

PROTECTED AREAS OF NATURE

PUBLIC
INSTITUTION
SEA AND KARST



Ivan Gabelica, Gvido Piasevoli,
Marijana Jurić, Stjepan Mekinić,
Zora Kažimir, Nenad Pešić,
Ana Perković, Jelena Kurtović

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PUBLIC
INSTITUTION
SEA AND KARST



Public Institution for
the Management of Protected
Areas in the County of
Split and Dalmatia
– „Sea and karst“



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The history of nature protection in the area that today belongs to our county is long and substantive and it started long before Croatia was divided into counties. This is understandable when one considers that this area is so rich by biological and landscape diversity and rare natural phenomena and, on the other hand, it has a thousand-year tradition of civilized human life.

Every natural resource, recognized and protected by all levels of government, is now somewhat summarized in this beautiful booklet, which gives us a brief overview of what is valuable in natural features of our county and as such it represents a kind of textbook. On the other hand, this is also fun for reading that can occupy every nature lover. In addition, it is also interesting travel guide, made according to the taste of modern intellectually demanding tourists of upper middle class, who do not want to spend their holidays exclusively at the beach.

In this segment, this booklet is in fact in line with the strategic determinants of our county's economic development. We are witnesses of the tremendous qualitative boost and quantitative growth

of tourism in the Split-Dalmatia County in recent years, as well as the facilities and spatial expansion of the entire tourist offer. We do not doubt that this unusually beautiful and beautifully preserved nature that surrounds us, and which we would like to share with our guests, was a fundamental prerequisite for these tourist successes.

In order to continue with this trend, it is necessary to wisely manage this wealth that God has given us. It has long been said, "Let's preserve the **Earth** and nature on it because we **didn't inherit** the earth from our ancestors; we borrowed it from our children." So I'm sure that only with the deliberate and sustainable use of natural resources we manage with a professional and responsible approach to nature conservation issues the generations that come will inherit the same wealth.

Let this booklet, for twenty or thirty years, be not just a memorial and a witness of some past time, but let it remain forever the actual layout of the beauties of Our Beautiful Homeland, of all the pearls of Dalmatian nature.

County Prefect
Zlatko Ževrnja





Eleonora's Falcon (*Falco eleonora*) – endangered species in Croatia nesting on the cliffs of the open-sea islands (Vis, Biševo, Sveti Andrija)

The Public Institution for the Management of Protected Areas in the County of Split and Dalmatia - "Sea and karst" was founded on the basis of the decision of the county assembly in 1996. The Institution performs the activities of protecting, maintaining and promoting protected areas of the Split-Dalmatia County for the purposes of protecting and preserving nature's origin, ensuring unimpeded operation of natural processes and sustainable use of natural resources, and supervising the implementation of the nature protection conditions and measures in the protected areas it manages.

Split-Dalmatia County is the largest Croatian county with a total area of 14,045 km² (of which 4,572 km² is the land). It is located in the central part of southern Croatia in the area of the historic Dalmatian region. It covers 16 cities and 39 municipalities. In the north it stretches from Vrlika, in the south to

the island of Vis, then to the outermost Croatian island of Palagruža, in the west to Marine and in the east to Vrgorac or Gradac.

The largest island in the Split-Dalmatia County is Brač, with a surface of 395.57 m², and Peruča is the largest lake of 13 km². The river Cetina with its 105.5 km is the longest river in the county, while Jankovo brdo, the peak of Dinara, with its 1.780 m is the highest peak.

By its natural, cultural and historical values, the Split-Dalmatia County is one of the richest counties in the Republic of Croatia, as evidenced by the number of 44 protected areas. The protected areas of the Split-Dalmatia County are divided into 6 categories. Thus, out of a total of 44 areas there is 1 nature park, 1 forest park, 3 special reserves, 14 nature monuments, 16 significant landscapes and 9 monument of park architecture.

Apart from the areas shown in this book (with the exception of the Ruskamen Nature Park, which is devastated and is expected the abolition of its protection), which are managed by the



Institution, the County Borders include three more protected areas: Biokovo Nature Park, Biokovo Botanical Garden of Kotišina and Park Forest Marjan. Due to its geomorphological characteristics, numerous karst phenomena and exceptional biodiversity in 1981, Biokovo, extending over 196 km², was declared as a nature park. Under the direction of the Biokovo Nature Park there is also Kotišina which was protected in 1984 as a monument of park architecture. Marjan, a hill on the western side of the city of Split, with the height of 178 m, was declared a park-forest in 1964. Considering the extraordinary richness of the Split-Dalmatia County, especially its biological and landscape diversity, this number is not definitive.

Speaking of biodiversity, there are three main hot spots of endemism in Croatia: underground, watercourses in karst and open-sea islands. All three are considerably present in our county.

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the Institution has been granted the manage-



ment of large areas of land and sea of the Split-Dalmatia County. The surface area of the ecological network in the Split-Dalmatia County is 280.164,37 ha. Of that figure, 180,882.53 ha belong to the mainland and 99,281,840 ha to the coast. In the County there are 6 bird conservation areas, 50 conservation areas important for species and habitat types, and 37 “dotted” conservation areas important for species and habitat types. The largest part of the ecological network in the area of Split-Dalmatia County is managed by the Institution.

Authors





SPECIAL RESERVES

- The Vrljika
- The Jadro
- Pantan

THE VRLJIKA

The Vrljika river is by far the most unique river in karst which flows through the entire length of the Imotski field. By hydrogeological features it is equal from its source to the shallow hole estuary, so it has its upper, middle and lower flow. It springs from many sources, the biggest are Opačac and Utopišće, while the smaller ones are Duboka draga, Dva oka and Jauk. The sources are located in the Proložac and Podbablje municipalities and the city of Imotski. The total length of its course is 70 km and on its flow its name changes several times, so from Kamenmosta it is called Matica. After that, it plunges in Šajnovac shallow hole in the Herzegovinian part of the field and then it springs in Peć Mlini, where it becomes Tihaljina, Mlada and Trebižat, depending on the area through which it flows.

Spotted Minnow

(*Phoxinellus adspersus*)

Soft-muzzled Trout

(*Salmothymus obtusirostris*)





By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of the Vrljika river is identified as the area of the ecological network under the code HR2000933 for the purpose of preservation of White-clawed Crayfish (*Austropotamobius pallipes*), Spotted Minnow (*Delminichthys (Phoxinellus) adspersus*) and Soft-muzzled Trout (*Salmothymus obtusirostris*).



special ihtiological reserve. Despite its small area of only 50 ha, the reserve is characterized by high water quality and it is ichthyologically very interesting.

Due to the isolation from other watercourses, several endemic fish species developed in the Vrljika river, which have not yet been sufficiently studied. The most famous endemic species that lives there is the Soft-mouth trout (*Salmothymus obtusirostris*). Otherwise, the



river Vrljika belongs to the Adriatic Sea basin, where about 28 endemic species are known, as opposed to the Danube which has only 2. In the Vrljika, except Soft-muzzled Trout, there are three more endemic fish species: Spotted Minnow (*Phoxinellus adspersus*), the Basak (*Rutilus basak*) and the Makal Dace (*Squalius microlepis*). By the middle of the nineties of last century in the Vrljika river was a widespread White-clawed Crayfish (*Austropotamobius pallipes*), but today it can be seen in only one locality that will probably be used for its re-spreading when the causes of its disappearance are found.

The entire river ecosystem is extremely important for biodiversity, but it is also extremely sensitive to external influences.





THE JADRO

The Jadro river is about three kilometers long and runs under the western slopes of Mosor, in Solin. It empties in Vranjic Bay into the sea and its water supplies about 300,000 inhabitants. The upper stream of the river was protected in 1984 as a special ihtiological reserve. The reserve area is about 7.8 hectares,

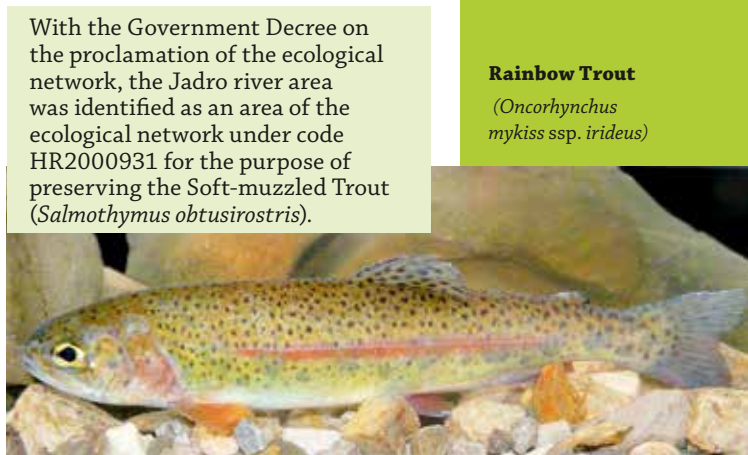
covering the watercourse and the coast of the Jadro River from the source to the Uvodić bridge.

The Jadro is a typical river in a karst, with a short flow but rich in water. It flows into the sea and is not in contact with any other watercourse, so its isolation, as in other karst rivers, affects the

With the Government Decree on the proclamation of the ecological network, the Jadro river area was identified as an area of the ecological network under code HR2000931 for the purpose of preserving the Soft-muzzled Trout (*Salmothymus obtusirostris*).

Rainbow Trout

(*Oncorhynchus mykiss* ssp. *irideus*)



Orange Foxtail

(*Alopecurus
aequalis*)

Galingale

(*Cyperus longus*)

creation of the endemics. In this way, the endemic subspecies of Soft-mouth trout (*Salmothymus obtusirostris* ssp. *salonitana*) developed in the Jadro, which lives only in this locality and therefore is valuable and potentially endangered. The population of this trout is being preserved, but its exact state is not known and regular monitoring is required. In the reserve there are also introduced fish species. Before the start of the World War II, the Rainbow Trout (*Oncorhynchus mykiss* ssp. *Irideus*) was brought into the Jadro. Thirty years ago, river crabs were also inhabited in the Jadro, but disappeared most likely due to the pollution and the concreting and designing of the riverbank.

