

Didactic trail

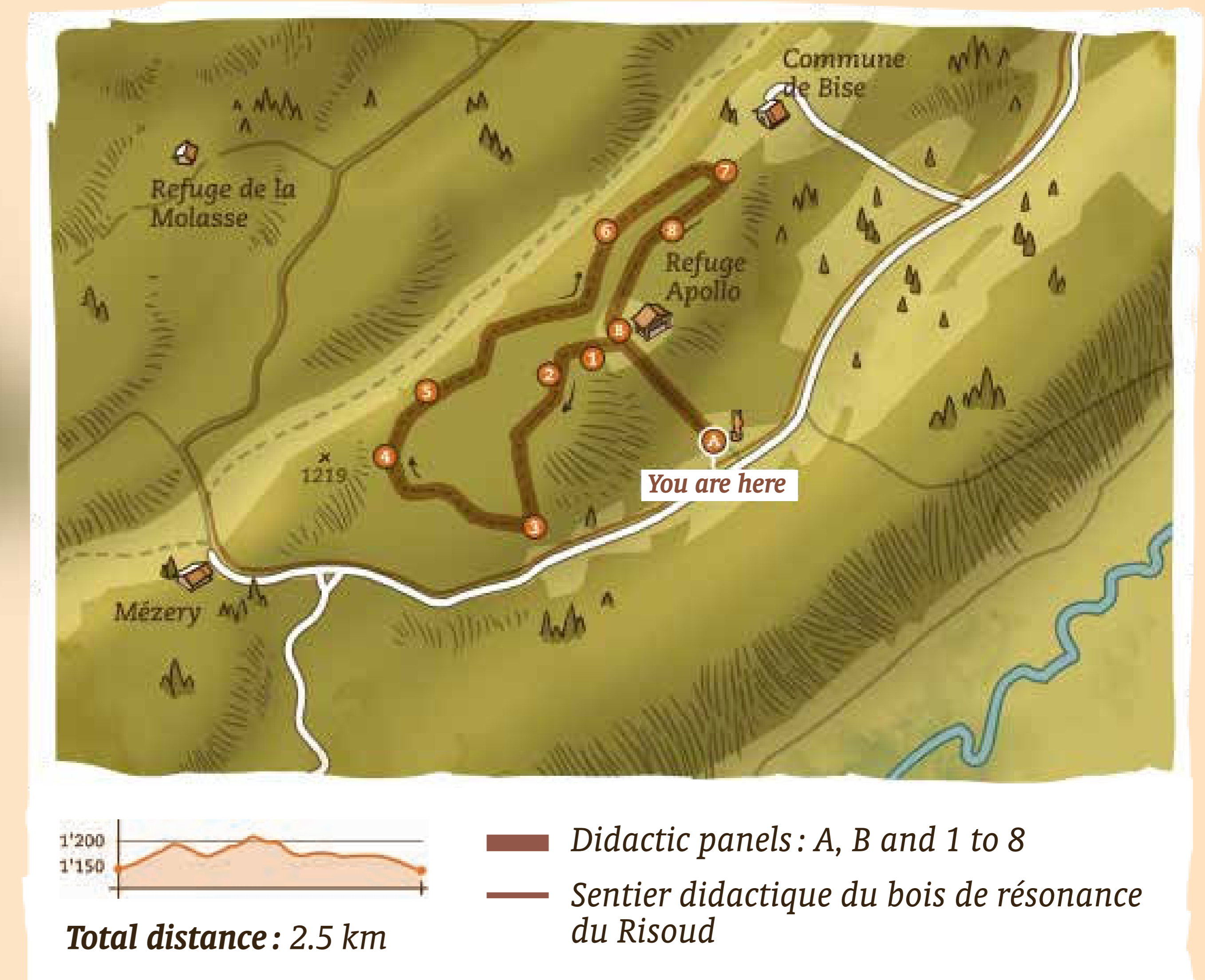
The trees, between the visible and the invisible

Welcome in the Risoud forest! You are currently at starting point of a trail that will enable you to discover some incredible features of trees and forests. Over the past years, some amazing discoveries have been made by researchers and forest enthusiasts. We wish you a pleasant visit along this trail, which we hope will change the way you look at trees forever...

The concepts presented on the trail panels are mainly derived from the research work of Professors Ernst Zürcher, Suzanne

Simard, Michaël Vescoli and Peter Wohlleben. We would like to take this opportunity to pay tribute to their curiosity, their intuition and their capacity for popularization. Without them, everything you are about to discover would have remained unknown. Humanity is still in the early stages of its understanding of how the forest environment works. Let's hope that this trail will inspire you to find out more and help you understand the close relationship between trees and humans.

Path



Animated versions of the illustrations on the panels are available on the website below. You'll also find additional information for each concept, such as scientific articles, documentaries, reference websites, etc.

This trail is the successor to an earlier one created by forest ranger Louis Bovey and his colleagues in 2005. Information panels for this trail can be found on the website at the bottom of this panel.



