



## TWO WHEELS AND A VALLEY

The Torgnon district features a network of tracks and connecting paths that provides access to the various pastures at high altitudes, and which allows to safely explore most of the northern district of the municipality. This area is characterised by the presence of several attractive nature sites, especially the Loditor pool, a Natural Reserve listed among Natura 2000 sites. Moreover, itineraries can include visits to the phenological observation stations of ARPA Valle d'Aosta to learn about scientific research on the two habitats where these stations are located, precisely the alpine prairie and larch woods. These two environments characterise this part of Valle d'Aosta, forming the natural backdrop for the many mountain bike itineraries to unfold.

We find such an example in the Tour of the Grandes Montagnes that winds its way from Chantorné along the slopes that lead to the village of Gilliarey, a magnificent scenic balcony that offers a view of Valtournenche and the Cervino, and then back along the wide trails (tratturi) that, passing through alpine pastures, provide a comprehensive view of the habitats and natural traits of this area. The route features several opportunities to stop and observe the sites, such as the Loditor pool, alpine prairies and their fauna, larch woods, ARPA phenological stations, alpine husbandry and cattle breeding in the Tellinod alpine pastures.

The visit, for instance, to the Loditor pool reveals a complex and steadily developing environment that has a very delicate balance. The pool is silting up, a process that has reached an advanced (and unstoppable) stage, and its survival strictly depends on a carefully maintained water balance. The typical plant species have specifically adapted to the aquatic environment, while the life cycle and reproductive cycle of the most common animal species is closely related to water. Every season discloses facets of the life cycle of plants and animals though, at this altitude, the most favourable time is summer, between late June and the end of August.

Paths are suitable for and can be travelled by anybody, ranging from enthusiasts to less athletic visitors who can use the pedal-assist mountain bikes offered by the Torgnon municipality or proposed by local tourist agencies. These bicycles encourage visitors to even choose long itineraries at impressive altitudes (1,800 m - 1,900 m of altitude), always on paths that are devoid of significant technical difficulties, such as the trail that leads to the Loditor pool.

Other environments can also be explored with these mountain bikes, such as the Verrayes and Saint-Denis area, passing by Col des Bornes or Colle Saint-Panthaléon, to explore the dry environments of the sun-kissed Adret's slopes.

Paths are suitable for and can be travelled by anybody, ranging from enthusiasts to less athletic visitors who can use the pedal-assist mountain bikes offered by the Torgnon municipality or proposed by local tourist agencies. These bicycles encourage visitors to even choose long itineraries rich in natural, scientific and landscape features that develop at impressive altitudes (1,800 - 2,200 m a.s.l.), always on paths that are devoid of significant technical difficulties.





### DETAILED INFORMATION OF THE ENVIRONMENTS

#### THE WOODS - THEY OUTWEIGH THE MERE SUM OF INDIVIDUAL TREES

When observed even from a distance, the woods tell us much about themselves. This complex system, which includes plant and animal species, is alive. You can perceive it in the changes you notice during the year, so just imagine what it will be like in a few decades. Alternating seasons wrought evident changes in the woods, and such variations are related to the life cycle of plants.

The very cold mountain winter with snow, cold temperatures and strong winds drives nature to a period of quiet, during which growth is blocked. Plants literally go to sleep. With the warmth of spring and as the days get longer, nature reawakens in a glory of buds, sprouts and flowers. Young leaves appear and turn green, renewing the crown of trees. The phases of the life cycle move fast in summer because good weather has a short duration and many seeds have to be produced for the future plants. Autumn brings days that become gradually shorter and the temperature starts dropping, especially at night. Plants perceive this and get ready by turning yellow and dropping their leaves. Conifers are an exception as they remain green always. The exception within the exception is the larch, the only European conifer that is deprived of its crown in winter.

As time goes by, the woods evolve and mature like us, season after season. Plants grow in height and, especially, in the size of the trunk. The bark becomes thicker and the roots broaden. Time leaves a deep mark on tree trunks, precisely the growth rings. Their formation is based on the fact that wood produced by the plant in spring is pale, while wood produced in winter is dark. The circles also have different measurements. If they are wide, it means that the plant was in good health, while narrow circles indicate that the plant has suffered due to lack of light or water. Hence, each ring corresponds to one year of life; therefore, by counting them (on a tree that has been cut down) you can know the exact age of the plant.