There is a tendency to extend the boundary of the reserve because its surface is currently very small and objectively insufficient to prevent the influence of certain adverse factors on the state of the ecosystem in its entirety.





PANTAN

Mediterranean Gull

*(Larus
melanocephalus)*

In 2000, Pantan was declared a special ornithological-ichthyological reserve, with a total area of 40.25 ha. It is a typical Mediterranean coastal shoreline swamp with specific biocenoses, and its main elements are the river, the surrounding reed beds, lagoons and pebbly shores. The river, with the surrounding population known simply as Rika, has a very short flow, only about a kilometer. Sometimes the swamp had a much larger surface area, but during the history of backfilling and urbanization its surface has decreased. The area of the reserve is particularly important for the migration of wetland birds and for feeding the juvenile fish species because water is rich in organic matter.





In the area of Pantan there are a total of 196 species of birds, out of which 45 are nesting birds. According to the international classification, 70 species are swamp birds. Among the Pantana nesting birds, related to wetlands, worth noting is Little Grebe (*Tachybaptus ruficollis*), Little Bittern (*Ixobrychus minutus*), Water Rail (*Rallus aquaticus*), Common Moorhen (*Gallinula chloropus*), Cetti's Warbler (*Cettia cetti*), Eurasian Reed Warbler (*Acrocephalus scirpaceus*)



Reed Warbler

(*Acrocephalus scirpaceus*)

Spoonbill

(*Platalea leucorodia*) - endangered nesting population in Croatia

and Great Reed Warbler (*Acrocephalus arundinaceus*). Some very rare birds of the Croatian ornithophonic ornithofauna fauna such as Sandwich Tern (*Thalasseus sandvicensis*), Mediterranean Gull (*Larus melanocephalus*) and Red Knot (*Calidris canutus*) can be seen in Pantan.

Among the 43 species of fish there are no real freshwater fish, but those are sea fish or the ones adapted to brackish water habitats with high salinity and temperature fluctuations. That is why



Annual Seablite

(*Suaeda maritima*)



Red Knot

(*Calidris canutus*)

there are also a few highly specialized and therefore extremely rare and endangered fish species. Among them the most significant is South European Toothcarp (*Aphanius fasciatus*), a species found in the “Red Book” of European and Croatian natural heritage, and is the main reason for proclamation of Pantan as a special ichthyological reserve. In Pantan there are also noted: Freshwater Blenny (*Salaria fluviatilis*), Mosquitofis (*Gambusia affinis holdbrooki*), Adriatic Dwarf Goby (*Knipowitschia panizzae*) and Canestrini’s Goby (*Pomatoschistus canestrinii*).

The reserve has developed a characteristic vegetation of wetland-halophilic

habitats. There are several flora communities that have a common feature to include a small number of species. There are noted 269 different species with 7 of them endangered in different categories. Mediterranean perennial coastal halophyte Coastal Meadowgrass (*Aeluropus litoralis*) is critically endangered, Long-bracted Sedge (*Carex extensa*) and Yellow horned poppy (*Glaucium flavum*) are endangered, While sea fern grass (*Desmazeria marina*), Barbgrass/Thintail (*Hainardia cylindrica*), Barilla plant Saltwort (*Salsola soda*) and Herbaceous seepweed Annual Seablite (*Suaeda maritima*) are vulnerable.

In the natural environment of brackish coastal wetlands, the old mills harmoniously fit as a valuable monument of cultural heritage. They are mentioned for the first time in the thirteenth century and since that time they have changed their owners several times and were the cause of disputes and even military conflicts. In times of war with the Turks they played a very important role in defending the city of Trogir. There was also significant the economic role of the mills, because the wheat from a



very large coastal area, hinterland and the islands used to be ground there. During the history, they have been damaged and renewed several times, and last time they were killed in the Homeland War. Now the mills have been restored in their original form.

Within Pantan there are also arable agricultural areas (about 15%), mostly planted with fruits and vegetables.



By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of Pantana is defined as the area of the ecological network under the code HR3000430 for the purpose of preservation of the Mediterranean killifish or South European Toothcarp (*Aphanius fasciatus*) and Adriatic Dwarf Goby (*Knipowitschia panizzae*) as well as habitat species of coastal lagoons, Mediterranean and thermo-Atlantic vegetation of Mediterranean and thermo-Atlantic halophilous scrubs Halophilic shrubs or Samphires (*Sarcocornetea fruticosi*) and Mediterranean salt meadows (*Juncetalia maritimi*). The Pantan-Divulje area under code HR3000459 is located in the ecological network for the purpose of preserving the sandy bottoms permanently covered by the sea and large and shallow coves and bays.

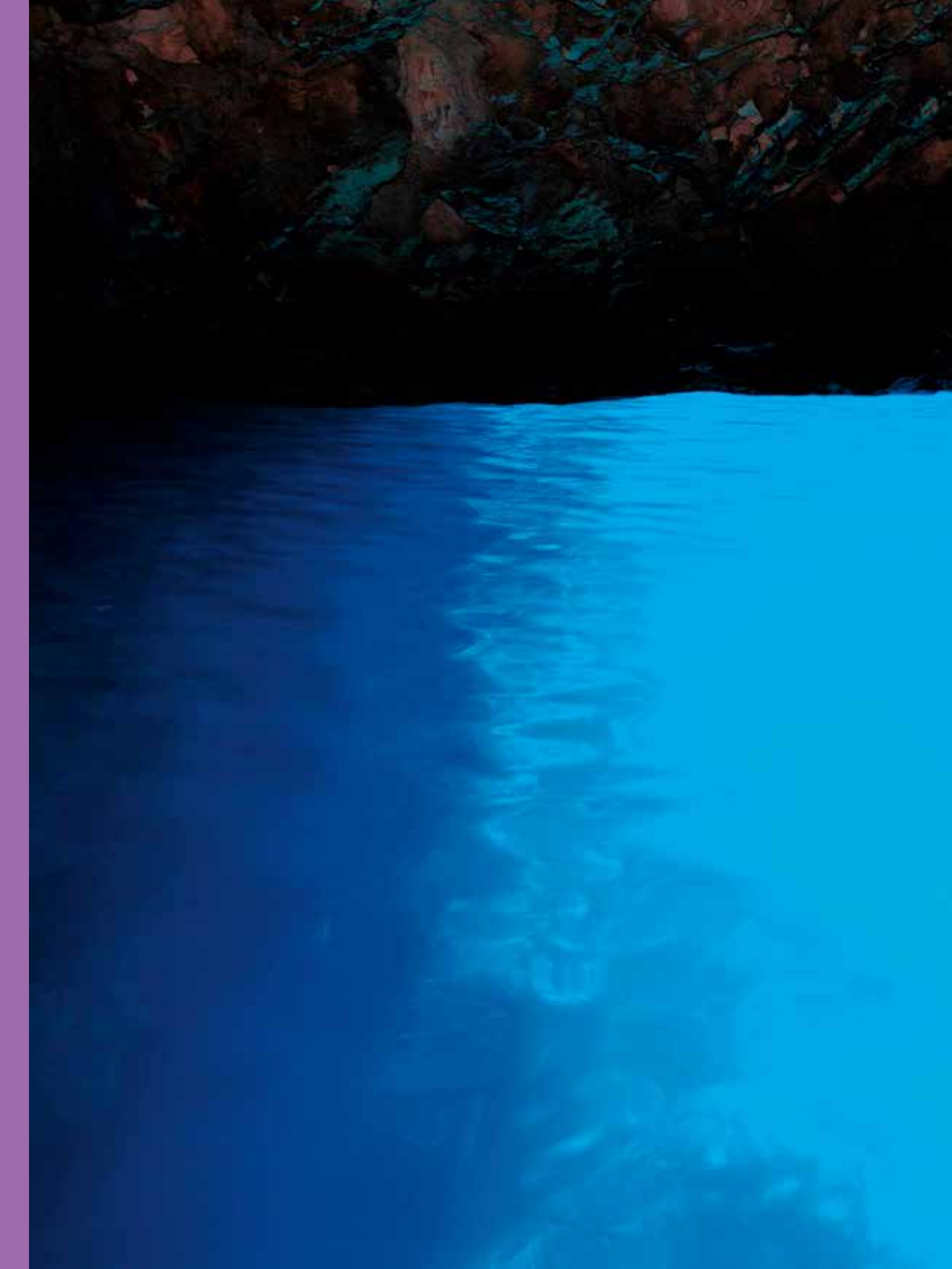
Yellow-horned Poppy

(*Glaucium flavum*)

Sea Fern Grass

(*Desmazeria marina*)





MONUMENTS OF NATURE

- Brusnik
- The Blue Cave
(*Croatian: Modra špilja*)
- Almond-leaved Pear
(*Pyrus amygdaliformis*)
- Jabuka
- Vranjača
- The Red Lake (*Croatian: Crveno jezero*)
- The Blue Lake (*Croatian: Modro jezero*)
- The Monk Seal Cave
- Cave on the Island of Ravnik
- Pine Tree on the roof of St. Peter's Church in Nerežišće (*Pinus nigra*)
- Kolač
- Olive Tree (*Olea europaea*)
- Oak Tree (*Quercus virgiliana*)

BRUSNIK

Brusnik is an open-sea island of volcanic origin. It is located about 13 miles from Komiža on the island of Vis and was protected in 1951 as a monument of nature, with a total area of about 3 ha. By its origin and mineralogical-petrographic construction, it represents a great rarity in the Adriatic. The west side of the island slopes down gently to the sea forming a small bay with beautiful dark pebblestones. These marvelous pebbles

Dalmatian Wall Lizard

(*Podarcis melisellensis* var. *melisellensis*)



of right shape, which can be very large, are just a proof of the power of wind and the sea that have enough strength to roll and shape such large rocks. Part of the island under the sea is crisscrossed by canals through which sea water penetrates the surface. These benefits of nature were exploited by Komiža fishermen, who fenced certain areas with sea to get pools for keeping the caught lobsters. During the fishing in the fall and spring months, they enabled them the longer stay in Brusnik waters. Today, those pools are only a monument to the former way of life and coexistence of the local population and the nature.

