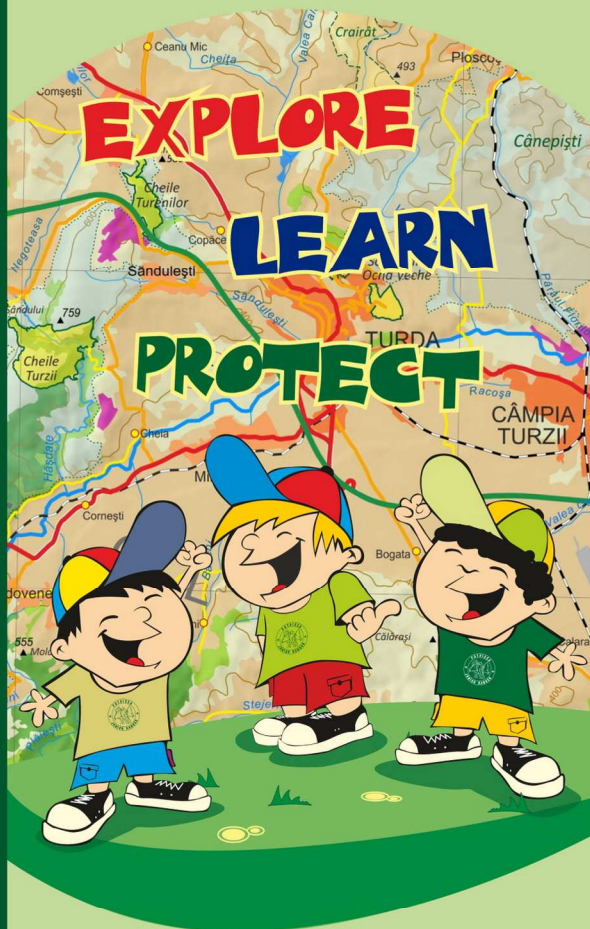


JUNIOR RANGER CLOSE TO NATURE



JUNIOR RANGER ... CLOSE TO NATURE



POTAISSA JUNIOR RANGER



www.juniorranger.ro

Information panels

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OF GORGES**

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CLIFFS**

A Junior Ranger wants to know nature, to protect and enjoy each output and activity in nature.

A world less known, a magical world opens in front of you, a world where plants and animals have learned to tell us beautiful stories.

Walking on paths in Turda Gorges and Tureni Gorges, you'll discover the limestone story, where the water has carved relief in various forms... a world of stone with mysterious legends, caves and fast rivers, animals and rare plants, which leads you to discover them and protect them.

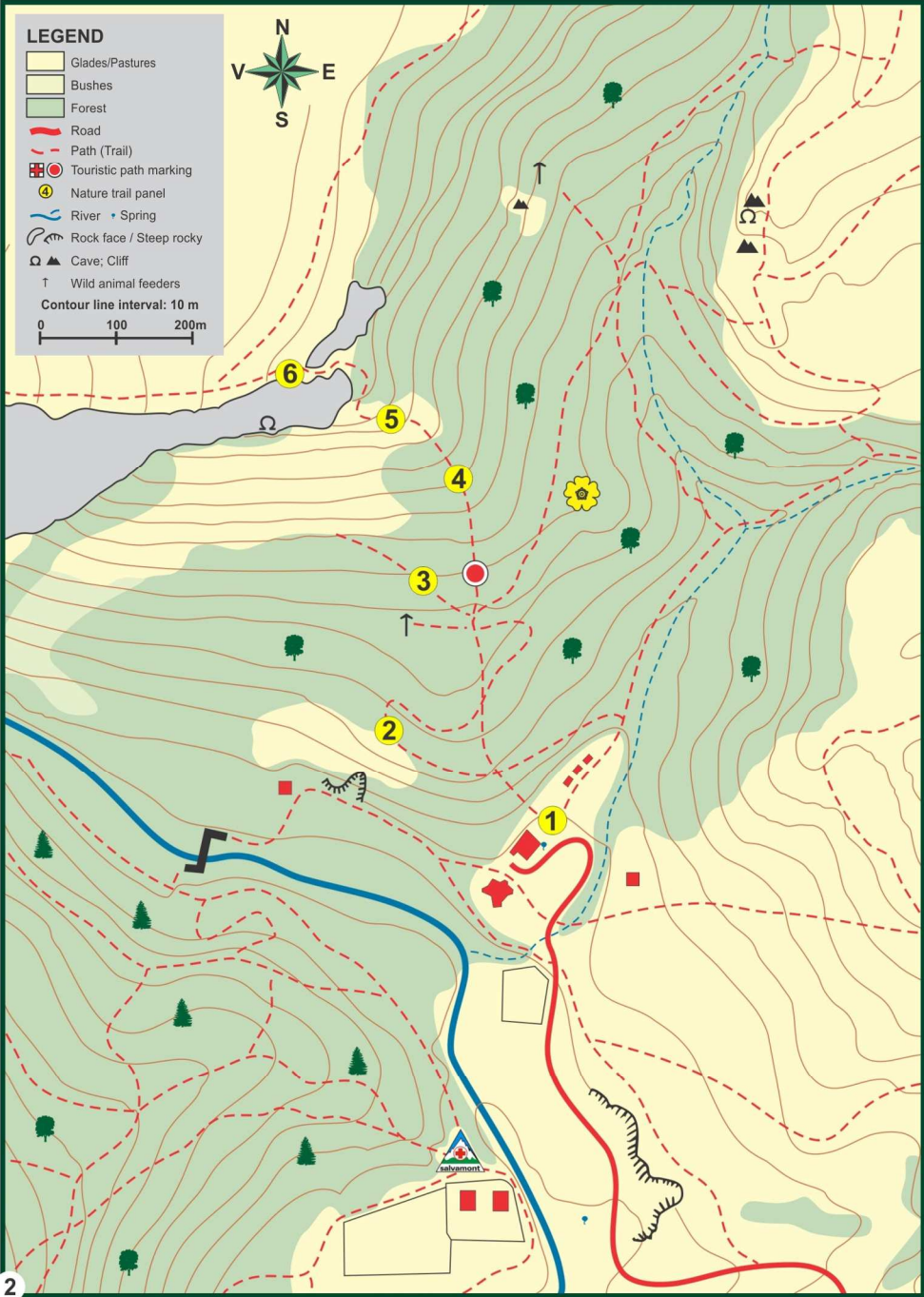
Patently and silently, following the steps and footprints of animals, the binoculars on our nose and the camera in our hands, we are about to discover a different world and various ways of life.