And how can you know the age of a living tree? To get a rough idea, you can measure the circumference with a tape measure and divide the result by 2.5. Today more than ever the calendar and the appearance of the woods might not be consistent. The seasonal phases of a plant depend on climate change. An early spring can anticipate the appearance of buds, leaves and flowers by more than a month, a prolonged winter can delay the appearance of new needles and a cold September can anticipate the yellowing of needles. Is it true that there are no transitional seasons, such as spring and autumn, anymore?

#### Why does the larch tree live well up here?

Its leaves modified into needles limit the loss of precious water through transpiration. The thickness of the bark protects it against the cold. The bare winter crown resulting from falling needles makes it resistant to falling snow. The soft needles create a light crown. This feature, along with the elasticity of the branches and the strong deep roots, ensures resistance even to strong winds. These trees can grow on ridges and even at high altitudes.

Woods express positive energy. Their aesthetic features are most evident and impressive. Their pleasant beauty enhances the landscape. But woods are much more besides. They offer protection against floods, landslides, avalanches, falling boulders and the force of the wind. Woods are good for us. They mitigate the climate and improve the wholesome quality of air by increasing its humidity levels and enriching it with oxygen, besides consuming carbon dioxide (produced by global warming, cars, etc.). Moreover, they are the ideal venue for outdoor activities. Woods are productive. They are an invaluable resource (firewood, joinery, carpentry, building construction works, and also mushrooms, fruits, etc.). Woods preserve biodiversity. They are precious for the various life forms that dwell in them, both animals and plants.





## ALPINE PRAIRIE - EXTENSIVE MOUNTAIN AREAS

Conditions at high altitudes are not favourable for the growth of trees. You step into the kingdom of the alpine prairie.

The landscape is dominated by the presence of an apparently monotonous green carpet that reveals its variety under close scrutiny.

The blend of species present issues from a dynamic process that seeks a balance between soil, climate, exposure, altitude and plant world. The thick and continuous grassy layer is the most complex and stable type of vegetation one could find in a place where the prolonged coat of snow, the climate and the wind affect the composition and aspect of the native flora.

The low height is a survival strategy that allows plants to obtain heat and protection from the soil. Grass is especially evergreen, and grows in tufts that, in the course of time, converge and expand with underground stems that yearly produce new branches and leaves.

Bushes with wooden branches, such as rhododendron, juniper and bilberry, have adapted to the environment with their flexible branches that can bear the weight of snow.

The most extensively present grass types have, in common, a frail stem, few long thin leaves that are almost sharp and which start from the soil; flowers that, instead of being flashy, are simple and very small, and combined in greenish inflorescences develop into ears and spikes, which release seeds that are carried by the wind. Other species, instead, resort to insects to convey pollen; hence, they attract them with colourful scented flowers that have attractive shapes.

### Specialists of high altitudes

The **Least willow (*Salix herbacea*)** provides an example of dwarfism. A few centimetres tall, it protects the stems by burying them, making them crawl on the ground or concealing them in rock crevices, allowing only the leaves and flowers to surface.

The peculiar **Cushion pink (*Silene acaulis*)** can stand the wind and the weight of snow with its cushion-like appearance formed by tiny leaves brightened by little flowers that are generally pink. The **alpine star (*Leontopodium alpinum*)** resists low temperatures well with its thick and short fur that fully covers it. What seems a flower is actually a set of tiny leaves that resemble petals. The fur that covers it conveys a white hue that is lighter than other leaves. The actual flowers are round yellowish structures located at the core of faux petals.

**Gentian and Gentianella.** Purple, red and lilac flowers are more common as the altitude increases. It is a device to protect the delicate petals from UV radiations that are more penetrating due to the rarefied air. Dark pigments absorb excessive sunlight, as occurs when you get a tan.

The **mountain houseleek (*Sempervivum montanum*)** is a succulent plant that, like the cactus, contains almost 95% of water. It is crucial to have a reserve of water at high altitudes where water is often present in the form of snow or ice, and thus cannot be assimilated by plants.

### The alpine prairie

- **it offers cows and goats excellent grass that gives a special flavour to the milk and, hence, to the cheese produced in alpine pastures;**
- **it protects the sides from the erosion of rain;**
- **it places at everybody's disposal miscellaneous types of grass that are edible or which possess curative properties;**
- **it is a living collection of plants and flowers, and also an archive for the preservation of seeds;**
- **it is a basic habitat for many wild animals that find refuge (e.g., marmots) or food (e.g., eagles) in this location.**