Lonely and left to the winds that severely blow on the open sea, Brusnik offers very poor living conditions. However, this islet is the habitat of the endemic form of the Dalmatian wall lizard (*Podarcis melisellensis* var. *melisellensis*) and the nesting place of the Yellow-legged Gull (*Larus michahellis*) and Peregrine Falcon (*Falco peregrinus*).



Brusnik was used by the British Navy in World War II as a trainer polygon for long-distance artillery. The soldiers shot out cannons toward Brusnik from the ships, causing the surface to be disrupted, which can still be seen today.

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of Brusnik was defined as the area of the ecological network under the code HR4000009 for the purpose of preserving the rocks and cliffs of the Mediterranean coastline covered by *Limonium* spp. endemic species. The Brusnik and Svetac area under the code HR3000099 is located in the ecological network for the purpose of preserving flooded or partly flooded sea caves and ridges.



Peregrine Falcon

(Falco peregrinus)

Yellow-legged Gull

(Larus cacchianus)

THE BLUE CAVE

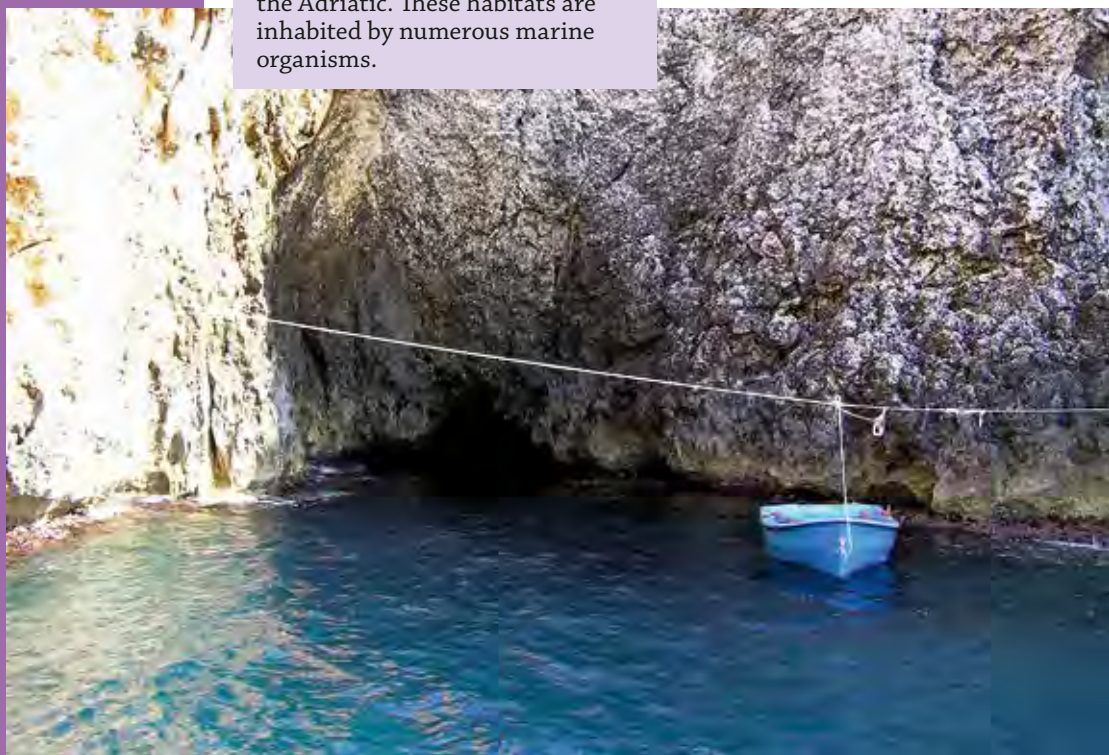
(Croatian: Modra špilja)

The Blue Cave (Croatian: Modra špilja) is a geomorphologic monument of nature and it was protected in 1951. It is a cave with a sea entrance and is located in Balun bay, on the eastern side of the island of Biševo. He was painted and described by barone Eugen von Ransonnet-Villez, an Austrian diplomat, painter, lithograph, biologist and researcher in 1884.

The entire island of Biševo belongs to the ecological network under the code HR3000098 for the purpose of preserving the target habitat types, but for Biševo we can highlight the underwater cliffs, coraligen and organogenic formation of "trottoars", which on the southern side of Biševo are the most developed ones in the Adriatic. These habitats are inhabited by numerous marine organisms.

The cave has three openings; one smaller, through which can pass the boat with paddles and that opening has no influence on the lighting in the cave. Initially, this entry into the cave was solely underwater, and at Ransonnet's encouragement the opening was expanded to allow smaller boats to enter. The other opening is dome shaped and is much wider, on the south side of the cave beneath the sea level, and through it penetrates the sunlight. The third opening was discovered in 2015 by a team of speleorons led by Alan Menige.

The cave is 24 m long, 10 to 12 m wide and up to 15 m high. The special beauty and attractiveness is given to it by unusual specific light effects created by refraction of sunlight. Around the noon at calm sea, the sun rays penetrate through the underwater opening, and being reflected from the white bottom they illuminate





the cave in blue and the objects in the water in silver colour.

It is worth contemplating for a moment about Ransonnet's intervention with explosive for the purpose of expanding the entrance to the cave. Though today we mention this intervention in a positive context, it is impossible to im-

agine that anyone would do it today without being considered a barbarian who destroys the natural heritage. Probably the true is somewhere in the middle.

The Blue Cave is very attractive to tourists and regular tourist excursions by boat are organized by a licensed concessionaire.



ALMOND-LEAVED PEAR

(*Pyrus amygdaliformis*)

The Almond-leaved Pear was protected as a monument of nature in 1954 and is located in the area of Selce municipality on the island of Brač. It grows at an altitude of about 320 m. The height of the tree is 5 m, while the diameter of the umbrella-like treetop is 6 m. It is assumed to be over 150 years old. This Almond-leaved Pear tree as a constituent element of Mediterranean vegetation is a reminder of former forests degraded by the devastating effect of a man. It is unique in its age and dimensions.



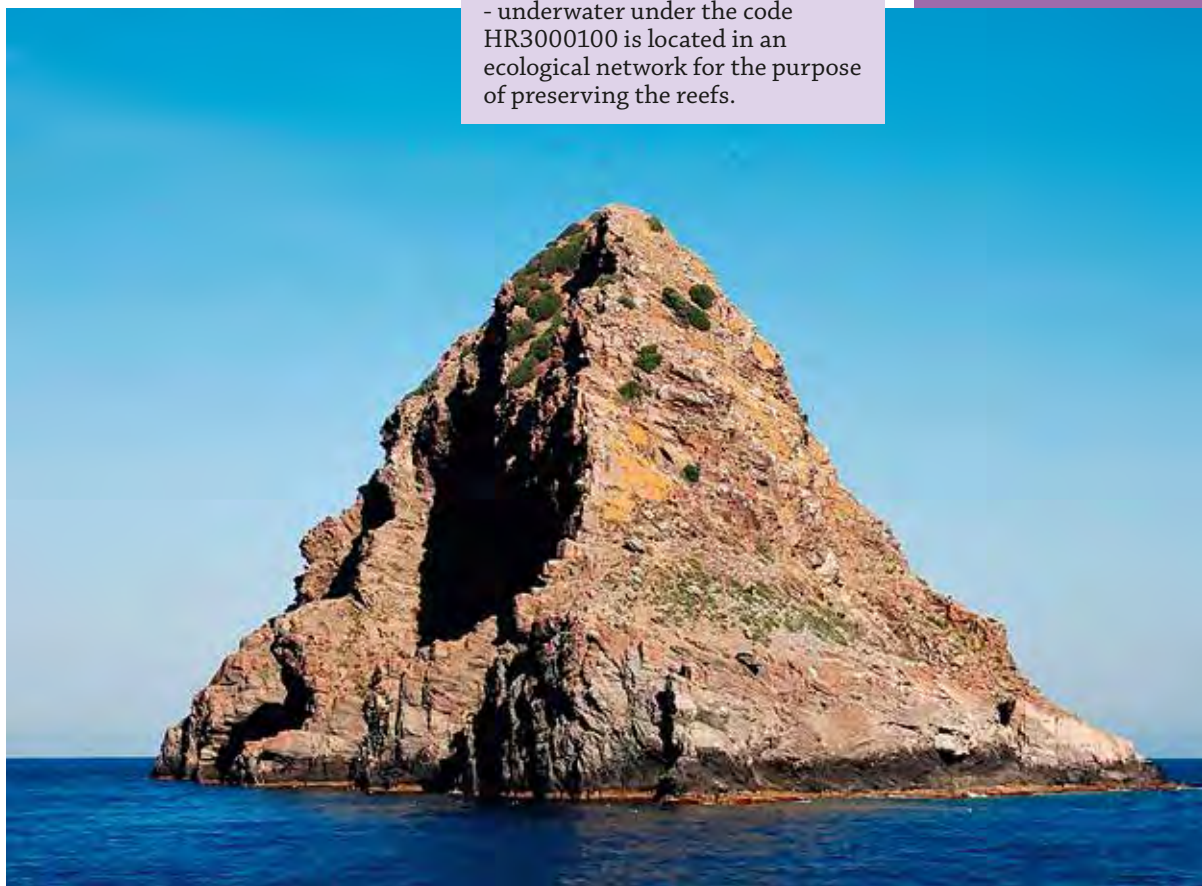
This is relatively unknown self-seeded fruit species in the folk known as almond-leaved or wild pear. It grows like a little tree or a bush. It blooms in April and May, giving white flowers and the fruits of sour taste that ripen in October.



