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First Interregional Training Seminar (ITS)

"Integrated green infrastructure and biodiversity conservation"

25 JANUARY 2024

Revalorization of municipality public green infrastructure to enhance biodiversity

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MUNICIPALITY OF MONTECOPIOLO

Montecopiolo is a small municipality with 1,044 inhabitants. It is part of the province of Rimini, in the region of Emilia-Romagna.

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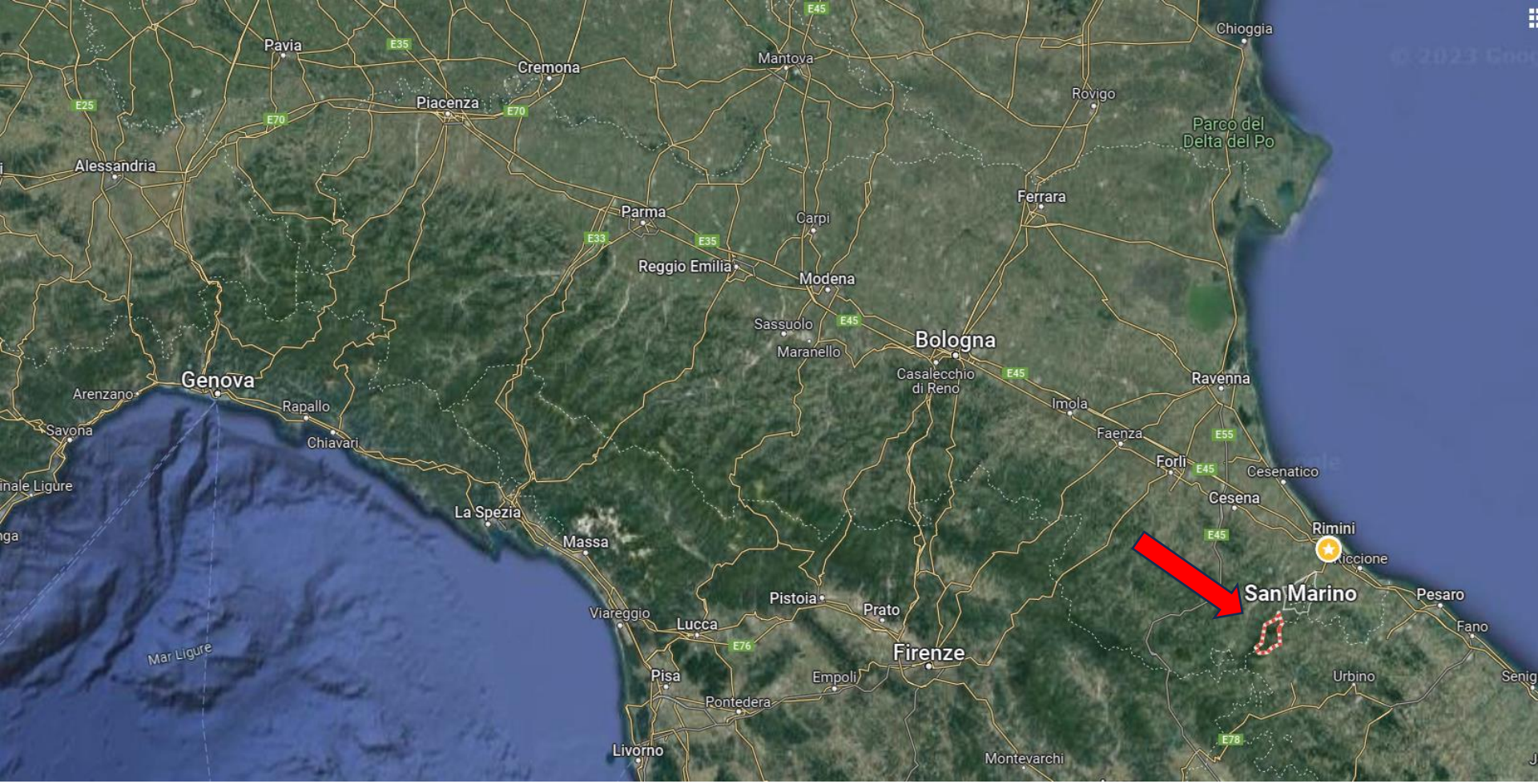
Rimini

Valmarecchia



Montecopiolo is the highest municipality in the province of Rimini (915 metres above sea level).