There's always a butterfly, a stag or an eagle stalking you from the cliffs or from the forest. By caves and cliffs, with camera in hand waiting for a butterfly or an eagle, you may figure out how time elapsed and get ready for a new adventure!

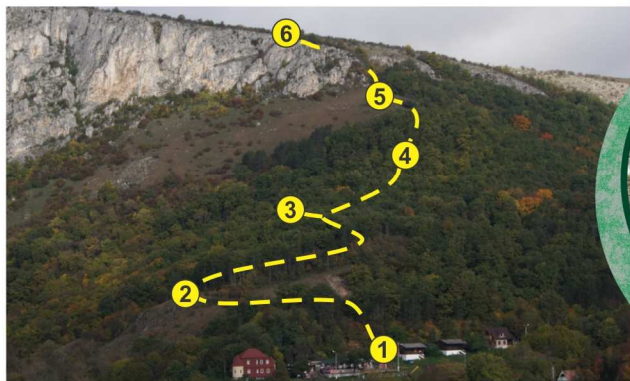
Discover the world around you, listen, look and learn the nature stories, mind and protect the house of plants and animals. A hidden paths which takes you through this worlds.

In Turda Gorges awaits you the "Nature Detectives" thematic trail and in Tureni Gorges you're invited on "The Stone Age Adventure" thematic trail.

THEMATIC TRAIL: NATURE DETECTIVES



TURDA GORGE (THE VAPA FOREST)



The path is in the natural reservation Turda Gorge, in Vapa forest, near the touristic chalet. One can have direct car access to it can reach the theme path driving from National Road (DN75) to Regional Road (DJ106) towards Cheia commune, then keep up the local road up to the downstream entrance of the gorge.

From Turda, one can walk from downtown either passing through Sandulesti village or going along a hill road called "The road of the gentlemen" (2 hours of walking) as far as the chalet.

THEMATIC TRAIL: NATURE DETECTIVES

Theme Path Length: 1 km; Level difference: 200 m

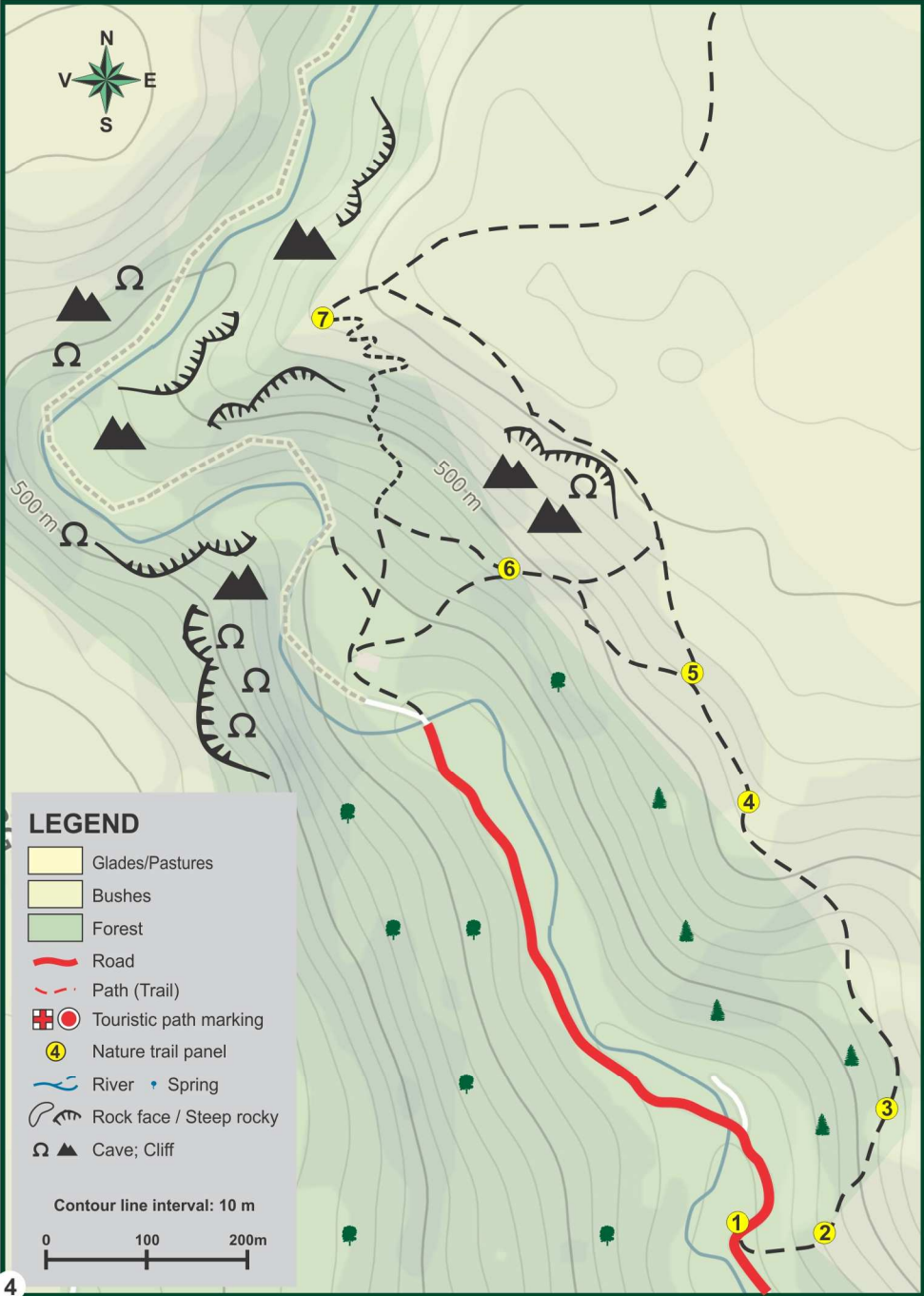
Duration: 1-2 ore (interpretation time included)

The route is accessible all year round. The theme path partially overlaps the tourist route "Turda Gorges Tour", marked with a red point. **WARNING !** There are no resources of drinking water! Please mind the slopes and the slippery areas !

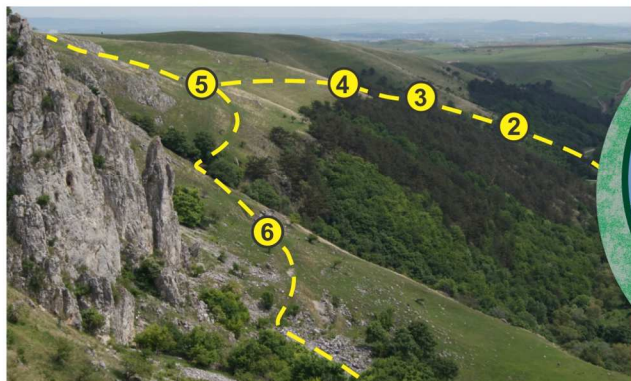
Turda Gorge and the surrounding area have been a natural reservation since 1938. The importance of the reservation is given by the biological diversity, which is high, compared to a roughly limited area (324 hectares), both in terms of the habitats and also of the existence of protected species of plants and animals (bats, amphibians, fish, invertebrates and birds). The caves and the grottos are also important for the archaeological vestiges discovered in the Neolithic and Bronze Age.



THEMATIC TRAIL: THE STONE AGE ADVENTURE



TURENI GORGE



The theme path is located in the natural reservation of Tureni Gorge. One can have car access to the theme path from the national road (DN1, Turda - Cluj-Napoca), through Copaceni village, on a 3-km way that one can reach as far as downstream the gorge.

From Tureni commune, upstream the gorge, one can get to the theme path walking through tourist routes, along both sides of the gorge.

Thematic trail: THE STONE AGE ADVENTURES

Theme Path Length: 1,5 km; Level difference: 200 m

Duration: 2-3 ore (interpretation time included)

WARNING ! Please mind the slopes and the slippery areas ! There are no resources of drinking water! The route is accessible all year round.

The Tureni Gorge presents itself as a spectacular gorge with a unique geomorphology: located in a natural picturesque setting, with many karst shapes, Tureni Gorge rises unexpectedly out of the monotony of the Transylvanian Plain and represents the ideal place for outdoor activities with family, but also for expeditions full of adventure (hiking, climbing, mountain biking).

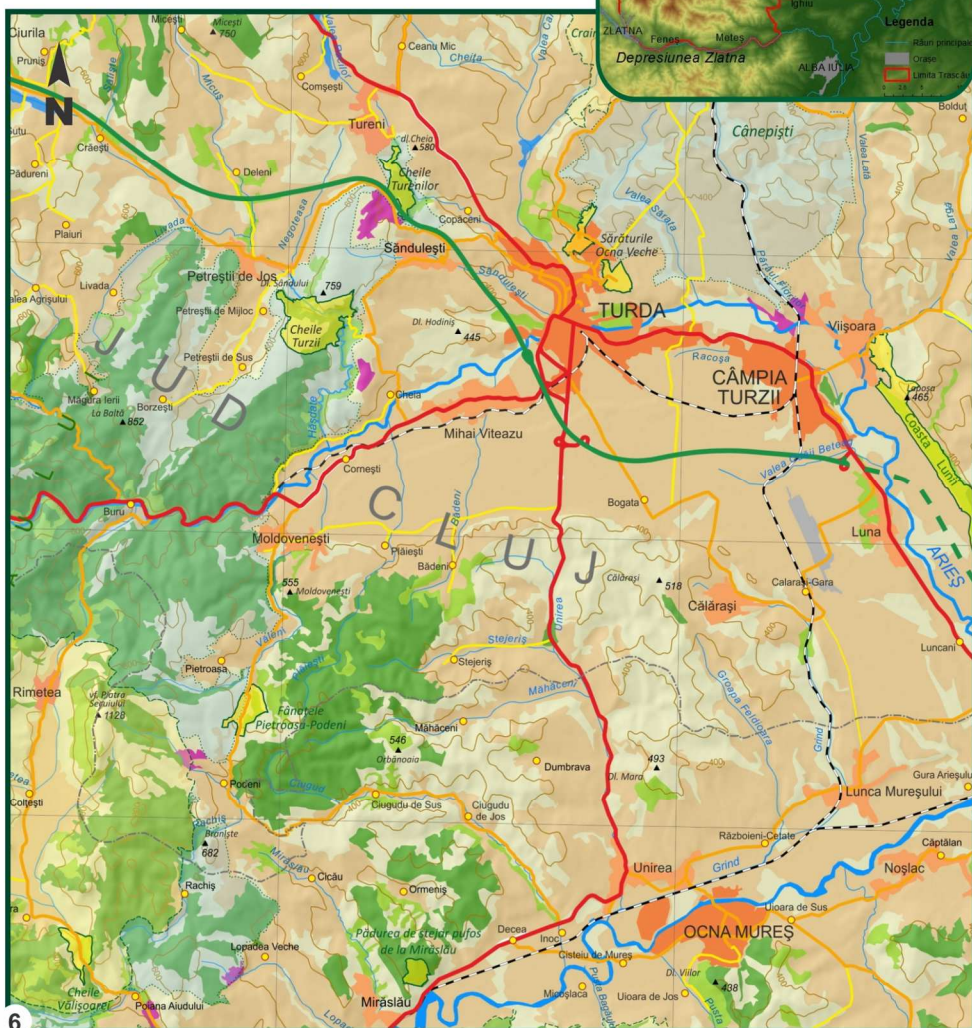
Given the importance of the preservation of the biodiversity, Tureni Gorge is home to 3 protected habitats. The site has been declared mixed natural reservation (in terms of the flora, the fauna and the landscape) and archeological park ever since 1993. Here were discovered 53 housing structures dated from the Neolithic times but also various species of corals, spongiae and algae.



Protected areas in the surroundings of Turda

The protected areas ROSCI0034 Tureni Gorges, ROSCI0035 Turda Gorges and ROSPA0087 The Trascău Mountains, are included in the protected areas network "Nature 2000".