JABUKA

The island of Jabuka is the second open-sea island in the Adriatic, along the island of Brusnik, of a volcanic origin. It is 26 nautical miles away from the island of Vis. It was protected in 1958 as a natural monument of 1.15 hectares of land and is uninhabited. It is within the system of ecological network and has been proclaimed an IPA area. The island is made of lava that contains a lot of magnetite and pyramidally emerges from the sea which is due to the large depths of extremely dark colors. The island of Jabuka is exposed to the blow of all the winds and the force of the great open sea waves, which with a deafening roar, fall apart of its cliffs. The imposing 97-meter high clippings of the conical shape do not

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of the island of Jabuka has been identified as the area of the ecological network under the code HR4000008 for the purpose of preserving rocks and cliffs of the Mediterranean coastline overgrown with endemic species of *Limonium* spp., Thermo-Mediterranean (stenomediterranean) bush formation with *Euphorbia dendroides* and carbonate rocks with hazzmophytic vegetation. The area of the island of Jabuka - underwater under the code HR3000100 is located in an ecological network for the purpose of preserving the reefs.





provide the protection from the winds, so anchoring along the coast and moving on the island is almost impossible, even more it is surrounded by great depths. The climate is extremely dry (arid) with extremely low average annual rainfall values of only 200 mm, and the average annual temperature is extremely high and is about 16 ° C with more than 2,700 sunny hours a year. Due to such specific conditions, the island of Jabuka is significant as the only habitat of some plant and animal endemics and as an open-sea birds' nesting spot. Thus, on the Jabuka's cliffs nest from 150 to 200 pairs of Yellow-legged Gulls (*Larus michahellis*) along with significant species of Peregrine Falcon (*Falco peregrinus*), Yelkouan Shearwater (*Puffinus yelkouan*) and Eleonora's Fal-

con (*Falco eleonora*). In addition to the endemic species of *Centaurea* genus, here grow some other rare species of Croatian flora, such as Tree Spurge (*Euphorbia dendroides*), Silverbush (*Convolvulus cneorum*) and European sea-heath (*Frankenia pulverulenta*). In the top areas of the island is developed a community of Wild Olive and Tree Spurge (*Oleo-Euphorbietum dendroidis*). Long ago on the island of Jabuka there grew an endemic Jabuka Pink (*Dianthus multinervis*) which is probably completely extinct today and its existence has not been recorded elsewhere in the world.

After the World War II the island of Jabuka was used by Yugoslav Army as a military Air-force base training area.

VRANJAČA

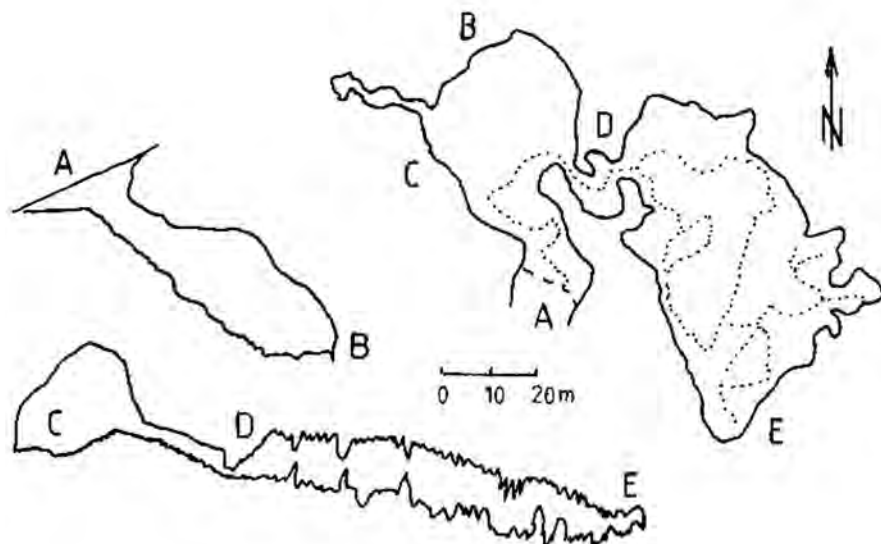
The Vranjača cave is formed in the rudimentary limestone. It is located on the northern slopes of Mosor, next to the village of Kotlenica, about 25 km far from Split. It was protected in 1963 as a geomorphologic monument of nature. It was discovered in 1903 and by the wealth of cave decorations it is the most beautiful cave in Central Dalmatia, and besides, it is also a significant site of Neolithic culture and the diluvian fauna. It consists of two main halls and several corridors connecting them. In the other hall of

the cave there are 9 smaller rooms, with their names: Predvorje (hall), Čekaonica (lounge), Kapela (chapel), Mala galerija (small gallery), Velika galerija (great gallery), Puževa kuća (snail's house), Palmin gaj (palm's grove), Plesna dvorana (dance hall) and Tursko groblje (Turkish cemetery). Cave entrance is 450 m above sea level, its length is about 300 m and depth is about 65 m. The temperature inside the cave is 15 °C throughout the year.

The cave is characterized by a wealth of cave decorations, impressive stalac-



Cave plan



tites, stalagmites, cave pillars and arcades. It is also a significant site for neolithic culture and the diurnal fauna. Due to all the above mentioned natural values and features it is declared a protected part of nature. In 1929 it was prepared for sightseeing. There were designed the stairs at the cave entrance with ropes

The Vranjača cave is also a habitat of two endangered species of bats, Greater Horseshoe Bat (*Rhinolophus terrumequinum*) and Lesser Horseshoe Bat (*Rhinolophus hipposideros*). According to the IUCN classification, these two types of bats are classified as low-risk category and are strictly protected native wild genera.





fixed along the stairs and installed lighting as well.

Famous Split naturalist Umberto Girometta (1883-1939) is particularly responsible for propagating the natural beauties of the cave, which he was writing about in daily newspapers, journals and scientific publications. During the research at the Vranjača cave, Girometta found out that the cave was inhabited in ancient times and that the first cultural layers date from the early Neolithic era. During that time, several earthenware and bone fragments were found in several layers, and in the deepest layers there were found some deer antlers (*Dama dama*) and the Cave Bear jaw (*Ursus spelaeus*). In 1913 Girometta discovered a new cave spider species in this cave, which was named after him, *Stalita giromettai*.

Although many researchers have been researching the Vranjača cave, its fauna is not completely known. According to the data of the Croatian biospeleologic society, there are: troglophilic snail species (*Troglaeopsis mosorensis*), troglotrophic cave shrimp (*Strouhaloniscus dalmaticus*), cave insects *Siro noctiphilus*, *Leptomeson dombrowski*, *Halotripidius taxi* and *Morariopsis kieferi*. The fauna of the cave is abundant with the endemic species of Mosor, which include the snail *Troglaeopsis mosorensis*, spider *Folkia boudewijni*, insects *Leptomeson dombrowski*, *Haplotripidius taxi*, *Spelaetes grabowski* and *Thaumastocephalus folliculipalpus*.



Underground millipede
(*Brachydesmus* sp.)

Troglophilic underground beetle
(*Leptomeson dombrowski*)

Underground isopod shrimp
(*Alpioniscus* sp.)

Troglophilic snail
(*Troglaeopsis mosorensis*)

THE RED LAKE (*Croatian: Crveno jezero*)

The Red Lake is a hydromorphological phenomenon, unique in its shape, color and origin. It is located 1.5 km northwest of Imotski and was protected in 1964 as a monument of nature, with a total area of 13.79 ha. The protected area includes a lake valley with a belt width of 50 m from the edge of the cliff. It was formed by the ceiling collapse of the former cave. The lake was formed by a double creation - it is made of two hollows of different ages caused by the earthquake.

Its depth is subtle, depending on the season and the water level. According to the latest research, the bottom of the lake is more than 6 m below sea level, and the total altitude difference between the highest and so far recorded lowest al-

titude is 528 m. The lake is named after reddish cliffs along its edges that do not allow access to water itself, so it is a flooded sinkhole. Access to water in the lake is the easiest from the east side, where you need to overcome a vertical cliff of about 60 m, then about 300 m of a very steep slope and finally one more vertical cliff whose height varies (at least 10 m)

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the Red Lake area under the code HR2000934 was identified as an area of the ecological network for the purpose of preservation of the Spotted Minnow (*Delminichthys (Phoxinellus) adspersus*), caves and holes closed to the public.



depending on water level in the lake. The lake in its cross section is of the shape of a large funnel and at the bottom it measures 20 x 10 meters. Water supplies the lake through the underground channels, apparently with a greater distance, which is a common case in the karst, so it does not depend on local precipitation and never dries over.

The Red Lake is a *locus typicus* for two endemic species of fish – the Ray-finned fish of Imotski *Phoxinellus adspersus* (Heckel, 1843) and the Basak *Rutilus basak* (Heckel, 1843). Both types are related to carp and belong to the same Cyprinidae family.

According to the morphological classification, the Red Lake is the deepest dike of Dinars Karst, which is half full of water and makes a water tank of at least 16,000,000 cubic meters and is one of the deepest ever-flooded sinkholes in the world with a depth of more than 315 meters.

Because of the beauty, mysticism and unavailability, Red Lake is the subject of many stories and legends, with most famous one about Gavan and its courts. According to this legend, long time ago on the site of the lake there were the luxurious courtyards of stingy and arrogant Gavan and his wife. When an angel in the character of a begger with two children begged Gavan's wife for some mercy, she said to him roughly and mockingly, "Why would I need your God when I have my Gavan?" At that moment, God punished them and shook the earth, the courtyard with all the surrounding area and all tenants fell deep into the chasm, where the lake appeared, and even today, from the depths of the Red Lake at night, Gavan's painful mournings can be heard.

After the liberation of Imotski from the Turks at the beginning of the 18th century, Ivan Zuane Franceschi sent the first description of the Red Lake to the world. That Venetian leader wrote in his letter to a friend: "When you see this

abyss, you ask yourself in fear: what could cause its formation?

