

## **PINE FOREST** (introduction through its flora)

### **Location**

You will find it in the topographical maps towards the west – north. In our general map it goes from Robledondo to the Monastery, and from there to Abantos (it goes right up to the Guadarrama range). To the west and north of the C-505, the town and the C-600.

During the whole year it is a bluish-green and sap green mass, sprinkled in its streambeds with ochre in autumn.

### **Flora**

Until the end of the 19th century, this area was taken up by great fields and what was left of the autochthonous forest, so diminished by the human needs of that time. Since 1892 the reforestation started thanks to the work of the Escuela Especial de Ingenieros de Montes (Special School of Mountain Engineers) and then, later, ICONA (National Institute for Conservation of Nature).

The lower boundary of the forest, between 800 and 1,030 metres, is made up of small areas of mixed forests of pines and Pyrenean oak, with the flora associated to them.

The great majority of the trees that were used to carry out the reforestation were the pines, and although we can find up to eight different species, we can only talk about four in general.

Scot's, Albar or Valsain pine trees, *Pinus sylvestris*, easy to recognise because of its orange-coloured branches and the youngest part of its bark. The old specimens exposed to the wind and the cold have the appearance of "flag poles", that is, all the branches on one side, which shows the resistance of these trees and their capacity to adapt to the winds and the cold. The twisted appearance of the trunk, opposed to the rectilinear and cylindrical look that is developed in normal conditions, is also characteristic in the trees that are in the rocky areas. The "sulphur" rain is characteristic at the end of spring, produced by its masculine flowers when they spread their yellow pollen.

Some pines – in the Llanillos or next to the last descent towards the Fuente (fountain) de los Negros or in the Naranjera grasslands itself – are parasitized by the magic Mistletoe (*Viscum album*) whose fruit is appreciated by the birds that take care of carrying the seed from tree to tree. The black pine (*Pinus nigra*), abundant in the Penosilla, Llanillos and in the entire district of Abantos and Romeral. A medium-sized tree of about 20-25 m. Its appearance, if it grows in good conditions, is slender and pyramidal and is characterised by the ash-grey colour of its bark in the younger specimens and brown or dark chestnut in older trees. The leaves (needles) grow two by two, are long, thin, flexible, of a pale green colour with a pointed tip that is usually yellowish. The pinecones are small (4-6 cm in length and 2-4 cm in width), oval or cone-shaped, of a chestnut colour; they grow horizontally although slightly tipped downwards. They take two years to mature. The pine nuts measure 3-8 mm and have a clearly visible winged expansion that serves to scatter them by the wind.

The maritime pine (*Pinus pinaster*) especially extended on the lowest hillsides at the foot of the mountain, has excellent natural regeneration in the Solanas after the fire of 1999.

Mount Abantos is formed for the most part by this pine tree. It is raised forming pure or mixed woods, especially in acidic soil and sunny areas, from sea level up to 1700 m. This pine tree can reach 40 m in height and around three hundred years of age and it is the one that has the most rapid growth rate among the Iberian autochthonous pines. It is also one of the trees that best resists drought and poor and rocky soil. In the Iberian peninsula the specimens that are bled to obtain resin are not cut until they are 80-90 years old. This resin is used for glues and adhesives, and dry, to soften the arch and thus tune some stringed instruments such as violins. From its distillation, you obtain the essence of turpentine that is used as a solvent, and one of its by-products after distillation is colophony, used in making varnishes, soaps, dyes, ointments, creams, etc.

The Stone or Umbrella Pine (*Pinus pinea*). It is very common to find it developing two main branches that hold the "umbrella". A mid-sized tree of about 20-25 m, with a thick and reddish bark that cracks in large plaques with the years. The pinecones are large, and scatter their rich pine nuts at the fourth year. Specimens stand out at the Tomillar picnic area.

Other species that we find:

The Radiata Pine (*Pinus radiata*) in the place that the Cañada Real (Royal Ravine) joins the Arroyo del Romeral. This pine is native of California; it is used in reforestation in the north of Spain. Its wood has

been much used in the manufacturing of beams for the mines. The Jeffrey Pine (*Pinus jeffreyi*) is found under the road that runs from the House of the Llanillos to the Arroyo del Ventisquero.

