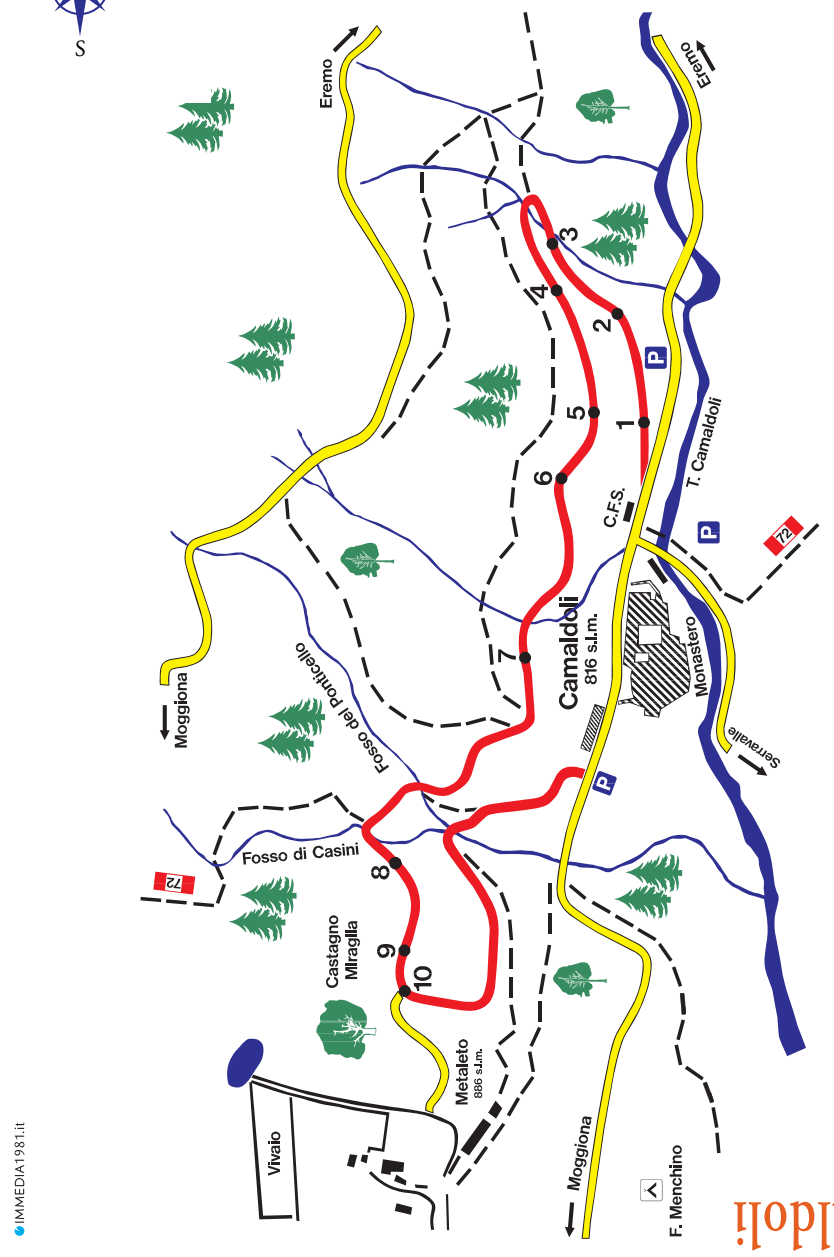
Parco Nazionale
Foreste Casentinesi
Monte Falterona
e Campigna

Camaldoli
Trees and forest

NATURE TRAIL



Getting there: take the "Umbro-Casentinese" road from Arezzo to Bibbiena (or Poppi if you come from Florence) and continue towards Soci. From the Romagna side take the E45 highway to Bagno di Romagna and continue to Passo Mandrioli.