According to the Imotian legend, at the edge of the Red Lake, there are only the walls that are said to be the remnants of the great Gavan's courtyard.

The recent event - from the World War II - also takes the contours of the legend. According to authentic testimonies and documents, in 1944, the German anti-missile defense dropped two US bombers, one of whom dropped into the lake and the other halved by hitting the northern edge of the lake and a half of it fell into the water too. However, later explorations of the bottom of the lake did not reveal the remains of the aircraft, as the legendary "Gavan's courts" has never been discovered.

Only a few will succeed in throwing a stone into the Red Lake. Science says that the reason for this is strong flow above the lake for which the stone returns among rocks like magnets, and the legend says that is due to Gavan's greed.

The Red Lake is a huge challenge for speleor divers.



THE BLUE LAKE *(Croatian: Modro jezero)*

The Blue Lake is the example of specific hydrography and karst morphology. It was caused by the collapse of the two neighboring karst sink-holes that merged giving it a "kidney" shape. It was protected in 1964 as a monument of nature with a total area of 38.96 ha. The protected area includes a lake valley with a belt width of 50 m from the edge of the cliff. It got its name by the remarkably blue color of water that, depending on the height of the water level and the weather conditions, varies from light blue to tur-

quoise. It is located near the edge of the town of Imotski in a 200 m deep abyss. Its kidney form is in dimensions about 900 x 500 m. Its water level during the year is significantly oscillated. At lower water levels, according to trails on the surrounding rock, it is possible to see the highest measured level of water, which is according to historic data, about 147 meters from the bottom. There are not very rare years when it completely dries out. The cause of water fluctuations are cracks at the bottom of the lake that

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the Blue Lake area under the code HR2000935 was identified as an area of the ecological network for the purpose of preservation of the caves and holes closed to the public.





drain water in the rainy season, while in dry season they turn into abysses. After the earthquake in 1942, when large blocks of stone crashed into the lake, the underground cracks expanded, so the process of its filling up is more and more noticeable. The lake also dries out more frequently and then the cracks in the dry bottom of the lake look like miniature craters of died volcanoes. Then, football matches are being played at its bottom, while the lake is a favorite bathing place of the inhabitants of Imotski in the summer months. In 1943, at the bottom of dried Blue Lake, the first football match was played. This tradition has been held up to date, with one important rule - the result must always remain without the winner.

On the occasion of the feast of Our Lady of Angels and the Day of the Imotski town there are organized traditional



leaps from the steep lakeside cliffs, by the *Lake Birds of Imotski/Imotske jezerske tice*.

The path to the bottom of the lake was done in 1907 by the efforts of local enthusiasts. For the ceremony of the path opening the city brass band gave its performance.

These facts point to a high degree of civic awareness and tradition of the small provincial town of Imotski at the beginning of the twentieth century.

The Blue Lake, along with the nearby Red Lake, is a *locus typicus* for the endemic fish species of Basak *Rutilus basak* (Heckel, 1843.).

Imotska krajina is a vast space of magical karst shapes that have for a long time been inspiration for the stories of the local inhabitants. Legends and fairy tales have always been linked to natural phenomena: depths, caves and mazes in rocks are awe-inspiring, but also inspire man's imagination! In the traditional narrative the fairies are myth creatures with supernatural powers. They live between these two worlds, near the waters and at the forest edges where they appear at dusk or dawn. They often live on rocks, in caves or in the bottomless caverns, so many localities owe their names to them. The *Vilinska cave* (Fairy Cave) - in which man allegedly never entered - is located near the Blue Lake. On the serpentine that leads to the shore of the lake is located the *Vilinsko počivalo* (Fairy resting area), the cave of whose creation is spoken in the legend of Imotski.

Lake fairies

THE MONK SEAL CAVE

Mediterranean Monk Seal

(*Monachus
monachus*)



Mediterranean Monk Seal is protected by law as a critically endangered species and the cave is named after this mammal. Another mammal that is often inhabitant in the waters of the island of Vis is a Bottlenose Dolphin (*Tursiops truncatus*), due to which the aquatic area is a part of the ecological network under code HR3000469.

The Monk Seal Cave is located on the south side of the Central Dalmatian isle of Biševo, not far from Komiža on the island of Vis. It was protected in 1967 as a geomorphological monument of nature. Its opening on the sea surface is relatively large in size and exceeds 20 m in height and 14 m width. However, these dimensions are reduced to the interior of the cave. At the very end, the cave is very narrow and low, and its full length of 160 meters ends with a small beach. The Monk Seal Cave is significant as the former and potentially present habitat of one of the most endangered mammals in the world, the Mediterranean Monk Seal (*Monachus monachus*), a very rare species of seals, which has almost disappeared from the Adriatic and is rarely seen.



CAVE ON THE ISLAND OF RAVNIK



The cave on island of Ravnik was protected in the category monuments of nature in 1967. It is located southeast of the island of Vis and as a geomorphological phenomenon it is characteristic of the southern exposure of our open-sea islands. These are abrasive caves, whose creation is determined by the structure of the limestone layers and the free pounding of the waves. The cave on the island of Ravnik is a representative example of such a cave and is one of the largest and

Due to its unusual light effect, the cave is often referred to as the Green Cave. It is quite spacious, the depth ranges from 3 to 5 meters. In World War II, small warships found their shelter here.

most beautiful caves of this kind on our coast. It possesses remarkable dimensions and two large entries which are easy to access. The cave is characterized by the crack on the ceiling, through which a beam of light passes and leaves its trace in the sea.



PINE TREE ON THE ROOF OF ST. PETER'S CHURCH IN NEREŽIŠĆE

(*Pinus nigra*)

The black pine tree that grew up on the roof of the apse of the church of St. Peter and Paul from the 15th century in the center of Nerežišće on the island of Brač, was protected as a monument of nature in 1969. No one really knows when the pine tree sprouted in this unusual place, but its age is estimated to be 150 to 200 years. Due to very poor living conditions, this natural bonsai of black pine tree remained stunted and small, about 170 cm high. In fact, it is supplied exclusively with the food and moisture found among the stone slabs on the roof itself.

After the Golden horn beach (Croatian: Zlatni Rat Beach) on the island of Brač, the Nerežišće pine tree is certainly the most photographed object on the island. There are no tourists who do not stop at the tour of the island to make the photo as a memoir of an unusual encounter.



KOLAČ

It was protected in 1986 as a geomorphological monument of nature. Kolač is a 12-meter-high rock, made of two arches that join and thus make a natural archway. By its shape and dimensions the Kolač Arch is a unique phenomenon. It is located two kilometers far from Nerežišće on the island of Brač, and it has its name after its shape that reminds of the old bun in Dalmatia, so called “kolač” (cake). An unusual form of Kolač was created at the bottom of a dry valley by erosion effects of atmosphere on the dolomite bottom base. The power of water and wind, changes in temperature and vegetation whose roots have astonishing power, shaped the basin where the Kolač remained as the most durable rock.

Rock climbing and any kind of damage are strictly forbidden.



Through our oral tradition have been handed the legends of the fairies, elves and other characters of fantasy that dance on the head of this glorious arch adorned with flower, and the stories of its miraculous power and inexplicable influence on people after passing under its arch.



OLIVE TREE

(*Olea europaea*)

The age of old olive tree, as it is often called, is located in Kaštel-Štafilić, is estimated at more than 1,500 years. According to its genetic structure it is classified into wild olives (75% of the genome belongs to the wild olives) and is most probably grew naturally and wild. Among the people this olive is often referred to as one of the

synonyms for “Mas-trinka” or “Drobnica”, but there is a significant difference between all three cultivars.

In 1990 it was declared a monument of nature. It has tiny leaves, fruits and stones, so it can be categorised as oilseeds. There is no main root but root system that has been developed in a space of about 100 meters. Today, the whole trunk is 10.7 m wide, with a main part of 6.5 m, while the surface of the tree top is about



130 m². The diameter of the tree top is about 22 m and the height is about 10 m.

All the necessary agrotechnical procedures have been carried out for many years, and despite its great age, it gives its fruitage every year. By the processing of fruits, it makes the oil of lower to medium intensity of bitterness and pungency, medium fruity smell and taste, that is used as a souvenir packed in the replicas of old Roman glass.

In 2001, Hrvatska pošta (Croatian Post Inc.) issued a commemorative postage stamp called: *15 Centuries of Olive Trees in Kaštel-Štafilić*. Olive was the motto of posters that represented Croatia at the ministerial conference “Environment for Europe” in Sofia in 1995.