It is part of the Sasso Simone and Simoncello Regional Natural Park.The municipal territory includes the mountains of Palazzolo, Boaggine, Pennuzza, San Marco, **Montone**, Copiolo and the peak of Mount Carpegna (1,415 m).

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Main intervention:

Forestry intervention in the Monte Montone forest with the aim of:

- securing the area
- reducing fire risk
- increase of tourist and recreational use

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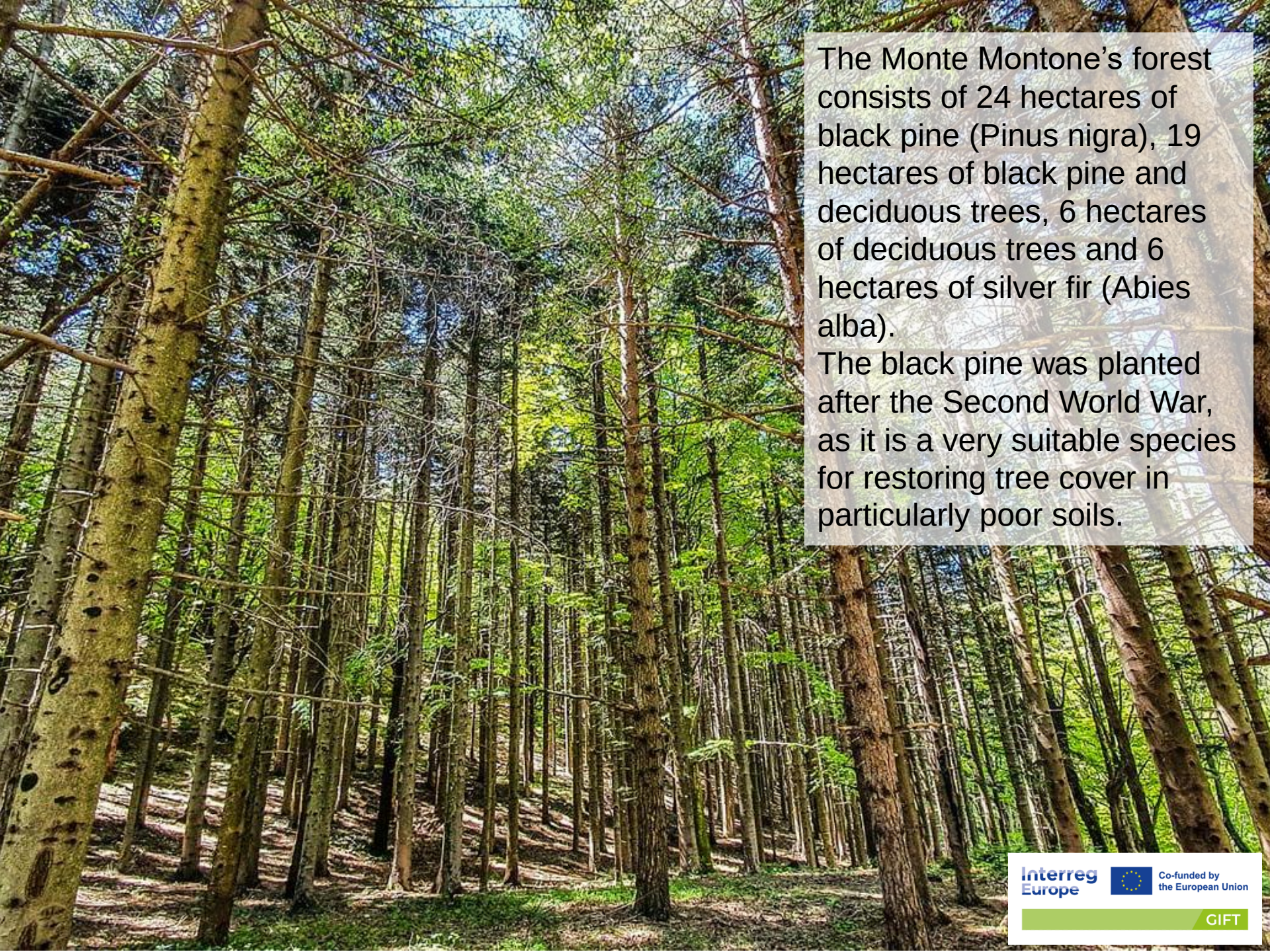

The Monte Montone's forest consists of 24 hectares of black pine (Pinus nigra), 19 hectares of black pine and deciduous trees, 6 hectares of deciduous trees and 6 hectares of silver fir (Abies alba).
The black pine was planted after the Second World War, as it is a very suitable species for restoring tree cover in particularly poor soils.

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In addition to black pine (Pinus nigra) and silver fir (Abies alba), the area is very rich in tree species such as :

- spruce (Picea abiens)
- beech (Fagus sylvatica)
- sycamore (Acer pseudoplatanus)
- norway maple (Acer platanoides)
- turkey oak (Quercus cerris)
- manna ash (Fraxinus profunda)
- ash (Fraxinus excelsior)
- hop hornbeam (Ostrya carpinifolia)
- chestnut (Castanea sativa)
- hazel (Corylus avellana)
- holly (Ilex aquifolium)

The forest also develops around the archaeological area of the Castle of Montecopiolo, founded in the 10th century and from which, in the 12th century, the dynasty of the Counts of Montefeltro, lords of the territory of the same name, began.

With the exception of some safety work, the forest had not undergone any management intervention for many years.

The lack of timely thinnings coupled with the advancing age of the reforestations and the increasingly frequent weather adversities such as strong winds, snowfall or concentrated and abundant rainfall have made these forests fragile with frequent plants or groups of plants standing dead, stunted or uprooted.

Thus, problems arose with regard to the safety of people, reduced or impeded accessibility of the forest and paths, and reduced attractiveness.
The thinning was also intended to encourage possible successions leading to more stable forests with a higher degree of biodiversity.

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The main intervention

Thinning from below was carried out on the entire area with a maximum removal of 30% of the woody mass present, and trying to determine a residual cover of at least 75%.

The thinning released the plants with the best development and conformation that were candidates for constituting the mature forest. Thinning then removed dead and perishing individuals as a priority and secondarily adjusted the density as uniformly as possible, eliminating dominated or subdued individuals.

In pure coniferous forests, native broadleaf trees in good vegetative condition were excluded from the cut. In the portion classified as a mixed broadleaf forest, the planned intervention was less intense and aimed only at eliminating dead and perishing plants and enhancing individual plants of particular value.

The silvicultural method adopted envisaged the removal of whole trees for the valorisation of woody material with a notable effect in terms of fire risk reduction as it decreases the material that can be set on fire, widens the distance between crowns and favours the mineralisation of the thick litter of needles that can easily be set on fire.

The forest subjected to thinning also has an excellent visual impact as it is the preferred setting for forest visitors, thus increasing the recreational value of the stand itself compared to the absence of treatment.

In consideration of the area's considerable tourist-recreational vocation, punctual interventions have also been carried out to enhance individual plants of particular value, freeing them from competition from neighbouring plants.