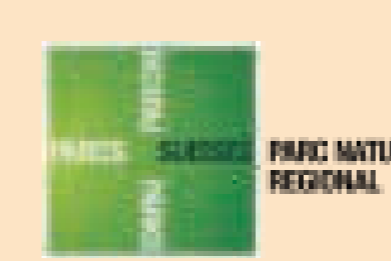
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We thank you in advance for:

- Only use the parking lots provided for this purpose
- Take your garbage with you
- Follow the directions given by the forestry services

The trail is not easily accessible for people with reduced mobility.

Impressum

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Graphics and illustrations: Pierre-Abraham Rochat

Audiovisual animations: 7Media

Website: Cavin-Baudat

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Le Brassus, October 2025

Melody of the Earth

Schuman resonance

Very low-frequency electromagnetic waves, such as those emitted by lightning, propagate and resonate in the cavity formed between the ground and the ionosphere. This creates resonance effects with a frequency peak at 7.83 Hertz. This phenomenon is known as “Schumann resonance”.

This vibratory rate is at the limit of that of the theta and alpha waves of the human brain in meditation and peaceful consciousness. An analogy here is the Earth pulse, sometimes poetically referred to as the Earth melody. This frequency is used in naturopathy to promote human health. Indeed, it seems that a Schumann frequency bath is beneficial for human beings.

Look for a tree and let it teach you calm.

Eckhart Tolle, Canadian writer and lecturer

Lightning emits very low-frequency waves.

A frequency peak can be observed at 7.83 Hertz. This is the main frequency of the Schumann resonance.

Although scientific consensus is still lacking at this stage, research is currently underway to demonstrate that trees may communicate with each other using this same frequency, and others even lower. Being close to trees would therefore enable humans to take care of their health. Living close to a forest could therefore be considered prophylactic. So don't hesitate to embrace trees (although be careful not to injure their roots)! They know how to take care of you, for free...

Find out more about Schumann resonance and see an animated version of this panel illustration:



The low-frequency theta-alpha waves of the human brain during meditation in a serene state are close to the Schumann resonance.

Plant-animal alliance

We bears love to fish! My colleagues in North America are champions in this field. But most of all, we like to eat in peace and quiet, taking our catch into the forest to enjoy it. In doing so, we leave gigantic quantities of fish at the foot of the trees. The trees, in turn, make good use of this providential food via their root systems. Among other things, this gives them access to nutrients essential to their growth: calcium, magnesium,

potassium, selenium, zinc, copper, iron, phosphorus, etc. The incredible size of some of Canada's west coast giants can be explained by this alliance between the plant and animal worlds. In return, the forest offers us protection, peace and food. This phenomenon can also be observed, on a lesser scale, in the forest you are currently visiting.

The oak jay

You may have come across an oak jay in the Risoud today! This bird also maintains an alliance between the plant and animal worlds, transporting and hiding its favorite food-oak acorns-in various places. Being omnivorous, it is thus capable of disseminating plant and animal elements (such as worms or insects) over great distances.

When the last tree has been felled - When the last river has been poisoned - When the last fish has been caught - Then we'll know that money can't be eaten.

Geronimo, Native American chief of the Apaches

Can you find any animal tracks around you that might behave in a similar way?

Find out more about plant-animal alliances and see an animated version of this panel illustration :



Mother Tree

Canadian professor Suzanne Simard has attempted to demonstrate that large Douglas fir trees act as protectors for the younger trees growing around them. Through their root systems, these “mother trees” are said to be able to promote or retard the growth of younger trees, by transferring variable quantities of

food to them, for example. These giant fir trees would not only live for themselves, they would also act as we humans do within our families. Although there is competition for light, we suspect that trees are more capable of collaboration than previously thought. However, the notion of the mother tree still needs more research to be considered scientifically validated.

*Roots and mycelium
(fungi) intertwine.*

*The trees are
interconnected in a
network reminiscent
of the Internet, the
human brain or
galaxies in the
universe.*

*Nutrients, chemical and electrical
signals are exchanged through the
roots and mycelium.*

*The best time to plant a tree was 20 years ago. The
second best time is now.*

Chinese proverb

Look around you ! Can you identify a potential Risoud mother tree ?

Find out more about the concept of the mother tree or see an animated version of the illustration on this panel :



Trees, cosmos and alchemy

Could it be that certain tree species are connected to particular planets? Renowned researcher Lawrence Edwards found that tree buds change shape and size rhythmically, in regular cycles throughout the winter, in direct correlation with the moon and other planets. Oak seems to be linked with Mars, beech with Saturn and birch with Venus, for example.

It's at the moment when the Earth, Moon and Mars are aligned that the oak bud has its most elongated shape (theta).

Let's take a closer look at the oak tree, so common in our latitudes. The fact that its buds pulsate in correlation with a moon-Mars alignment tends to prove what alchemists have been saying since time immemorial: the oak is linked to Mars. And in alchemical tradition, oak and Mars are associated with war, iron and blood. So we've come full circle!