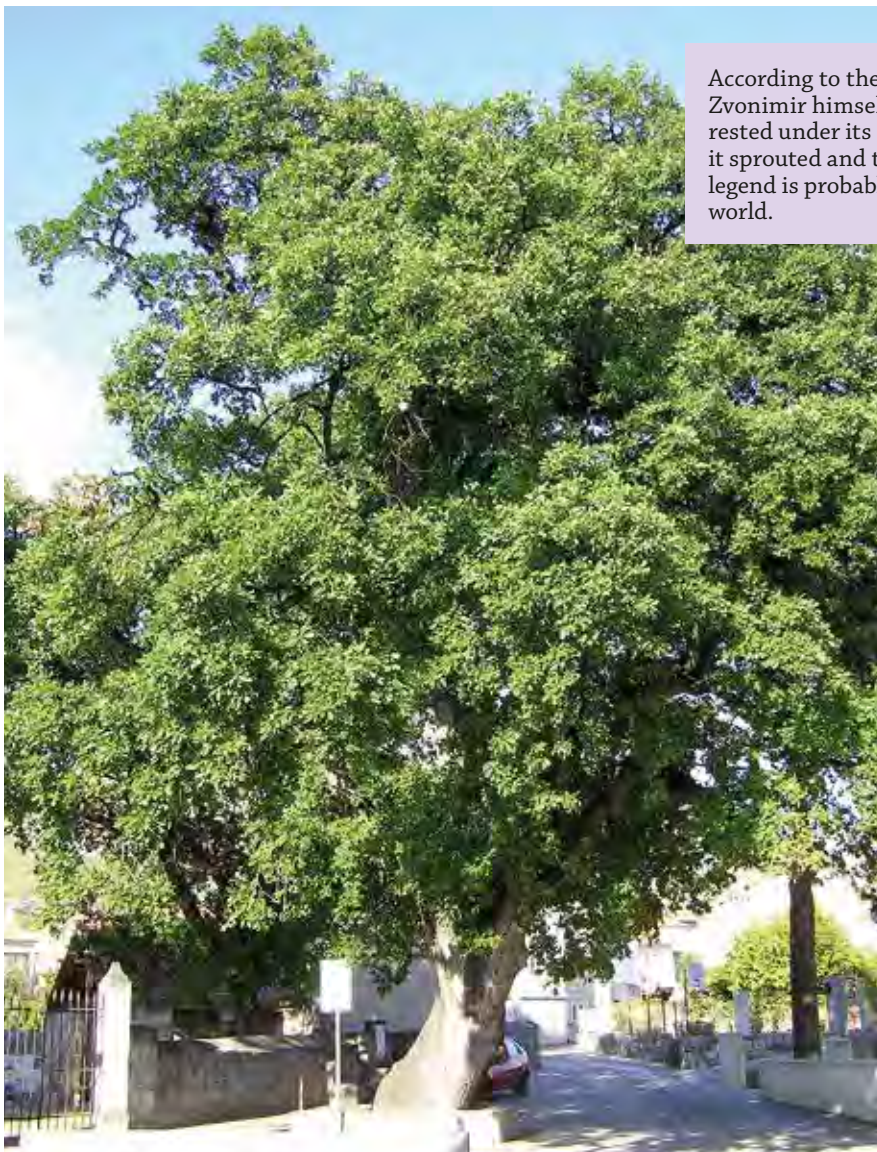


OAK TREE

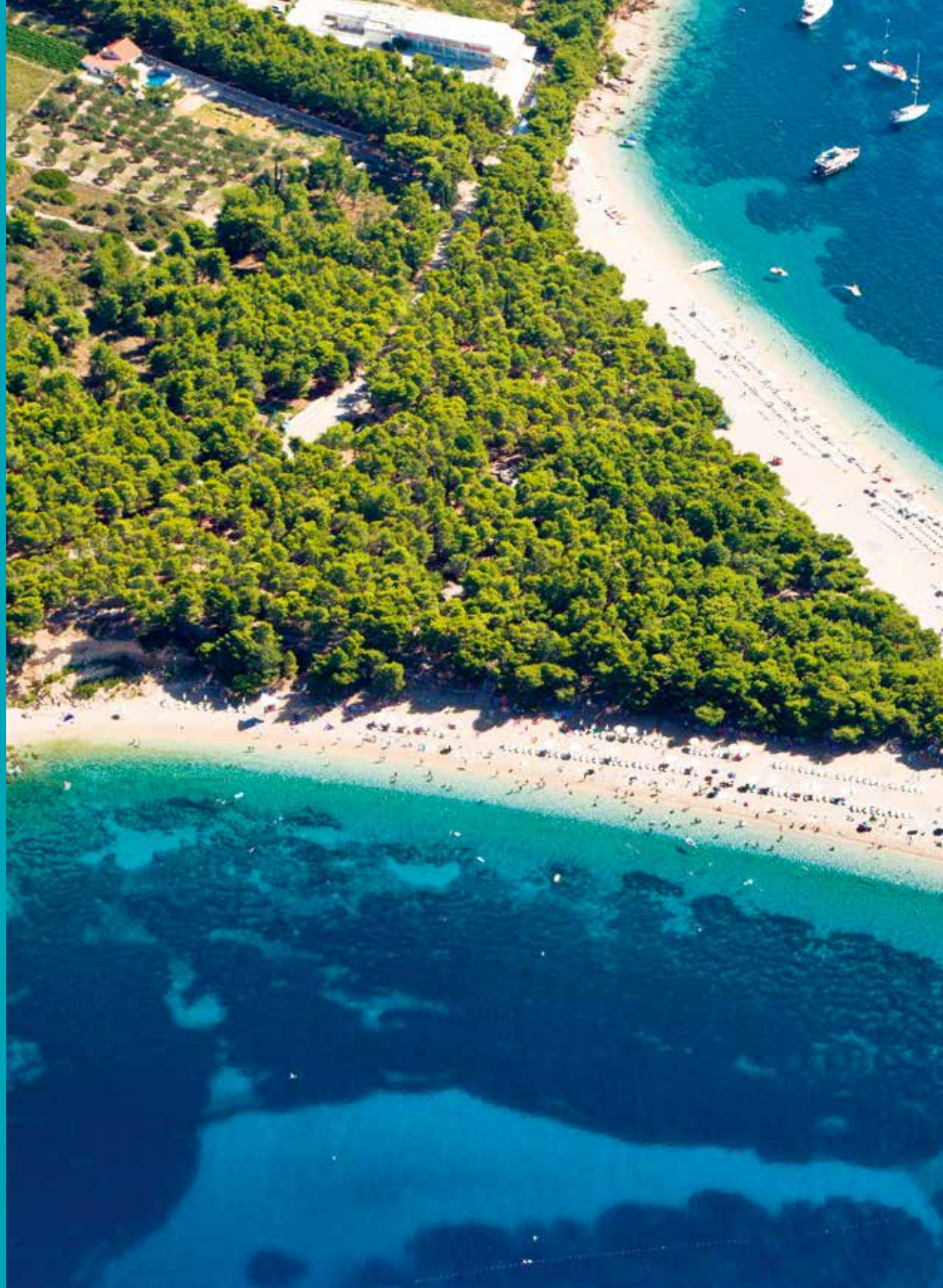
(*Quercus virgiliana*)

It was protected in 1996 as a monument of nature. In 1078, King Zvonimir gave a property in Kaštelansko polje to Benedictine monastery from Split, where they built in the 12th century, near the re-

mains of the Roman villae rusticae, the church of St. Kuzma and Damjan. Next to this church, this oak still stands today, whose age is estimated at about 700 years.



According to the legend, King Zvonimir himself (died in 1089) had rested under its shade, even before it sprouted and therefore this local legend is probably unique in the world.



SIGNIFICANT LANDSCAPES

- The Cetina Canyon
- The Golden Cape (*Croatian: Zlatni rat*)
- Stiniva
- Ravnik
- Paklinski Islands
- Šćedro
- Zečevo
- Vidova Mountain (*Croatian: Vidova gora*)
- Imotski Lakes - Gaj
- Prološko Blato
- The Blaca Valley
- The Grab
- The Ruda
- The Rumin
- The Sutina



THE CETINA CANYON

The Cetina Canyon is protected in 1963. It stretches from the Old Bridge and upstream of about 8 km to the rocks of Tisno, which makes about 1345.3 ha. The Canyon is most fascinating geomor-

phological phenomena, which the Cetina, as a typical river in the karst, has created on its way to the sea.

The name Cetina comes from the frigate word Zetna, meaning: the door. In its lower course, the Cetina deeply cuts into the limestone base between Mosor and Omiška Dinara, forming canyons up to 300 m high, ending in Omiš breakthrough. The lower course of the Cetina River is covered within the IPA area system (botanically important areas).

The whole flow of Cetina, and especially this part, has a great scientific value as an example of the constant existence of the surface flow in karst and the example of the affects of differentiated erosion.

Close to its estuary, the combination of fluvial and maritime influences (brackish/briny water) forms a specific biocenosis, while upstream, at Radman's



European Pond Turtle

(*Emys orbicularis*)



Dice Snake

(*Natrix tessellata*)

By the Decree of the Government of the Republic of Croatia on the proclamation of the Cetina river ecological network - the canyon is defined as the area of the ecological network under the code HR2000929 for the preservation of Dalmatian Spined Loach (*Cobitis dalmatina*), Canestrini's Goby (*Pomatoschistus canestrini*), Adriatic Dwarf Goby (*Knipowitschia panizzae*), Leopard Snake (*Zamenis situla*), Dalmatian Barbelgudgeon (*Aulopyge huegeli*), Sea Lamprey (*Petromyzon marinus*) and habitat types of carbonate rocks with hazmophytic vegetation and Eastern submediterranean grassland (*Scorzoneretalia villosae*).



mills, the ambient is fairly fluvial. The Cetina estuary, which covers the area from Balić Rat to Dugi Rat, is part of the national ecological network under code HR3000126. The sandy submarine of the estuary, due to the influence of the Cetina River, belongs to the special habitat of fish and other marine organisms, molluscs, crabs, fish and shellfish that spawn, feed, grow or shelter there. Marine flowering plants that cover the sand bottom are significant as habitats of strictly protected Long-snouted sea-horse (*Hippocampus ramulosus*). A large beach in the center of the town of Omiš in the Punta area, south of the Cetina River is due to the exceptionally clean sea and coastline of the long-standing Blue Flag bearer.

Recently, scientists from the Institute of Oceanography and Fisheries from Split, in cooperation with scientists from abroad, found in the waters of the Cetina River a specific, yet unknown, algae type. It has so far been considered that coral algae are exclusively marine organisms, some of which inhabit habitats with brackish water, but not fresh water. The *Pneophyllum cetinaensis* species has adapted to its full life in fresh water and inhabits the river Cetina from its estuary to the Peruća dam.

The Cetina Canyon is not only an area of particular natural values because of its geomorphological and hydrological characteristics, but also due to its floristic and faunistic diversity.

Terrestrial fauna of Cetina Canyon is characterized by species such as Southern White-breasted Hedgehog (*Erinaceus concolor*), Beech Marten (*Martes foina*), the European Badger (*Meles meles*) and Wild Boar (*Sus scrofa*). The Eurasian Lynx (*Lynx lynx*), a strictly protected native wild animal, was also registered in the canyon.