The Spanish firs (*Abies pinsapo*) also stand out for their appearance and colour; they were introduced in the Arroyo del Romeral and in the passing of the Arroyo de las Cebadillas. The Cedars (*Cedrus Atlantica*), yews (*Taxus baccata*), poplars (*Populus sp.*)... Although in the territory of the Madrid Autonomous Community they are scarce, in Mount Abantos we find European larches (*Larix decidua*), one of the few conifers whose needles mark the seasons, in November they turn yellow and gold.

The forest mass of pines hold small surprises for us, which we will find above all next to the numerous arroyos. Thus, as you go up to the Malagón, on the road of the Gallegos (Galicians) you find a small group of beech trees, around 40, (*Fagus sylvatica*), some of which have developed a magnificent size.

Hidden among the gullies of the arroyos are found groups of three to five chestnut trees (*Castanea sativa*) – in the arroyo de las Cebadillas you will see them in November releasing the prized chestnuts. We can also see leafy trees, such as the birch (*Betula sp.*), and a type of ash, not native to this area, the European ash (*Fraxinus excelsior*).

But not all the plants that we can find correspond to human introduction, in some areas we find Pyrenean oaks (*Quercus Pyrenaica*) and holm oak (*Quercus ilex*), among English hawthorn (*Crataegus monogyna*), brambles (*Rubus sp.*) and a rich variety of wild rose bushes.

On the road from the sun terraces, we can find a small thorny tree, the wild apple tree (*Malus sylvestris*). Its fruit, the apple, is small and with a acidic taste.

The junipers also appear on our road, the common or creeping juniper (*Juniperus comunis*) that is developed by the soil due to the rigorous climate of the high areas in which it grows. Its fruit is sought for the extraction of essences, to flavour gin or as a spice for meat. The other juniper that we find is the prickly juniper (*Juniperus oxycedrus*), especially pretty, you can find them in the dam of the Infantes and on the Garcés road to the former Sanatorium dump. Its fruit or reddish brown, much sought after by foxes.

Among the bushes that survive, we can find the mountain ash (*Sorbus aucuparia*) – in the area of the Barrancón (cliff), which resprouted after the fire, a whitebeam (*Sorbus aria*) – in the high area of Cuelgamuros- and the snowy mespilus (*Amelanchier ovalis*) that in some cases miraculously grows in the most hidden cracks.

Being quite uncomfortable for the hiker, you will find the rockrose (*Cistus ladanifer*), almost always on the hillsides of the mountain. It has a very pretty white flower. The rockrose is a perfect indicator of the poverty of the soil: acidic, dry and sunny. It produces a resin called ladano that inhibits the growth of plants that surround it.

In the small fields the aromatic plants develop, prospering bushes such as Spanish thyme (*Thymus Zygis*), majoram (*Thymus mastichina*) and, as the most representative, Spanish lavender (*Lavandula stoechas*).

High up, in many areas sharing structure with pine trees, Spanish gold broom (*Cytisus purgans*) and the buckthorn (*Adenocarpus hispanicus*) stand out.

In the area of the high crag and Malagón, north face of the Escorial Cirque, the mountain thicket develops: the laburnam field, as a single ecosystem. The broom is a bush with many branches that reaches a metre in height. In the flooded streambeds the broom gives way to pasture land in which matgrass (*Nardus stricta*) dominates. You have a clear example in the Fuente del Cervunal, near Abantos.

And as any pine forest that prizes and depends on the moisture of each autumn, a great variety of fungus are highlighted, with the milk mushrooms (*Lactarium deliciosus*) of an orange colour standing out for their gastronomic value. The edible penny-buns (*Boletus edulis*) are frequent. Among the non-edible species the fly agaric (*Amanita muscaria*), authentic residences of gnomes. And the Blusher (*amanita rubescens*), of a brown colour and rosy meat.

In this short introduction to the Pine Forest, we recommend that you visit the Woods "Luis Ceballos", where you will be thoroughly introduced to the Escorial environment.