After a 24-month intervention, this is the condition of the forest today
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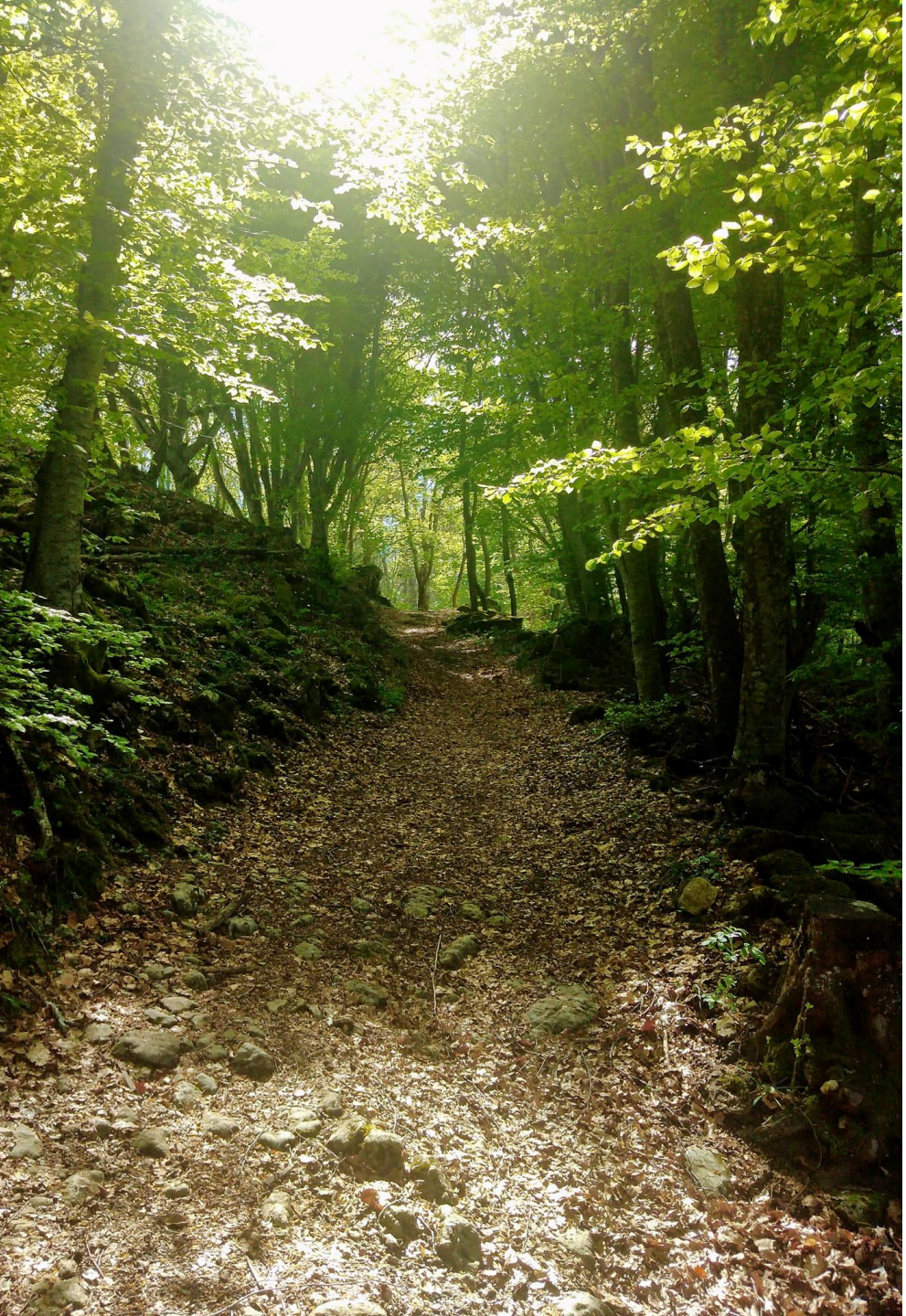

The enhancement project took place without incurring direct economic costs, but rather through an exchange of resources that contributed to significantly improving the appearance of the site from a landscape point of view.

This initiative involved targeted actions, such as road improvements, the installation of benches, the removal of metal fencing within the forest and its replacement with wooden fencing. In addition, cottages and other equipment were erected to blend harmoniously into the natural environment.

The only costs incurred relate to the erection of the small “houses” for insects and birds along the biodiversity trail, the notice boards, the signposting of the new trails and the information and illustration panels containing detailed maps of the available trails. In total, the costs amounted to approximately 10,000 € (regional funds).

All of the equipment has been made using timber obtained from forest enhancement. This not only demonstrates a commitment to environmental sustainability, but adds a visual touch that highlights the combination of nature and structures created to enhance and preserve the environment.

Here is another example of the research and reuse of materials that this redevelopment work has brought.

The Monte Montone Park is now widely frequented by tourists and is the scene of many initiatives such as guided tours with Environmental Hiking Guides, guided tours for schools, yoga sessions, musical immersion experiences in nature.

It is also home to the Outdoor Survival Academy, which runs training courses in the main outdoor sports.

The redevelopment of the areas has stimulated the emergence of cultural associations such as the Lettrici nel Bosco (Readers in the Wood).

Several cultural activities take place here, for adults and children

Two areas have been created near the Monte Montone Park to protect and increase biodiversity and raising awareness.

➡ An area where the land is not mown, and vegetation is left to grow spontaneously.

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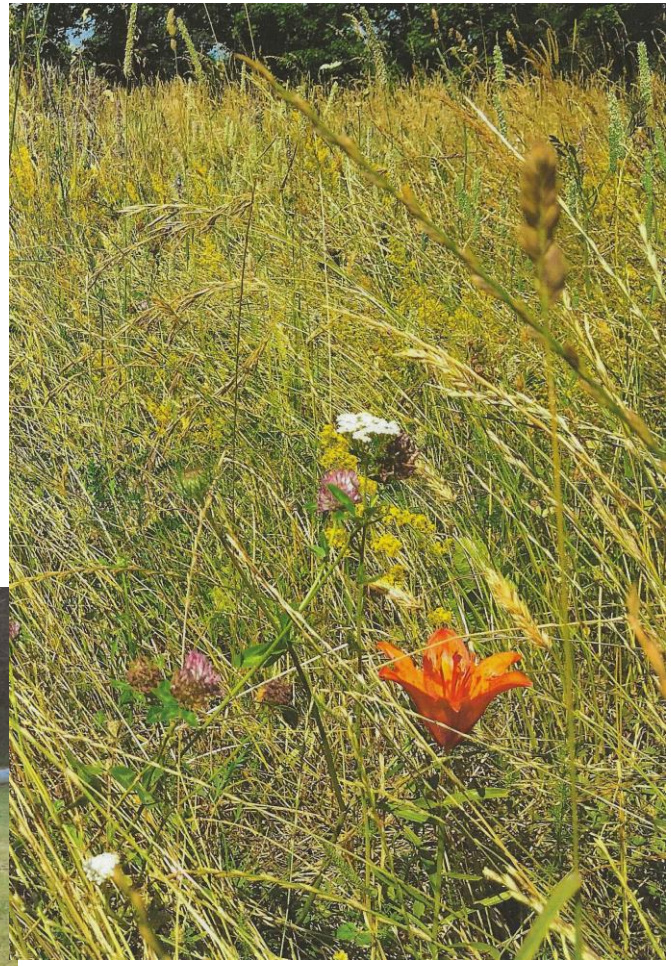

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➡ A path equipped with several bird and insect houses/shelters, and some Beehotel for bees.

Last but not least

Work on the area also provided the opportunity to map the biodiversity present. This mapping revealed the presence of around 600 species of wild flowers and a significant number of wild orchid species in the area, around 40.

This further highlights the richness and diversity of the flora present in the Montecopiolo area. The presence of so many species of wild flowers further contributes to local biodiversity, providing habitats and resources for a variety of organisms and contributing to the balance of the ecosystem.

In Emilia-Romagna region, orchids are protected thanks to Regional Law which prohibits their collection throughout the entire regional territory.

The presence of orchids, in so many species, has aroused the interest of the Gruppo Italiano Ricerca Orchidee Spontanee (Italian Spontaneous Orchid Research Group), which monitors and corroborates the data and whose careful and specialised work is essential to ensure the continuity of this monitoring and to develop sustainable management strategies that ensure the long-term protection of this extraordinary natural wealth.

GRUPPO ITALIANO RICERCA ORCHIDEE SPONTANEE

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Thanks!

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