Aquatic habitats and the Cetina Canyon represent an ideal habitat for numerous species of amphibians and reptiles. Of the 9 species of snakes so far recorded in the canyon area, the only snake dangerous for humans is a Horned Viper



Marsh Frog

(*Pelophylax ridibundus*)



Ukliva Dace

(*Telestes ukliva*)



Illyrian Chub

(*Squalius illyricus*)



Corncrake

(*Crex crex*)



Redshank

(*Tringa totanus*)





(*Vipera ammodytes*). Much more often we can see the Dice Snake (*Natrix tessellata*), the species completely harmless to humans. Among the canyons lizards are the Balkan Green Lizard (*Lacerta trilineata*), one of our biggest lizards and the Dalmatian Wall Lizard (*Podarcis melisellensis*).

In the reed beds and wet meadows of the Cetina Canyon significant landscape there is the Marsh Frog (*Pelophylax ridibundus*) and European Pond Turtle (*Emys orbicularis*).

The Cetina is a habitat of rare and endangered fish species. Ukliva Dace (*Telestes ukliva*) is a critically endangered species living in the canyon area of Cetina. Among other species, in Cetina also live Brown Trout (*Salmo trutta*), Dalmatian Spined Loach (*Cobitis dalmatina*), Illyrian Chub (*Squalius illyricus*), Dalmatian Barbelgudgeon (*Aulopyge huegelii*), Freshwater Blenny (*Salaria fluviatilis*), Canestrini's Goby (*Pomatoschistus canestrini*) and Adriatic Dwarf Goby (*Knipowitschia panizzae*). Interestingly, in Cetina, many marine fish are characterized by commercial values such as European Bass (*Dicentrarchus labrax*) and various types of mullets (*Liza* sp.) that migrate from the estuary to the Tisno rocks area. The Cetina is important river for the life cycle of European Eel (*Anguilla anguilla*).



Lucania Moon Carrot
(*Portenschlagiella ramosissima*)



Chimney Bellflower
(*Campanula pyramidalis*)



Southern Adriatic Iris
(*Iris pseudopallida*)



Eurasian Eagle-Owl

(Bubo bubo)



Crag Martin

(Hirundo rupestris)



Merganser

(Mergus merganser)



Along the river Cetina there are numerous birds that, due to the great tourist pressure on canyoning, rafting and kayaking, are endangered. On the cliffs of the canyon nest: the Peregrine Falcon (*Falco peregrinus*), Eurasian Eagle-Owl (*Bubo bubo*), Raven (*Corvus corax*) and Crag Martin (*Hirundo rupestris*), the only swallow that spends the winters in Europe. In the Canyon can also be seen: Dipper (*Cinclus cinclus*), Golden Oriole (*Oriolus oriolus*), Goldfinch (*Carduelis carduelis*), Eurasian Jay (*Garrulus glandarius*), Kingfisher (*Alcedo atthis*) and Jack Snipe (*Lymnocyptes minimus*). Along the upper course of the Cetine, that is also intended for protection, live: Merganser (*Mergus merganser*), Montagu's Harrier (*Circus pygargus*), Corncrake (*Crex crex*), Redshank (*Tringa totanus*) and Moustached Warbler (*Acrocephalus melanopogon*).

The richness of the plant kingdom in the canyon consists of different plant communities, from rocks vegetation, reeds and sedge communities, lawns to forest complexes.

There are a large number of endems in this area. Numerous historical and cultural sights are also part of a significant landscape with natural values. The whole rich and detailed history of the pirate is portrayed by fortress Fortica, along with

the fortress Mirabela or Peovica. Forti-
ca is located on the very top of Omiška
Dinara, overlooking the entire town of
Omiš, the canyon, the islands of Brač,
Hvar, Šolta and the middle of Poljica.

The entire canyon is under the “watch-
ful eye” of a heroine from the time of the
people from Poljica fight with the Turks.
It is a monument of Mila Gojsalić, the
work of Ivan Meštrović.

The river, surrounded by lush green-
ery, with several beautiful islets, partly
quite peaceful is the right place for soul
and body relaxation and with its rapids,
a rafting adventure destination.

As a combination of adventure, sports
and fun, rafting has experienced its
greatest flourish on Cetina. The river and



its amazing canyon of astonishing beau-
ty provide an unforgettable experience
and justify the epithet of the best rafting
site, both for beginners and old lovers of
this sport.

But the Canyon is not only an ideal
place for rafting but also one of the most
interesting climbing places in Croatia.
Climbing area in Omiš was set up in 1997
and 12 climbing areas have been built so
far with 175 different directions of var-
ious weights and lengths. Most routes
can be reached by road, which is a major
advantage for larger groups. At the en-
trance to the Canyon, between the first
and the second tunnel there is Planovo
climbing area with 39 directions, while
the other with 26 directions is located
behind the second tunnel. There is also
a possibility of recreational fishing in the
Canyon.



The natural and cultural features of
this part of the Canyon are presented on
the educational track "St Leopold Man-
dić", situated within the boundaries of
a significant landscape. The 2.6 km long
track with 11 resting places, 5 view-
points and 10 informative boards were
created by the work and cooperation of
the Public Institution, Split-Dalmatia
County, the City of Omiš and the Tourist
Association of the City of Omiš.

As part of a significant landscape,
there are also cultivable areas (around
20%) under grapevines, olive groves and
vegetables, which are particularly valu-
able for the conservation of the biological
and landscape diversity of the area.

**Sombre
Bee-Orchid**
(*Ophrys fusca*)

Bee Orchid
(*Ophrys apifera*)

Fibigia
(*Fibigia triquetra*)



BEACHES AND FOREST - PARK IN BRELA

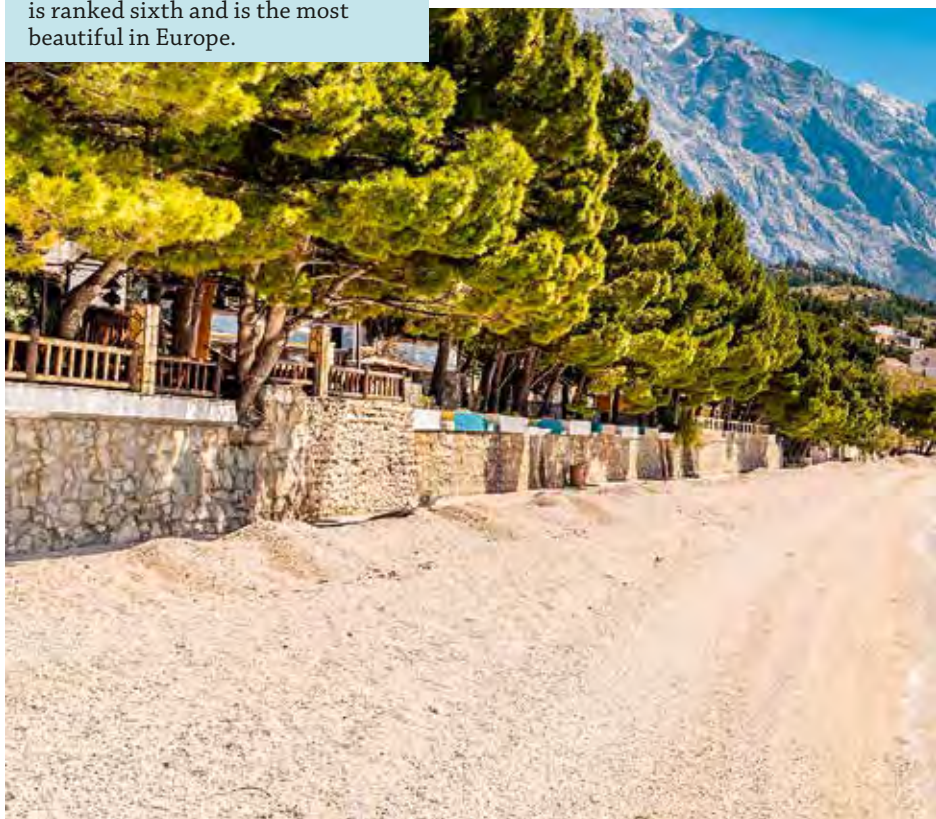
Beaches and forest parks in Brela were protected in 1964 as a significant landscape, with a total area of 32.71 ha. Significant landscape is the most typical part of Makarska and below the Biokovo mountain coastline, whose fundamental landscape features are the Aleppo pine forests and the typical gravel beaches below Biokovo.

Apart from the well-known sunny beaches, clear sea and the benefits of resting in the shade of centuries-old pine forests, the trademark of this pearl of the Adriatic is Kamen Brela. This stone, both integral and separated part of a beautiful

gravel beach, forms a specific scene that surely every visitor remembers. There are various legends about how the stone got into the sea.

At 6 km long beaches and promenades along the coast, everyone can find their peace. The most famous beach is Punta Rata. For several decades, Brela is the most attractive tourist resort on the Croatian Adriatic, the bearer of a high international award of the Bronze Flower of Europe for 2005. Brela was also declared the most beautiful tourist resort on Croatian Adriatic in the action Flower Festival held in 2004. Three beaches: Punta Rata, Berulia and Stomarica are the bearers of the Blue Flag, an international symbol of a clean sea that represents a synonym for the ecological preservation of the beach and the seaside.

At the choice of the well-known American magazine Forbes 2004, Punta Rata beach was included among the ten most beautiful beaches in the world, where it is ranked sixth and is the most beautiful in Europe.





THE GOLDEN CAPE

(Croatian: Zlatni rat)

The Golden Cape was protected in 1965 as a significant landscape and is located near Bol, on the southern coast of the island of Brač. The boundaries and areas of the protected area are still not clearly defined, and the issue of the protection category could also be discussed. This 400 m long cape is built from the gravel that was brought by streams from the Vidova mountain. It has a “tongue” shape jutting deeply into the sea. The top of the rat cape constantly changes its shape and direction, depending on the sea currents. In some cases, the top is completely rounded to one side and merged with the shore so that in the middle it creates a puddle. Due to its peculiarity and beauty, the Golden Cape is one of the most famous symbols of Croatian tourism.