We must honor the oak under which we live.

Icelandic proverb

In winter, the buds pulsate, as if they wanted to bloom.

Find out more about tree pulsation or see an animated version of this panel illustration:



Yew: tree of life tree of death

Among all trees, there is one that is truly special: the common yew (*Taxus baccata*). This tree has been revered by all the peoples where it has grown, and in particular by the Celts. In particular, it represents immortality, which is why it is often found in cemeteries. It has many specific characteristics, but we've chosen to present two in particular.

Yew produces an exceptional natural composite material. The heartwood (duramen) performs very

well in compression. The softer sapwood, on the other hand, has an unrivalled ability to resist bending. By combining these two properties, the English created an artifact that enabled them to win some incredible battles during the 100 Years' War in the 15th century: the famous "Longbow". The symbolism of the yew in archery is omnipresent and its history goes back thousands of years. Yew was one of the first high-tech natural composite materials used by man.

Heartwood Sapwood

What we do to the forests of the world is only a reflection of what we do to ourselves and to each other.

Mahatma Gandhi, Indian lawyer and political leader

Yew is toxic to humans and most animals. For this reason, it has often been cut down to avoid any danger, especially to horses. Yew produces several anti-cancer substances, notably paclitaxel and docetaxel. These molecules have now been synthesized to avoid the need to cut down yew trees. The yew is therefore a tree that can kill... or bring life! It's easy to see why its symbolism is so powerful in human cultures.

Find out more about yew and its special features or see an animated version of the illustration on this panel:



Defense strategy

We often think that trees are at the mercy of predators and don't know how to defend themselves. But this is often not true! For example, the acacias of the African savannah have a very special skill. When a giraffe starts to graze on their leaves, after a few minutes they produce a toxic substance that prevents the giraffe from continuing its feast. In addition, a volatile substance is released into the air and carried by the

wind to the surrounding acacias, which in turn make their leaves bitter.

Acacias are, however, dependent on animals to disperse their seeds and perpetuate their presence in the savannah. By forcing large consumers to graze elsewhere, their precious droppings are disseminated to the benefit of all the surrounding trees.

In our latitudes, the geranium has a similar ability. When attacked by a Japanese beetle, it produces a toxic substance that prevents the predator in question from continuing its meal.

To defend themselves, acacias produce a toxic substance.

When attacked, acacias emit a volatile substance, a warning signal for their fellow acacias.

The tree is such a generous organism that it offers its shade to those who come to cut it down.

Francis Hallé, French botanist and biologist

Learn more about tree defense strategies or see an animated version of this panel illustration:



Sauna

Of all human inventions, the sauna is among the most relevant to health. A sauna built of wood, heated with logs and placed in a forest environment brings an unsuspected number of benefits to human beings.

Scientific studies have shown that “phytoncides”, natural chemicals released by trees, can boost the immune system. Simply taking a walk in the forest can absorb these phytoncides.

Infrared rays from the radiant heat of a wood fire are particularly beneficial to human health, unlike the radiation from an electric heater, for example.

The heat generated by the wood fire promotes perspiration, which improves blood circulation by increasing heart rate, effortlessly. The heat of a sauna stimulates the release of oxytocin (love hormone) and endorphins (happiness hormone).

In aromatherapy, the sauna allows the use of particularly useful essential oils such as lavender, pine and peppermint.

A Japanese scientific study shows that the simple act of touching wood instantly calms the nervous system, unlike other materials such as stone or metal.

The tree of silence bears the fruit of peace.

Arabic proverb

Find out more about the sauna and its benefits or see an animated version of the illustration on this panel:



Growing up dancing

Did you know that trees grow by dancing? It has been scientifically observed that the annual shoot at the top of the tree oscillates in different directions before stabilizing. This ability to find the right direction for growth is called “proprioception”. This ability to grow “dancing” can also be observed when a tree grows on a slope. A coniferous tree will create more wood on the side of the slope to compensate for gravity (the opposite is true of deciduous trees). Trees are masters in the art of living in permanent dynamic imbalance.

The treetop seeks verticality by “dancing”.

*Do like the tree: change your leaves and keep your roots.
Change your ideas and keep your principles.*

Tibetan proverb

*Softwoods create more wood
on the slope to restore their
balance.*

We’ve reached the end of our journey into the heart of my forest! Thank you for taking the time to learn about my friends the trees and their incredible powers. I hope that your perception of them has evolved a little and that this introduction has whetted your curiosity! If you’d like to find out more about trees, I invite you to visit the Discovery Trail website by scanning the QR below (www.lesarbresdurisoud.ch). But before I leave you, I’d like to leave you with an open question:

If trees communicate with each other, work in networks, are intelligent, peaceful and caring. If they take care of their families and know how to heal. If they vibrate to the rhythm of the earth and the cosmos. Are they so different from humans?

Find out more about the tree dance or see an animated version of the illustration on this panel:

