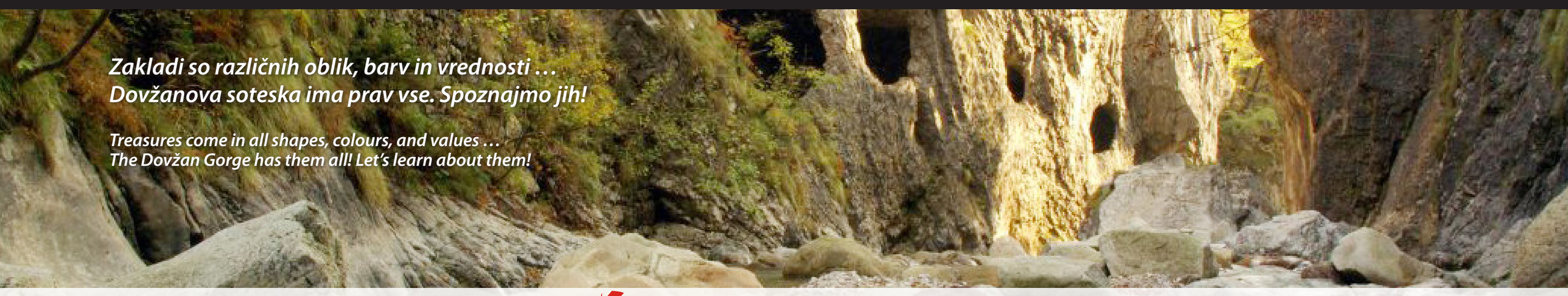
NARAVNI SPOMENIK

Dovžanova soteska

Tržič
RAZKOŠJE POTI. IZBERI SVOJO.



Zakladi so različnih oblik, barv in vrednosti …
Dovžanova soteska ima prav vse. Spoznajmo jih!

Treasures come in all shapes, colours, and values …
The Dovžan Gorge has them all! Let's learn about them!

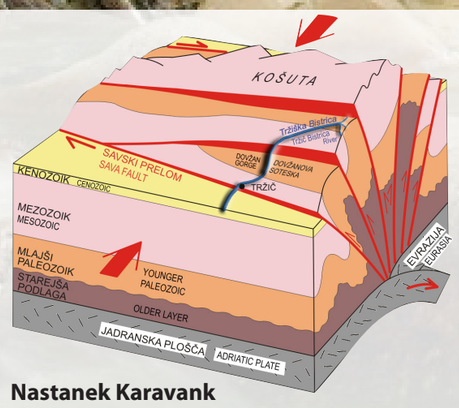
Tržiška geozakladnica
/ Tržič's geological treasure chest

Dovžanova soteska se nahaja v osrednjem delu Karavank, naše najdaljše gorske verige. V njej je edinstveno nahajališče okamnin iz mlajšega paleozoika (stari zemeljski vek).

Vabimo te, da se sprehodiš skozi sotesko in spoznaš bogato geološko dediščino, ki jo je razkrila gorska reka Tržiška Bistrica, ko je vrezovala strugo v pestro kamnito skladovnico.

The Dovžan Gorge is located in the central part of the Karavanke Mountains, Slovenia's longest mountain range. Within it lies a unique site of rocks dating from the late Paleozoic Era.

Take a walk through the gorge and learn about the rich geological heritage uncovered by the Tržič Bistrica River, a mountain river that carved a riverbed through the diverse rock deposits.



Nastanek Karavank
/ The origin of the Karavanke Mountains

Pred okoli 5 milijoni let se je podrivajoča Jadranska tektonska plošča začela počasi vrteti v smeri, nasprotni urnim kazalcem. Kamninske plasti so se gubale in ob prelomih premikale tako v navpični kot v vodoravni smeri. Ob najmočnejših strmih prelomih je prišlo do izrivanja ogromnih tektonskih blokov v obliki velike pahljače. Tako so se dvignile Karavanke. Paleozojske kamnine, davno odložene na vodoravnem morskem dnu, so v skoraj navpičnih plasteh spet pogledale na površje. Podobne tektonske razmere vladajo še danes in tako premikanje kot dviganje se nadaljujeta.

About five million years ago the underthrusting Adriatic Plate began to move slowly in a counterclockwise direction. The rock layers underwent folding and in places where they fractured they moved in a vertical as well as horizontal direction. Along the steepest faults enormous tectonic blocks were lifted up in the form of a large fan. It was in this way that the Karavanke Mountains rose up. Paleozoic rocks, deposited long ago on the sea floor, once again came to the surface, but in nearly vertical layers. Similar tectonic conditions continue to exist today and this kind of movement and lifting still takes place.

Trbiška breča – najlepša kamnina Dovžanove soteske
/ Tarvisio breccia – the most beautiful rock in the Dovžan Gorge

Trbiška breča je kamnina, nastala iz odlomkov (grušča) starejših kamnin, ki so zlepljeni z rdečkastim peščenim vezivom puščavskega izvora. Ime je dobila po kraju Trbiž (Tarvisio) v Italiji, kjer so jo prvič našli in opisali.

Namig: Poišči trbiško brečo ob poti in si oglej barvite odlomke v njej! Kako močno lepilo jih je zlepilo skupaj!

Tarvisio breccia is a rock that was created from fragments (rubble) of older rocks that are bound together by a reddish sandy material of desert origin. It takes its name from the town of Tarvisio in Italy, where it was first found and described.

Hint: Look for Tarvisio breccia along the trail and look at all the colorful fragments in it! How strong is the glue that holds them together!

Sphaeroschwagerina carniolica – najbolj prepoznaven fosil Dovžanove soteske / *Sphaeroschwagerina carniolica* – the best known fossil of the Dovžan Gorge

Luknjičarko (fuzulinidno foraminifero) sta na tem mestu že leta 1938 prvič našla in opisala avstrijska geologa Franz in Gustava Kahler v plasteh črnega apnenca v osrednjem delu soteske. Danes je »kranjska švagerina« simbol Dovžanove soteske.

Namig: Najznamenitejši fosil Dovžanove soteske boš najlažje našel na geološkem stebru. Velik je približno 1 cm.

The fusulinid foraminifera was first discovered and described at this site back in 1938 by the Austrian geologists Franz and Gustava Kahler. It was found in layers of black limestone in the central part of the gorge. Today Schwagerina carniolica has become a symbol of the Dovžan Gorge.

Hint: You will most easily find the most famous fossil of the Dovžan Gorge on the geological column. It is about 1 cm in size.

Ramenonožci (brahiopodi)
/ Brachiopods

Slovenski geolog, prof. Anton Ramovš je leta 1966 z najdišča ramenonožcev (brahiopodov) v Dovžanovi soteski po Ernstu Schellwienu imenoval vrsto *Karavankina schellwieni*. Primerek je velik 1,6 cm.

In 1966 Slovenian geologist Anton Ramovš named the species found in the site of brachiopods in the Dovžan Gorge *Karavankina schellwieni*, after Ernst Schellwien. The specimen is 1.6 cm in size.

Soteska je ozka rečna dolina
/ The gorge is a narrow river valley

Raznolika kamninska in tektonska zgradba območja Dovžanove soteske se odražata v razgibanem površju, ki ga preoblikujejo močni erozijski procesi.

Namig: Soteska je tako ozka, da je tudi cesta speljana skozi predor. V bližini najožjega dela poišči tablo, ki opisuje »Hudičev most«.

The diverse geological and tectonic structure of the area of the Dovžan Gorge is reflected in its dissected surface, shaped by powerful erosion processes.

Hint: The gorge is so narrow that even the road goes through a tunnel. Look for the sign that describes "Devil's Bridge" near the narrowest part of the tunnel.

Dovžanova soteska je dobila svetovni pomen leta 1900, ko je nemški paleontolog Ernst Schellwien objavil obsežno razpravo o ramenonožcih (*brahiopodih*). V njej je opisal kar 81 različnih oblik iz barvitega rožnatega, rdečega in svetlosivega apnenca, med njimi 21 do tedaj nepoznanih vrst.

The Dovžan Gorge gained international prominence in 1900, when the German paleontologist Ernst Schellwien published an extensive monograph on brachiopods. In it he described 81 different forms from the colourful pink, red, and light gray limestone, among them 21 previously unknown species.

Tržiška Bistrica – neukročena trmoglavka Karavank
/ The Tržiška Bistrica – wild and headstrong child of the Karavanke Mountains

Gorska reka Tržiška Bistrica je 29. 10. 2018 po nekajurni ujmi prestopila bregove. Hudourniško delovanje gorske reke je preoblikovalo strugo, voda je premeščala celo več ton težke kamnite bloke. Razdejanje je povzročilo škodo na javni infrastrukturi in številnih objektih na širšem območju soteske. O divji naravi Tržiške Bistrice priča tudi ime nekdanjega Hudičevega mostu, ki ga je v preteklosti pogosto odnašala voda. Narava deluje po svojih zakonitostih, zato se ji človek lahko le prilagaja, da lahko z njo živi in deluje v sožitju.

The Tržiška Bistrica flooded its banks on 29 October 2018 after a heavy storm lasting several hours. The torrential flow of the mountain river reshaped the riverbed, with the water even displacing stone blocks weighting several tons. The devastation caused damage to public infrastructure and a number of buildings in the wider environs of the gorge. The name of the former Devil's Bridge is a testament to the untamed nature of the Tržič Bistrica River; the bridge was regularly swept away by the water. Nature works according to its own laws, and humans can only adapt in order to live and work in harmony with it.

Porečje Tržiške Bistrice
/ The Tržiška Bistrica River watershed

- površina: 146 km²
- povprečna nadmorska višina: 1080 m
- povprečni naklon površja: 25,3 °
- izvir Tržiške Bistrice: območje planine Brsnina (med okoli 1300 in 1400 m)
- dolžina reke: 27 km
- nadmorska višina ob izlivu v Savo: 370 m
- rečni režim: snežno–dežni

- area: 146 km²
- average elevation: 1080 m
- average slope of the surface: 25.3 °
- spring of the Tržič Bistrica River: the area of the Brsnina alp (with an elevation between roughly 1300 and 1400 m)
- length of the river: 27 km
- elevation where it joins the Sava: 370 m
- river regime: snowmelt-rainfall

Biotska raznovrstnost
/ Biodiversity

Zoisova zvončica (*Campanula zoysii*)
/ Zois' bellflower *(Campanula zoysii)*

Rastlina je endemit jugovzhodnih apneniških Alp, ki uspeva v skalnih razpokah in na meliščih v visokogorskem pasu. Raste pa tudi v strmih stenah v Dovžanovi soteski. V Sloveniji je zvončica zavarovana od leta 1922, Zoisova zvončica je vključena tudi v omrežje Natura 2000.

This plant is endemic to the southeastern limestone Alps, and thrives in the rock crevices and scree slopes of the high mountain zone. It also grows on the steep walls of the Dovžan Gorge. In Slovenia the bellflower has enjoyed protected status since 1922. Zois' bellflower is also included in the Natura 2000 network.

Gams (*Rupicapra rupicapra*)
/ Chamois *(Rupicapra rupicapra)*

Gams je v plečih visok do 75 cm in tehta 25–30 kg. Živi v tropih in je najbolj aktiven podnevi. Dobro pleza in skače. Pari se od oktobra do decembra, brejost traja 6 mesecev, skoti 1-2 mladiča, ki so po enem letu samostojni. Okolje Dovžanove soteske je zanj ugodno, saj je prilagojen življenju na strmih pobočjih.

The chamois is up to 75 cm high at the shoulder and weighs 25 -30 kg. It lives in herds is active mostly during the day, is a good climber and jumper. It mates from October to December, the gestation lasts 6 month. They can have up to 2 young which become self dependent after one year. The environment of the Dovžan Gorge is favorable one for this animal since it is well adapted to living on steep slopes.

Lepi jeglič (*Primula auricula*)
/ Mountain cowslip *(Primula auricula)*

Lepi jeglič ali avrikelj uspeva v skalnatih razpokah in na suhih gruščnatih tratah od nižine do visokogorskega pasu. V pritlični rozeti ima vednozelene liste, na steblu pa v kobulastem socvetju živorumene cvetove, vse obrnjene v isto smer. Vsa rastlina je pokrita s kratkimi žleznimi laski in z moknatim poprhom.

The mountain cowslip or auricula thrives in rock crevices and dry gravelly grasslands from the lowlands up to the high mountain zone. It has evergreen rosette leaves at its base and a globular inflorescence of bright yellow flowers on the stem, all facing in the same direction. The entire plant is covered with short glandular hairs and a layer of down.

Planinski močerad (*Salamandra atra*)
/ Alpine salamander *(Salamandra atra)*

Planinskega močerada največkrat opazimo po dežju, najbolj je aktiven ponoči. Prehranjuje se z žuželkami in zraste od 9 do 14 cm. Po obliki telesa je podoben navadnemu močeradu in je bleščeče črne barve. Živi v hladnejših območjih z dovolj vlage v zraku.

The Alpine salamander is most frequently observed after a rain and is most active at night. It feeds on insects and grows to between 9 and 14 cm in length. Its body shape is similar to the common salamander and it is a brilliant black colour. It lives in cooler areas with sufficient air humidity.

Črtasti medvedek (*Callimorpha quadripunctaria*)
/ Jersey tiger *(Callimorpha quadripunctaria)*

Črtasti medvedek je metulj vlažnih travnikov, gozdnih obronkov listnatih in mešanih gozdov, poseljuje pa tudi območja z robno zeliščno gozdno vegetacijo. Odrasli osebki so veliki od 5 do 7 cm.

The Jersey tiger is a moth inhabiting wet meadows and the forest edges of deciduous and mixed woodlands; it can also be found in areas with marginal herbaceous forest vegetation. Adults are between 5 and 7 cm in size.

Alpski kozliček (*Rosalia alpina*)
/ Alpine longhorn beetle *(Rosalia alpina)*

Alpski kozliček je velik hrošč iz družine kozličkov (Cerambycidae), ki ga prepoznamo po njegovem značilnem vzorcu obarvanosti. Dolg je od 15 do 38 mm. Tipalnice pri samcih so lahko dvakrat toliko dolge kot preostalo telo, pri samicah pa so iste dolžine kot telo.

The Alpine longhorn beetle is a large beetle from the longicorn family (Cerambycidae), identified by its distinctive colouration. It is 15 to 38 mm long. The antennae in males can be twice as long as the body and in females the same length as the body.

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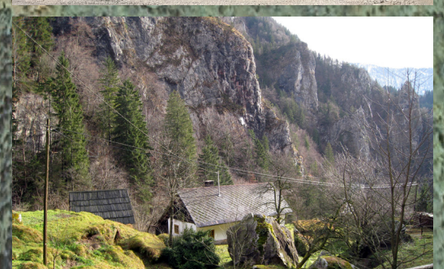
Zemljevid območja in oglednih poti
/ Map of the area and trails



DOLINA

Razstavno izobraževalno središče Dolina

Dolina Exhibition and Education Center

NA JAMAH

Borova peč
Pine Crag

mali predor
small tunnel

Kuščegarjevi turni
Kuščegar's Belfries

predor
tunnel

Partizanska tehnika Kokrškega odreda

Partisan printing works of the Kokrica detachment

ČADOVLJE

POTARJE

Legenda / Legend:

1. Vstopna točka v Dovžanovo sotesko
   Entrance point to the Dovžan Gorge
2. Botanična dediščina in Jamenšnikova paštba
   Botanical heritage and Jamenšnik paštba (shed used for drying flax)
3. Trbiška breča
   Tarvisio breccia
4. Razgledišče
   Viewpoint
5. Predor
   Tunnel
6. Geološki steber
   Geological column
7. Slapišče
   Waterfall
8. Zaselek Na Jamah in kremenov konglomerat
   Hamlet of Na Jamah and quartz conglomerate
9. Razstavno izobraževalno središče Dolina
   Dolina Exhibition and Education Centre
10. Rožnati apnenec
    Pink limestone
11. Gozdna učna pot (GUP) – dobrine gozda
    Forest Educational Trail – forest products
12. Gozdna učna pot (GUP) – razvoj gozda
    Forest Educational Trail – forest development
13. Gozdna učna pot (GUP) – gospodarjenje z gozdom
    Forest Educational Trail – forest management
14. Gozdna učna pot (GUP) – naravna obnova gozda
    Forest Educational Trail – natural regeneration of forest
15. Gozdna učna pot (GUP) – živalski svet v gozdu
    Forest Educational Trail – forest wildlife
16. Gozdna učna pot (GUP) – gozd in človek
    Forest Educational Trail – humans and forest

Razgledna pot / Scenic trail
Zahtevna pot / Demanding trail
Gozdna učna pot / Forest Educational Trail
Nemarkirana planinska pot / Unmarked hiking trail
Tržiška Bistrica / Tržič Bistrica River
Meja zavarovanega območja / Boundary of the protected area
Brv / most / Footbridge

PSSST!

Dovžanova soteska je naravni spomenik / The Dovžan Gorge is a natural monument

Dovžanova soteska je zaradi ohranjanja edinstvenega nahajališča paleozojskih okamnin že vse od leta 1988 zavarovana kot naravni spomenik. Novi odlok na zavarovanem območju prepoveduje odkopavanje, razbijanje in odnašanje kamnin. Izjema velja za znanstvene raziskave. Vsak poseg in iznos kamnin je treba prijaviti pooblaščeni naravovarstveni organizaciji in pridobiti naravovarstveno soglasje pristojnega ministrstva. Nahajališče številnih fosilnih živalskih skupin in vrst, posebej ramenonožcev, je izjemno tudi v svetovnem merilu. Poleg okamnin so v soteski zanimivi tudi drugi geološki pojavi, zato je Dovžanova soteska prava geološka učilnica v naravi, izjemno pomembna za proučevanje geološke zgodovine paleozoika in nastanka današnjih Karavank. Z uničevanjem nahajališča ter odnašanjem kamninskega in fosilnega gradiva izgubljamo pomembne in neponovljive podatke o geološki preteklosti in delamo nepopravljivo škodo naravi. **Zato si sotesko le ogledujte, jo fotografirajte in uživajte v njeni lepoti.**

The Dovžan Gorge has had protected status as a natural monument since 1988 in order to preserve this unique site of Paleozoic rocks. A new ordinance in the protected area prohibits the excavation, breaking, and removal of rocks. Exceptions are granted for the purposes of scientific research. The authorized nature conservation organization must be notified of any intervention and removal of rock and a permit granted by the ministry in charge. This site of numerous fossil groups and species, especially brachiopods, is exceptional on an international scale as well. In addition to rocks, other geological phenomena in the gorge are also of interest and so the Dovžan Gorge is a true geological classroom in nature, of exceptional importance for the investigation of the history of the Paleozoic and the formation of the present-day Karavanke Mountains. Destruction of the site and removal of rock and fossil material means the loss of important and unique data about the geological past and causes irreparable damage to nature. **For this reason human activities are restricted to viewing, photographing, and enjoying the natural beauty of the gorge.**

V primeru nesreče pokličite 112
/ In case of emergency please call 112

Turistično promocijski in informacijski center (TPIC)
/ Tourist Promotion and Information Center (TPIC)

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