The European network "Nature 2000" has as purpose to protect and preserve the plants and the animals and their environment (habitats) and does NOT aim to forbid human activities, but only to establish some rules helping to preserve the biodiversity in the long run, and to put into value the natural resources and local heritage.



THE FORMATION OF GORGES



Turda Gorge came into being as a result of the epigenetic activity of the Hasdate brook. The relief formed on jurassic limestone gave birth to a karst landscape of rare wilderness: high and steep cliffs, vertical walls, sharp crests, stone towers, stony dales, gravel roads ("zurusuri" in the local language), lapiaz and sinkholes (La Bliduri, the sinkhole from the Sandulesti Cross).

In Turda Gorges there are over 30 caves, niches or arcades of small sizes (only 8 caves exceed 20 m, the biggest reaching 120m - The Hungarian Cave). The caves are mostly dry, that's why they have been lived in since old times.

The Tureni Gorge are the result of some karst phenomena developed in jurassic limestones. It looks like a "V" shaped karst canyon, with walls heights between 20-105m. The gorge is 1850m long. On the karst plateau over the gorge the altitudes are relatively uniform (between 540m and 580m).

The presence of the lapiaz, the dolines and the natural bridges are the result of some karst phenomena at the surface.

The grottos and the caves are very short (between 3-58 m), clogged, inactive and have been lived in ever since the oldest times. Archeological research has found out that caves were lived in and many objects, tools, ceramics, coins and tombs necropolis have been discovered.



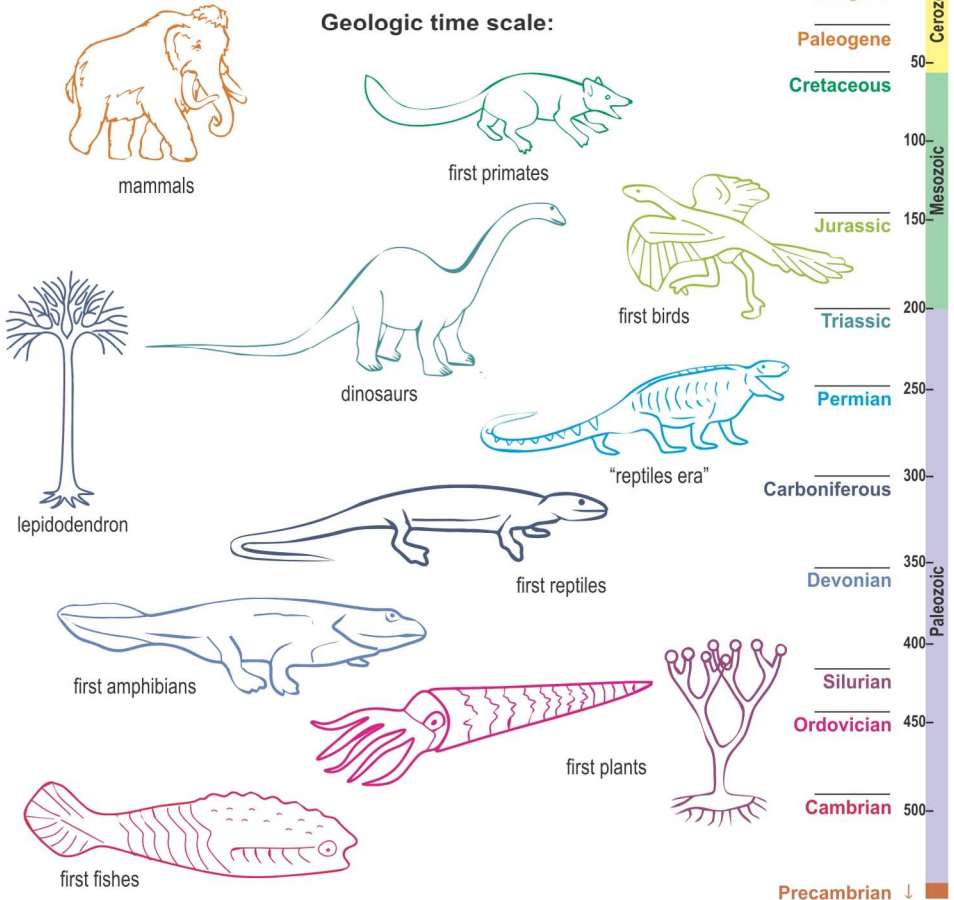
The importance of water in nature

Turnul Ascuțit (The Sharpened)

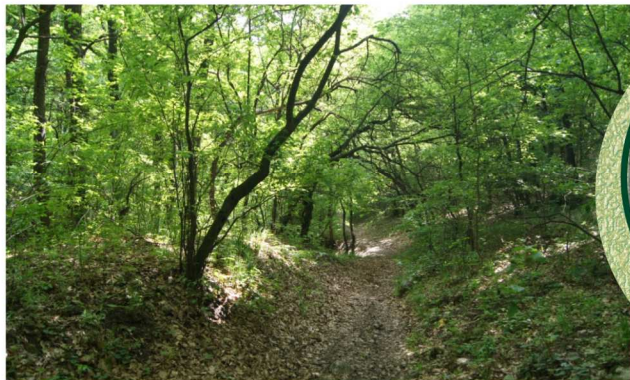
It is a rocky ridge in Turda Gorges, which imposes through verticality of the walls. He stood on the Hasdate river, until the top of the Petresti ridge. At the bottom, was formed an impressive trail of debris, which is called "Zurușul Lung"



Geologic time scale:



THE FOREST, THE HOUSE OF ANIMALS



The forest is the house and the place where many plants and animals are born and live.

In Turda Gorge the forest vegetation grows and develops alternately. Trees specific to high altitudes will be met together with species typical of hills and plains. In Tureni Gorge one can spot hornbeam trees (located on the right side of the gorges), and the river meadows which house species of willow-trees and poplar-trees.

In general, the wildlife is to be seen where there is vegetation, where every corner, every pool, the forest and the bushes vibrate with life, from the simplest forms to the cynegetic animals. With a little bit of luck and interest, you can see various species of animals.

Dependent on the forest wood are the insects like: Rosalia longicorn (*Rosalia alpina*) and the stag beetle (*Lucanus cervus*) and the great capricorn beetle (*Cerambyx cerdo*).

Through stones and springs one can see various species of amphibians and reptiles: the yellowbellied toad (*Bombina variegata*), the common frog (*Rana temporaria*), the common newt (*Triturus vulgaris ampelensis*), smooth snake (*Coronella austriaca*) and european green lizard (*Lacerta viridis*).

In the waters of rivers lives the Spined loach (*Cobitis taenia*), a species protected at the European level.

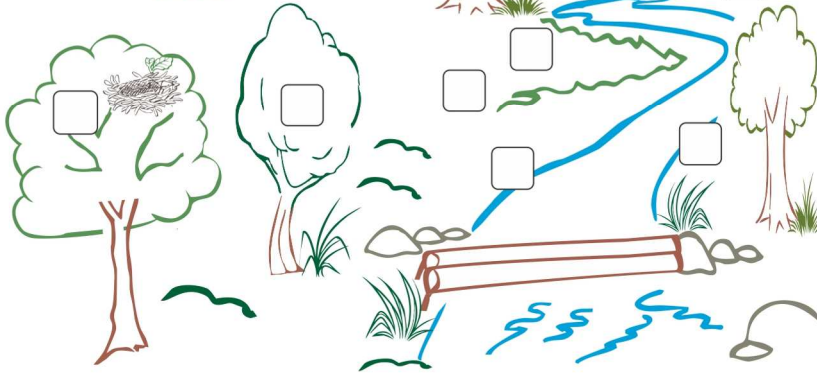
In the shade of the trees, one can meet different species of mammals: the deer, the hare, the fox, the wild boar, while the squirrel is active at the tree level.











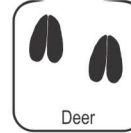
The house of animals

Squirrel

Squirrels have four front teeth that never stop growing. In order to keep teeth, squirrels always nibble something. The squirrel feeds on seeds, nuts, acorns, berries, young shoots, leaves and bark.



1. Bear 
2. Lynx 
3. Wolf 
4. Wild boar 
5. Otter 
6. Fox 
7. Deer 
8. Hare 
9. Golden eagle 
10. Owl 
11. Frog 
12. Squirrel 



Draw the traces found today ...

THE WORLD OF THE BIRDS



Turda Gorge and Tureni Gorge are located at altitudes between 400-800m, the area of oak-trees, the beech and the hornbeam. The bush vegetation is represented by the shrubbery, with hawthorn, common hazel, dog-rose and cornel-trees. Along the valley one can spot willow-trees, alder-trees and poplar-trees. At the end of the downstream entrance in the gorge, a pine-tree forest has been planted.

Up in the air, over the trees one can see numerous species of birds such as: the nightingale (*Luscinia luscinia*), the black woodpecker (*Dryocopus martius*), the great spotted woodpecker (*Dendrocopos major*), the greyheaded woodpecker (*Picus canus*), the woodlark (*Lullula arborea*) and the common chaffinch (*Fringilla coelebs*). Different species of birds are to be spotted in the limestone areas: the wallcreeper (*Tichodroma muraria*), the common rock thrush (*Monticola saxatilis*), the rock bunting (*Emberiza cia*), the Eurasian crag martin (*Ptyonoprogne rupestris*), the black redstart (*Phoenicurus ochruros*), the northern wheatear (*Oenanthe oenanthe*) and the golden eagle (*Aquila chrysaetos*).

The alternation of cliffs, agricultural fields and meadows offer home and food to many species of preying birds such as: the Eurasian sparrowhawk (*Accipiter nisus*), the common buzzard (*Buteo buteo*), the peregrine falcon (*Falco peregrinus*), the merlin (*Falco columbarius*), the Eurasian eagle-owl (*Bubo bubo*), the common kestrel (*Falco tinnunculus*) and the red-footed falcon (*Falco vespertinus*). The forests or the tree clusters are used for passing the night.



foto: www.freenatureimages.eu

The world of the birds

The golden eagle

is one of the best-known birds of prey. These birds are dark brown, with lighter golden-brown plumage on their napes. Golden eagles use their agility and speed combined with powerful feet and massive. Has a wingspan of up to 2m. It feeds on small mammals.



European honey buzzard
Pernis apivorus



Golden eagle
Aquila chrysaetos



Eurasian sparrowhawk
Accipiter nisus



Common buzzard
Buteo buteo



Peregrine falcon
Falco peregrinus



Eurasian hobby
Falco subbuteo



Common kestrel
Falco tinnunculus



FLOWERS AND BUTTERFLIES



Turda Gorge and Tureni Gorge enjoys a rich vegetation, with numerous species of plants and habitats (high conservative value, endemisms). The vegetation includes many tertiary, glacier relicts, steppe, balcanic and mediterranean elements.

The Turda Gorge flora has over 1000 species: the steppe iris (*Iris aphylla* ssp. *hungarica*), the sand iris (*Iris humillis* ssp. *arenaria*), Monkshood (*Aconitum fissurae*), a rare sorbus species (*Sorbus dacica*), aererul (*Ferula sadleriana*), prairie crocus (*Pulsatilla patens*) and the lop-sided onion (*Allium obliquum*).

Other representative plants are: the dianthus white (*Dianthus spiculifolius*), thymus (*Thymus comosus*), the red fescue (*Festuca rubra*), the Volga fescue (*Festuca valesiaca*), tall oat-grass (*Arrhenatherum elatius*), the mouse-ear hawkweed (*Hieracium tordanum*, *Hieracium pilosella*), the dragonhead (*Dracocephalum austriacum*), rose daphne (*Daphne cneorum*), snake's head fritillary (*Fritillaria meleagris*), the burning bush (*Dictamnus albus*), Hungarian lilac (*Syringa josikaea*) and Red-flowered viper's bugloss (*Echium russicum*).

The rich vegetation brings forward various species of invertebrates such as: bush-cricket (*Pholidoptera transsylvanica*), *Pilemia tigrina* and numerous species of butterflies: a Fenton's wood white (*Leptidea morsei*), a large cooper (*Lycaena dispar*), the Danube clouded yellow (*Colias myrmidone*), the scarce fritillary (*Euphydryas maturna*), Jersey tiger (*Callimorpha quadripunctaria*) and the southern festoon (*Zerynthia polyxena*).