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Camaldoli

NATURE TRAIL

Welcome to Camaldoli

Camaldoli is probably the most famous place in the Park, for the high natural and spiritual value of the forest and the thousand year old monastic institution. Monks and forest are an inseparable pair, and the symbolic tree is once again the white fir.
This nature trail has a more profane character and its intent is to evoke some "entities" that have always inhabited this territory: the trees. We shall begin from the simpler and most minute forms of vegetable life, to arrive at the giants of the wood, such as the Miraglia chestnut tree. The footpath itself offers a brief introduction to botany, enough to generate in the visitor the wish to know and recognize the multiple forms of life in the forest.

Hermits must apply great care and diligence to insure that the forests, all around the Hermitage, are not decreased nor diminished in any way, but rather, expanded and enhanced. (…) Also the Fathers should provide with diligence that each year absolutely, should be planted, in appropriate places, four or five thousand firs. Which, if by chance a year this is not done, the following year this should be done for both the one and the other year...

Year 1520 - Rule of the hermit life

Total distance (loop trail): 1,8 Kilometers.
Gradient uphill: 100 m.
Walking time (including stops): 2 hours
Best period: April to November

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HALTING POINT 1 — Mosses and lichens: a pioneer life

Let us dedicate our first attention to the more humble and less imposing organisms. Few organisms populate the surfaces of bare rock, among these few, mosses and lichens stand out as specialized organisms for living in hostile environments, where they play an indispensable role in the evolution of more complex forms of vegetation. **Mosses** normally live in environments with a high degree of humidity. Various species are, however, well adapted to conditions of relative dryness, thanks their capacity to enter into a state of dormancy. Old leaves dry up and enrich the very poor surface upon which they live, awaiting better conditions. Water absorption can occur through the entire surface exposed to the air, thus allowing the storage of a quantity of water up to seven times its own weight! **Lichens** are special living things made up of an alga and a fungus joined in a symbiosis. The fungus is dominant and makes up the greater part of the lichen, whereas the alga consists of a thin layer within the interior of the fungus tissue. This life in common presents many advantages for both organisms: the fungus can absorb the product of the alga's photosynthesis, whereas the alga is better protected from external agents. If on one hand lichens are capable of withstanding extreme climatic conditions, intolerable to the great majority of plants, on the other they are very sensitive to atmospheric pollution. Toxic substances are in fact absorbed and stored, causing death. Bearing in mind this state of affairs, a modern method for assessing atmospheric pollutants utilizes the census of lichens as a marker.

Lichene cespuglioso

HALTING POINT 2 — Camaldoli: an oasis of nature and spirituality

Taking our breath back and taking advantage of a pause for a due reflection on Camaldoli. The name seems to derive from "casa Maldolo" or "campo Maldolo" (Maldolo's house or Maldolo's field), later contracted into Camaldoli. Tradition speaks of Maldolo as being a hypothetical Count who at the start of the 11th century donated to **Saint Romualdo**, the founder of the Camaldolese Order, a villa in a place called Fontebuona where now lies the monastery. It seems more likely that Maldolo is a diminutive of Romualdo. The saint was passing through this district around 1023 – 1024. Chronicles tell that he was especially struck by the beauty and peace of the woodland of those days, thus he decided to establish a Hermitage here. In addition he accepted the offer made to him by Theodaldo the Bishop of Arezzo, to create a site for the assistance of passing pilgrims, wayfarers and guests of the same monks. The Hospice was thus founded and it turned into a Monastery toward the end of the 11th century, thanks to the Blessed Rodolfo who became the Prior. St Romualdo introduced the reform that he promoted regarding the Benedictine Rule, which consisted of the introduction of a spiritual experience in the Hermitage, as in Oriental Christian Monasticism. The emblem of the Monks of Camaldoli, consisting of two doves drinking from the chalice of faith, represents the co-existence of the Hermitic and the Communal experiences, a balance between solitude and communal life. Another innovative element was the introduction of the white habit for the monks, instead of the dark habit of the Benedictine tradition.

HALTING POINT 3

The Silver fir and the Camaldolese monks

We have reached the end of the strenuous climb and, if our breath allows us, we shall re-read some verses from "Rules of the hermit's life":

"You shall be a fir for height of contemplation (…). Cultivating firs the monk helps himself to grow in the love of God"

From them emerges as the centuries the Camaldolese monks have been tied to the care and preservation of the forests and of the Silver fir. Camaldoli has always been a symbol of spirituality focused on the dimension of silence and listening, that the monks have sought in the green and silent woods surrounding the Hermitage. Here emerges the deep relationship of reciprocity that binds the hermits to the environment and to the surrounding forest. A relationship of love and respect, but also focused on the use of plants. The Benedictine matrix of the Camaldolese which they find in "ora et labora" one of the elements of their spiritual experience, leads the hermits to find in the cultivation and sale of timber, one of the elements for the achievement of their material livelihood. The primary interest of the monks was, however, that of preventing the traders from causing disturbance to the peace of the places by going to purchase timber directly at Camaldoli, and for this reason they created, from the sixteenth century onwards, selling agencies in Arezzo, Florence and Livorno.

HALTING POINT 4

Hazel and hornbeam

At this point of the trail, the forest looks thick, with deep and fresh soil. Here two plants grow with interesting strategies for pollination and for the dissemination of their fruits. The **Hazel *Corylus avellana*** is a shrub branched from the base in multiple stems, typically 1-3 meters tall with heart-shaped leaves at the base and acute apex. The name derives from the Greek "Koris", helmet, in allusion to the casing that protects the fruit. The wood is used for walking sticks, turnery (buttons, pipes, baskets) and wood inlay. The **Hornbeam *Carpinus betulus*** looks like a tree richly branched, up to 25 m tall, with smooth bark and no peel or grooves, even in old age. The wood is very light (thus the name of common hornbeam) and it is highly valued as a fuel. The name comes from the Celtic *"carr"*, wood and *"pen"* head, which makes it suitable for making yokes for the oxen. Both species have flowers with separate male and female sexes and flowering occurs before the growth of the leaves: in this way the pollen produced by male flowers and is dispersed by the wind can reach female flowers unhindered.

Very different is instead the strategy for seed dispersal: the fruits of the nut are produced in limited quantities, and are extremely appetizing to wild animals, which collect an abundant supply for the winter season, contributing to the dissemination. The fruits of the Hornbeam are instead enclosed within a leafy wrapper with three lobes. Produced in large quantities, they are dispersed by the wind and the casing constitutes the flight instrument to carry the fruits often at considerable distances.

Carpino bianco

HALTING POINT 5

Easy… That's an Oak!

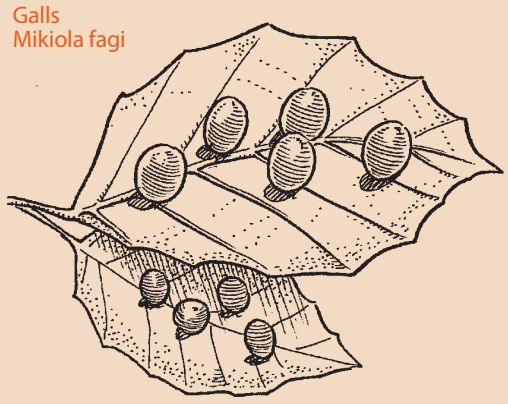
Not everybody knows that with the general name of Oak we include around 600 different species of trees distributed all over the world and, in the area of the Park, there are 5 different species. In this place you are looking at a specimen of **Turkey oak *Qercus cerris*** the commonest oak along this trail. The Turkey oak, is a tree with a straight trunk and with smooth bark in young trees, this cracks up lengthwise afterwards. The leaves are leathery and deeply lobed. The fruit is an acorn with a scaled dome, from which derives the name of the species. The Turkey oak is the typical oak of the submontane belt, loving a certain amount of humidity, notwithstanding it being deciduous, during Winter it does not shed its leaves, which remain dead on the tree. The Turkey oak is regularly cut down for firewood of charcoal, in the past was widely used for railway sleepers, barrel staves, wheel spokes and poles. The **Pubescent oak *Quercus pubescens*** is a tree with an irregular and sparse canopy. The trunk is stout and twisted, with blackish and deeply cracked bark. Young leaves are highly pubescent, but tend to become smooth on top, retaining a dense pile beneath. The pubescent oak is the typical tree of the sub-mediterranean deciduous woodlands. It likes dry and sunny places, withstanding high temperature. It creates sparse and bright woodlands, but in unfavorable conditions it tends to create a shrub land. It is used as the Turkey oak, but with one more quality: the acorn is very appetizing to animals. Oak woods near old farmhouses had in fact the function of producing acorns for the pigs.

Pubescent oak

HALTING POINT 6

The beech tree

Fagus sylvatica probably derives its name from the Greek *"faghéin"*, eat, and its fruits were in fact used since Roman times as a food for livestock and were also toasted to obtain a sort of coffee. The beech is a deciduous tree with very variable habits: if isolated, in fact, it develops a broad crown and become mighty and majestic reaching heights of over 40 meters. The trunk is generally straight and elegant, the bark is smooth and thin. The timber has always been employed by carpenters and cabinet makers. Its ample roots expand laterally just under the surface, being capable f absorbing great amounts of water and nutrients, often to the disadvantage of nearby trees which suffer from such competition. Leaves are oval-elliptical, with straight or slightly undulated margins. In Summer it is not unusual to see on top of the leaves some pale green oval formations; these are galls caused by an insect ***Mikiola fagi***, a sort of gnat that lays eggs on the leaves, causing infections that generate growths turning onto galls. The fruits, called "beechnuts", which are sharply angular, coupled within a wooden case, which when mature it opens into four lobes, releasing the fruit. The production of fruit is not annual, it occurs every 5-6 years with a rich harvest which was called "pasciona".



Galls Mikiola fagi

HALTING POINT 7

An old chestnut grove

The chestnut forest, despite being perfectly integrated into the mountain landscape, is a formation of artificial origins, widely distributed both for its fruit and the quality of its wood. The chestnut was the bread fruit, and the prosperity of mountain people was tied to the results of the chestnut season. Beginning from Roman times man has progressively replaced oak woods with cultivations of chestnuts. However, of the great wood where we now are only some monumental trees remains, along with old stumps from which vigorous pollards grow, along with a plantation of conifers. The cultivation of the chestnut has also suffered from two diseases, often lethal: the ink disease caused by a fungus of American origin ***Phytophtora cambivora*** and from canker caused by a second fungus, the ***Endothia parasitica***. All this has caused the transformation of many fruitful chestnut groves into deciduous forests with the presence of stumps of old chestnut trees whose pollards are regularly cut for timber. Fruitful chestnut trees are instead tall trees, rising from extremely well groomed lawns. The presence of such ancient trees is a cause of environmental diversity and thus of high biological diversity. The cultivation of the chestnut formed the basis of the Apennine mountain economy for many centuries, until the actual abandonment of the territories determined the neglect of many chestnut trees, which are now gradually returning to the state of natural mixed oak forest.

HALTING POINT 8

Golden chain laburnum and cherry tree

Nei boschi misti di latifoglie, alcune specie arboree si fanno notare nei mesi primaverili per le loro belle e copiose fioriture. **Golden chain laburnum *Laburnum anagyroides*** derives its name from its flowers, in dangling long bunches, which generally blossom in May chiefly visited by hymenmoptera, such as honeybees and bumblebees; its fruits are legumes which often drop to the ground without dissemination, which takes place gradually. You must know that the Laburnum is highly toxic! Nearly all parts of the tree in fact contain a highly toxic alkaloid, the cytisine, particularly concentrated in the seeds. A much more interesting tree is the **Cherry *Prunus avium***, clearly recognizable from the horizontal bands with lenticels of its bark, and by its foliage which in the Fall becomes intensely colored from yellow to scarlet red. On the leaves of the cherry are also extra floral nectars: they produce nectar particularly appetizing to ants, which we can easily observe on these trees. But let us now move on to the main course: the fruit, the famous cherry. The fruits of the wild cherry have a bitter aftertaste and slightly more bitter than the cultivated varieties and these are very pleasing to many species of birds, as well as hikers, that favor the spread. Not surprisingly, the Latin name for this species, Prunus avium. means "bird cherry".

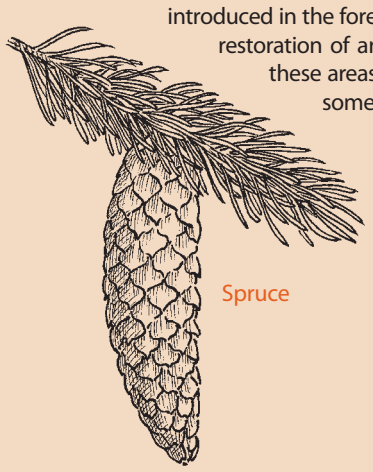
Cherry

HALTING POINT 9

Recognising conifers

With the exception of the silver fir, the yew, and the juniper, all other conifers and gymnosperms found in the National Park are exotic species and unrelated to the native plant heritage of the Park. Different species of pine and cypress, spruce, the Douglas fir, larch, and the cedar of the Atlas and Himalayas, therefore not naturally present in the territory. It was man who introduced them on a well-defined extent or very extensively since the last century, and more intensely in the last fifty years, especially to test their economic performance in terms of forestry. For several years, however, none of these alien species has been introduced in the forests and forestry interventions are now directed towards the gradual restoration of arboreal spontaneous components. Along the trail, and especially in these areas, you have the opportunity to recognize some species, starting with some simple features. The easier distinction concerns in fact the shape, the density of leaves and the arrangement of them on the branches. In the case of pine, larch and cedar, leaves are always together in groups or bunches, to form very short branches that are set on the main branches.

In the case of other species, including fir, spruce and Douglas fir needle-like leaves are placed directly on the branches, without forming small groups of needles typical of the different species of pine. Finally, in cypress, leaves are inconspicuous, small scales closely leaning against each other almost as a result of an appropriately adapted to dry hot climates.



Spruce

HALTING POINT 10

the Miraglia chestnut

Long standing plants and of such considerable size, are infrequent in nature and have significant scientific and cultural importance. To reach their exceptional development they must have enjoyed favorable environmental conditions or preferential treatment by man, which must have contributed to their conservation through careful treatment, or (more often) this is due to ...human forgetfulness or indifference! To these giants, true "monuments", we also recognize the role of symbols of the ancient relationship between tree and man. Not as a coincidence, monumental trees are found not only in the woods and areas of high naturalness, but also in the agricultural countryside and in towns, often next to houses, churches or along roads, where they have become fully integrated elements into the anthropic landscape. Monumental trees are, for their age, sensitive plants and for this reason most vulnerable to natural threats (parasites, lightning ...) and above all anthropogenic (pollution, acid rain, irrational cultivation interventions ...), and for this they are particularly protected even at the legislative level. We come to our giant: "The Miraglia chestnut" dedicated to Mrs. Elena, wife of Commander Miraglia, Director General of the Ministry of Agriculture at the end of the 19th century. Its dimensions are considerable: the diameter at breast height is of 4.20 m, height 19 m, the estimated age is 300-500 years, while the crack through it is 10 m long. A second giant which we meet at the end of the path is a centuries-old cedar planted in 1861 and regarded as one of the first exotic species introduced into the forest.