iberian region, is rare and under threat; the snub-nosed **viper** *Vipera latastei* is also rare in Portugal and under threat throughout the community. Particularly noteworthy, among ichthyologic fauna, is the Portuguese boce, *Chondrostoma lusitanicum*, a fish which inhabits the waters of the Colares and Samarra rivers and is one of the rarest of the vertebrate species endemic in continental Portugal.

Wild fowl

The Natural Park is particularly rich in bird life. The peregrine *Falco peregrinus*, **Bonelli's eagle** *Hieraetus fasciatus* and the eagle owl, *Bubo bubo* are examples of species who reside and nest here but whose numbers are shrinking, and which are considered rare and threatened in Portugal and are protected by international legislation. The buzzard, *Buteo buteo*, kestrel *Falco tinnunculus*, tawny owl *Strix aluco* and the barn owl *Tyto alba*, are all birds of prey who roam the Park. The sea-birds to be found here in abundance along the coast, enhance the shores with the beauty of their silhouettes. Between residents, winter and migratory birds, both rare and common, there is a considerable bird population which feeds off the sea, inhabits the cliffs and nests on them including noteworthy species like the northern gannet *Morus Bassanus*, the shag, *Phalacrocorax*, and the black-headed gull *Larus ridibundus*.



Human occupation



Throughout the Park there are vestiges of the ancient occupation of the area, the oldest dating back to the Palaeolithic period. The term "Sintra" itself is probably derived from the word "Cynthia", the moon in Celtic mythology, but it was the Romans, inspired by the same symbolism, who called the mountain ridge "Mons Lunae" Mountain of the Moon. Moorish character is splendidly represented here by the imposing symbol of the Moors' Castle and is also represented by a number of place names which

clearly suggest a Muslim origin.

Local culture has expressed itself in a variety of construction down through the ages: windmills of oriental origin and traditional water mills, mainly disused; religious architecture featuring hermitages and convents, amongst which the Capuchos Convent and the **circular chapel of St Mamede** are the most striking examples; military architecture is represented by the early fortifications which made up the line of defence protecting the coast from Guincho to the Cascais Citadel; and of course the historical monuments such as the palaces of Pena, Seteais and Monserrate which, set along the ridge, bear witness to the powerful attraction which Sintra exercised over the aristocracy during a period stretching from the Renaissance down to the twentieth century.

The current population of the Park area is in the region of 30,000 inhabitants who are distributed in a network much of which comprised of small scattered groups of buildings in ribbon development alongside



the principal roads. There are also a number of towns which are remarkable for their architectural merit and for the harmonious manner in which they blend into the landscape; these include the old town of Sintra itself and others such as Azenhas do Mar, Gouveia, Penedo and Ulgeiro in the Sintra local authority area and Figueira do Guincho and Biscaia in Cascais.

Rustic farmhouses



Down through the centuries, different types of occupation have resulted in a variety of lifestyles and these are represented in the traditional architecture of the area, of which the rustic farmhouse is a good example. Still to be found in the rural parts of the Park, these are normally somewhat isolated from the urban areas and are usually to be found on lands divided up by dry-stone walls or hedges of reed which serve to mark out property limits and protect the crops from the sea breezes. They are usually composed of a two-story house and adjoining outbuildings reflecting the agricultural activities carried out on the land: stables, animal pens, wine-making sheds and baking ovens.

Peninha



Half way between Sintra and the coast, at an altitude of between 300 and 490 metres, this area, property of the ICN, is subject to strong sea winds but offers a panoramic view of almost the entire Natural Park and as well as the distant coastal strip which runs from Cape Espichel to Cape Carvoeiro off to the south. Set within a landscape dominated by low brushwood, Peninha itself contains a group of important old buildings which include the 12th century Hermitage of St Saturnino and the Peninha Chapel, erected in the 16th century as an expression of popular devotion and classified as a Building of Public Interest.

Traditional livelihoods



The most common occupations have traditionally been connected with farming, fruit wine and horticulture and forestry in the wooded areas of the mountain ridge. In the northern rural zone, four characteristic fruits of the region are grown - the Colares *reinele* apple, the pink peach, the thick-skinned lemon and the pearl pear - and of course the wine from the Colares region continues to be appreciated internationally.

Handicrafts reflect the natural features of the Park and include basket-making, flour production in wind-mills, rustic bread and cakes including the well known *queijadas* which trace their origin back to the pastoral lifestyle which the untilled lands of the mountain ridge supported up to the middle of the 20th century.