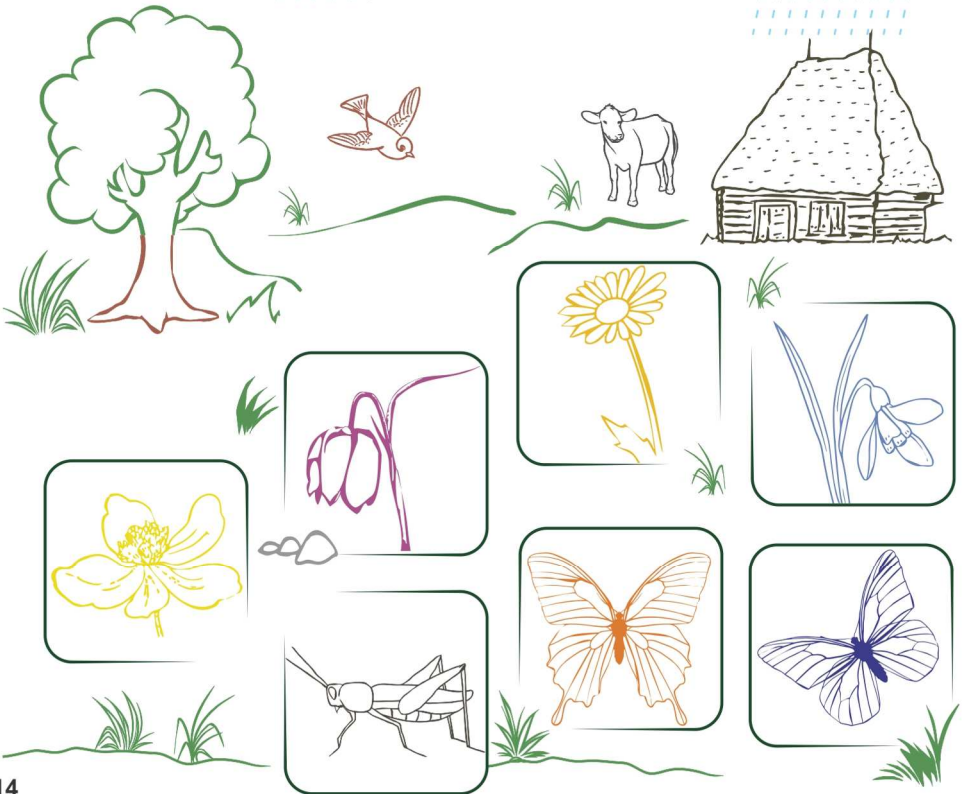
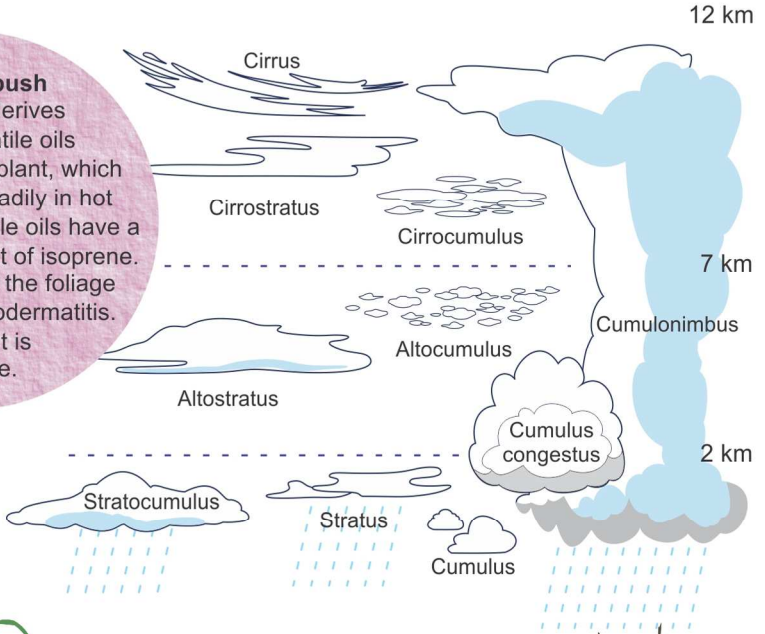


Cloud classification

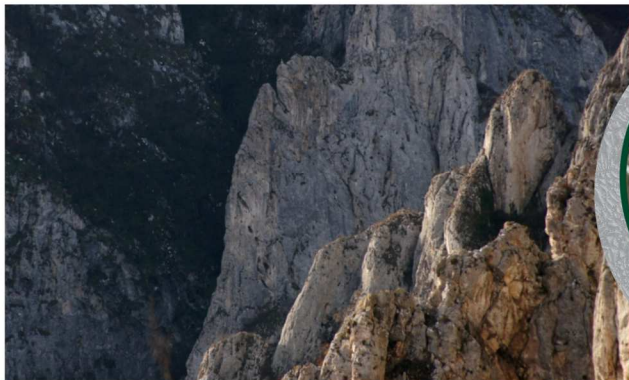
Burning bush

The name derives from the volatile oils produced by the plant, which can catch fire readily in hot weather. The volatile oils have a reputed component of isoprene. The contact with the foliage may cause photodermatitis.

The plant is
inedible.



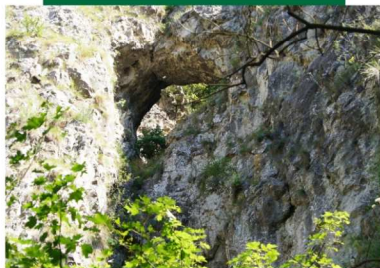
THE LIMESTONE CLIFFS



The limestone is a soluble, sedimentary rock which is dissolved under the action of water. All the processes related to water flow in soluble rocks and the forms of relief which come into being due to the water activity are known as Karst. The karst relief is divided in 2 categories: surface relief (exokarst) and in-depth relief (endokarst)

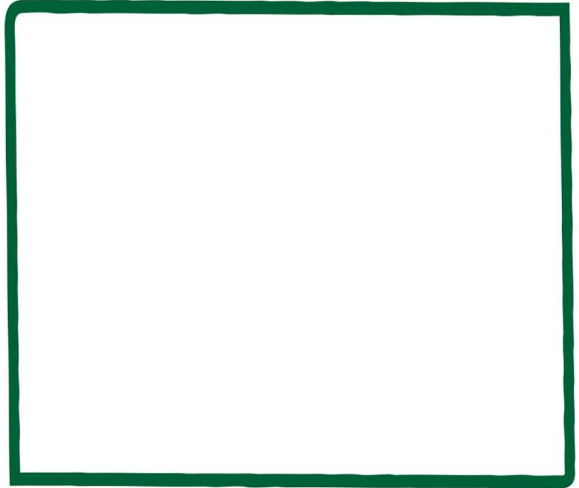
The erosion of the limestones at the surface gave birth to specific shapes, such as lapies, sinkholes and natural bridges and on the steep sides one can see various karst landforms (pinnacles, cones and towers) looking strange and picturesque at the same time. The frost and the thaw widened the cracks of the limestones, causing stone crumbings and leading to water flowing in and residual material piling up, thus, forming the gravel at the foot of the mountain sides. The endokarst phenomena have played an important role in the gradual deepening of the valley, which demonstrates the presence of the caves at different altitudes.

The caves and the cracks on the mountain sides, are home to many bats: the greater mouse-eared bat (*Myotis myotis*), the Mediterranean horseshoe bat (*Rhinolophus euryale*), the greater horseshoe bat (*Rhinolophus ferrumequinum*), species protected at European level. The reptiles which can be seen around are common wall lizard (*Podarcis muralis*), european green lizard (*Lacerta viridis*) and smooth snake (*Coronella austriaca*), who prefer rocky areas, scree and shrubland vegetation.

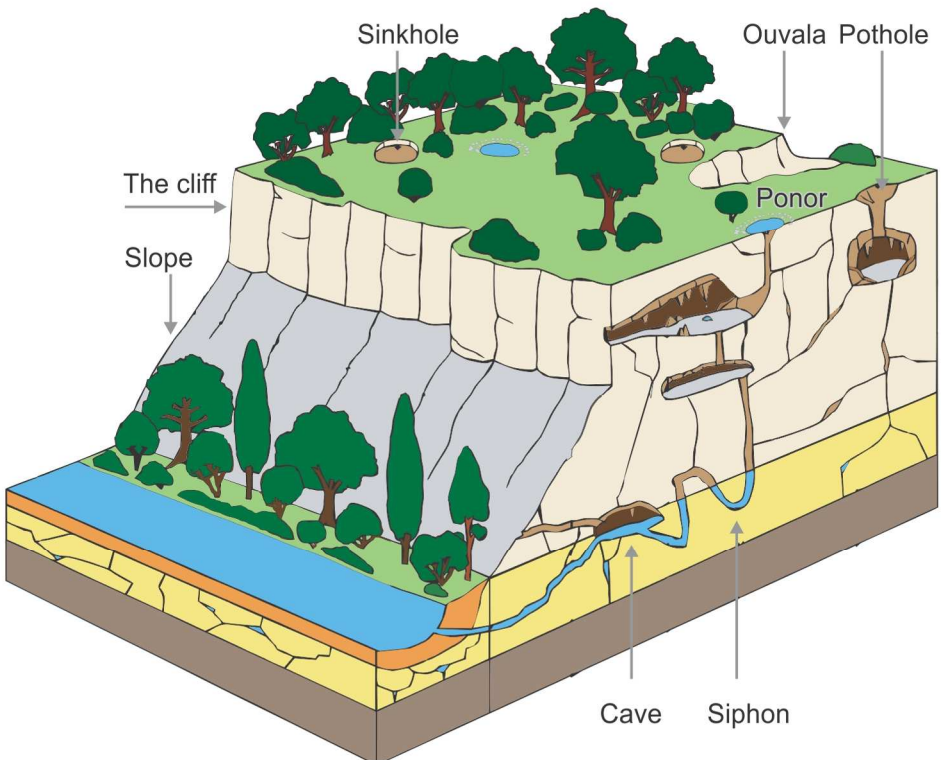


Draw what you see ...

BATS are mammals of the order Chiroptera. The forelimbs form webbed wings, making them the only mammals naturally capable of true and sustained flight. Bat echolocation is a perceptual system with ultrasonic sounds. This allows bats to detect, localize, and even find their prey in darkness.



The karstic relief



THEMATIC TRAILS & ACTIVITIES

The educational activities for knowledge of nature, offers unique experiences that help young people to understand the importance of nature protection, for local communities and provide a framework for involvement in preservation, protecting and promotion of the local heritage and the natural values.

THE SURROUNDINGS OF TURDA

In the surroundings of Turda has several conservation areas, with a high biodiversity and protected habitats.

Turda Gorge (1) and **Tureni Gorge (2)** are very important for many protected species and very impressive karst landforms. **Turda Saltmarsh (3)** protects the hills from Salt Valley, the salt lakes and the saltmarsh plants. The protected areas, **Cânepiști** and **Suatu-Cojocna-Crairât (4)** are important for steppe habitats and different species of birds. To **Butterflies Hill (5)** the steppe vegetation is shelter for 700 species of butterflies.

There are several thematic trails accessible all year round. Informative panels were located only in Turda Gorge and Tureni Gorge.

IARA COMMUNE

On the territory of Iara commune are two protected areas, included in the Natura 2000 Trascău site.

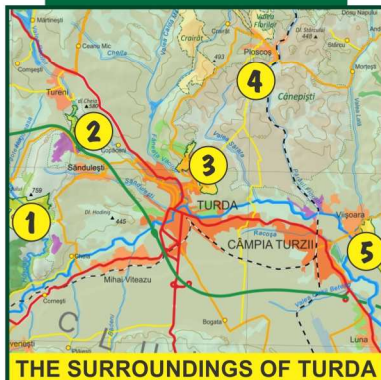
In **Ocolișel Gorge (6)** are hosted specific plants and animals for beech forests and limestone cliffs. In **Borzesti Gorge (7)** are little walls, wooded hillsides and a river with waterfalls.

There are touristic trails, resting places and informative boards have been placed.

THE MURES VALLEY

On Mures Valley, between Turda and Aiud, are two nature trails with informative and educative boards placed.

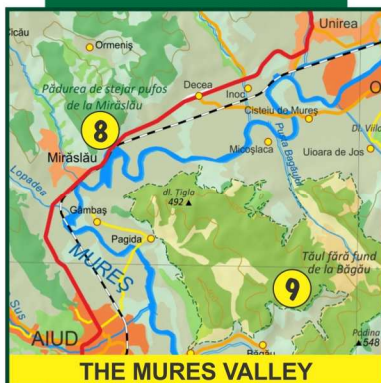
The forest of Miraslau (8) is very important for the pubescent oak habitat, very well preserved. **The Frogs Kingdom from Bagau (9)** highlights the vegetation and habitats of swamps and peat bogs.



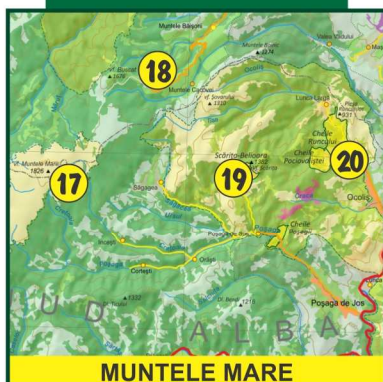
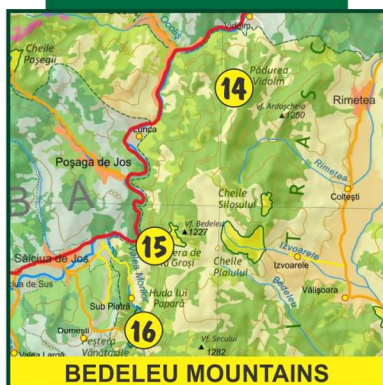
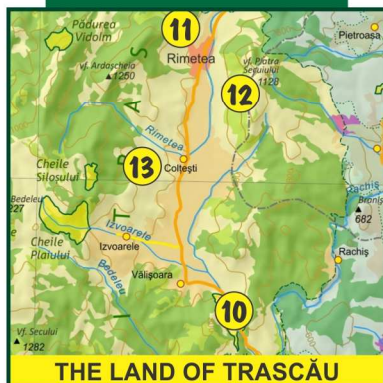
THE SURROUNDINGS OF TURDA



IARA COMMUNE



THE MURES VALLEY



THE LAND OF TRASCĂU

Valisoara Gorge (10), offers the thematic trail "Biodiversity - the hidden treasure", with two sections, one on each side of the gorge. There are information panels about the species of plants, animals and the caves visited on the trail. The route passes through panoramic view points from which are opening panoramas over the Land of Trascau and Mures River Basin. The route requires repair works and maintenance. The surroundings of Rimetea and Colțești, offers diferent possibilities for organizing educational activities: **The iron mines (11)**, **The Secuiului Stone (12)** and the ruins of **Colțești Fortress (13)**. There are no educational panels.

BEDELEU MOUNTAINS

In the **Vidolm area (14)** you can visit the protected area "The European larch forest" and the northern edge of Bedeleu Mountains (vf. Ugerului)

The thematic trail "The speaking stones", pass on to **Șipote waterfalls (15)** and several panoramic viewpoints towards Aries Valley, Bedeleu Mountains and Muntele Mare. There are information panels about the evolution of the karst landforms, but also about the species of plants and animals, that can be found on the route. **Huda lui Păpară - Vânățările Ponorului (16)** is a complex karst system, located in a traditional rural area, very well preserved.

MUNTELE MARE (*literally: Big Mountain*)

In the "**Natura 2000 Muntele Mare**" site (17), is a thematic trail on which are placed 8 informative panels, about flora, fauna, the habitats and the landscape, in the vicinity of the highest peak in the area (1826m).

Other recommended places for organizing educational activities: **The resort „Muntele Băişorii“ (18)**, **The Geo-botanical conservation area „Scărița-Belioara“ (19)**, **Runc Gorge and Pociovaliștea Gorge (20)**. There is a network of touristical trails marked and maintained, but are not placed educational panels.

The thematic trails could become valuable educational tools for "outdoor lessons" or just a way of change a usual hike into a unforgettable experience.

INFO: 0744.678674 - potaissa@juniorranger.ro

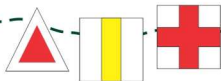
JUNIOR RANGER POTAISSA

Name and Surname:

Residence

Age Height

Other informations



WHO CAN BE JUNIOR RANGER?

Any young who wishes to participate in educational activities for environmental protection, discovering nature and promotion of local heritage.

JUNIOR RANGER ACTIVITIES!

- ✓ trips and educational activities
- ✓ activities in protected areas (flora and fauna observation, maintenance and restoration activities trails)
- ✓ Junior Ranger events (Junior Ranger Adventure, Photo Safari, Natura 2000 Day, Biodiversity Day, Junior Ranger Week)
- ✓ design and production of educational and promotional materials (manuals, brochures, maps, activity sheets, observation kits, website, etc)
- ✓ training sessions (Junior Ranger Camp, outdoor activities coach / leader)

Please write down all the interesting things that have taken place during the Junior Ranger activities that you attended!

Do not forget to tell us what you liked more in Junior Ranger activities!

At the end of each activity, the coach will write in your notebook and will tell us how you got involved!

Activity 1

Data:

Place:

Leader:

Activity 2

Data:

Place:

Leader:

Activity 3

Data:

Place:

Leader:

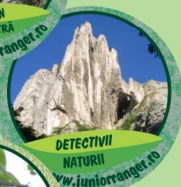
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CERTIFICATE JUNIOR RANGER POTAISSA

This document certifies the participation of

to educational activities organized in the project "Junior Ranger - Close to nature", and demonstrate the interest in discovering nature and promotion of local heritage.

As a member of Junior Ranger POTAISSA,
I promise to protect the nature and I know that
all plants, animals and the earth's resources
must be respected !

I will participate in Junior Ranger activities,
to **EXPLORE** the nature in protected areas,
to **LEARN** about the mysteries of nature and
to **PROTECT** the nature and environment, and
in my turn I will teach others everything what I
learned.

Date:

Signature:

2%
pentru JUNIOR RANGER



2% pentru JUNIOR RANGER

Fundația de Ecologie și Turism POTAISSA

C.U.I. 11182323

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