The sites of marine flowering plant (*Posidonia oceanica* (L.) Delile), which is common in the eastern Adriatic submarine, are a habitat for numerous marine species which play an important role in sediment retention, coastal erosion prevention and enriching the sea with oxygen. Because of the remarkably slow growth and renewal (for the settlement of *Posidonia* with a size of one hectare, a century of growth is needed!), it is important to regulate any interventions in the seas and to prevent the threats such as uncontrolled anchoring and fishing, plucking, wastewater discharge, and the like. *Posidonia* is the endemic of the Mediterranean Sea.





By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the Golden Cape area on the island of Brač - underwater was identified as an area of the ecological network under code HR3000120 for the purpose of preserving dense meadows of Posidonia (*Posidonium oceanicae*) and sand bottoms permanently covered by the sea.

STINIVA

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, submarine area of the Stiniva cove is defined as part of the ecological network under the code HR3000097 Island of Vis - submarine area, with the purpose of preserving dense meadows of Posidonia (*Posidonion oceanicae*), reefs, flooded or partially flooded marine caves, muddy and sandy bottoms exposed to the air during the low water period and sandy bottoms permanently covered by the sea.

Stiniva cove, located on the south side of the island of Vis, was protected in 1967 on a total area of 15.28 hectares. The area on which it is located (on the southern side of the open-sea island) is characterized by a remarkably strong sea effect on the rocky shores. In such conditions, a series of abrasive caves with the sea entrance emerged in that area, as the erosion of waves produced cavities in the structure of heterogeneous limestone layers. The assumption is that long ago the Stiniva

cove was one of those caves in the geologic past, whose ceiling subsequently collapsed, so was formed today's cove of a very unusual appearance. Formerly small stone fishing facilities, monuments of the traditional way of life, testify that the cove used to be a fishing harbor for residents of nearby huts.

The entrance from the sea side is relatively narrow and then the cove extends and ends with a nice beach. Probably in the geologic past, it was formed by the collapse of the cave ceiling. There is no road for the car to the cove so its natural beauty is preserved. This cove of unusual shape is one of the most beautiful not only on the island of Vis, but also all over the Adriatic. The narrow passage from the open-sea, the beach surrounded by high rocks and several stone fishing houses really create a unique atmosphere.

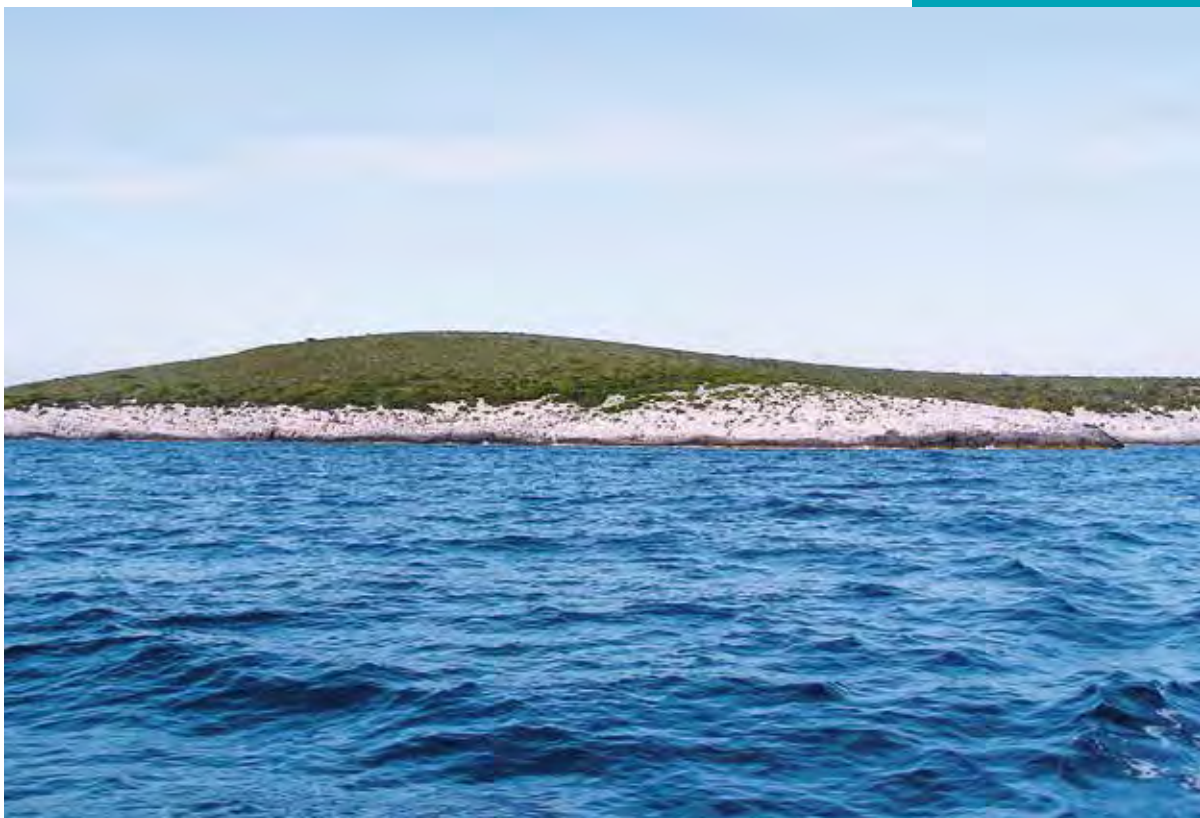


RAVNIK

Ravnik is an uninhabited island of 27.02 ha. It is located along the southeastern coast of Vis, 1.5 km from the Rukavac settlement. It was protected in 1967 as a significant landscape. Ravnik is an example of a typical Mediterranean vegetation of macchia and Aleppo Pine. It is also significant as the nesting place of colonies of Yellow-legged Gull (*Larus michahellis*).



**Yellow-
legged Gull**
(*Larus michahellis*)



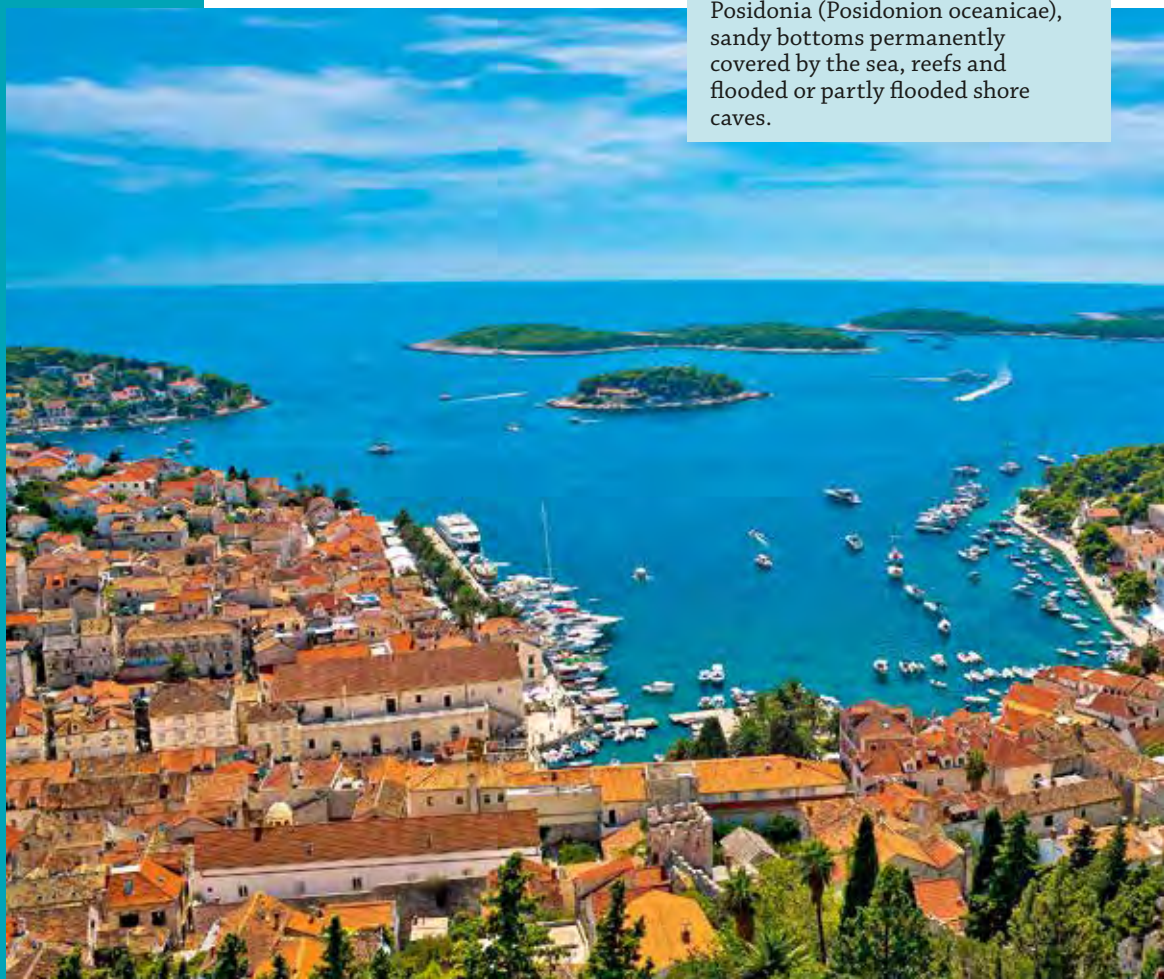
PAKLINSKI ISLANDS

Paklinski Islands are a group of islets in front of the southwestern coast of the island of Hvar. They were protected in the category of significant landscape in 1968 and they stretch on 634.38 ha. On our coastline they are the most beautiful landscape. They are made of limestone, and there is particularly noticeable their exceptionally indented coast. It consists of 19 islands and cliffs, and looking from west to east, they are: Mali and Veliki Vodnjak, Karbun, Travna, Lengva, Paržanj, Borovac, St. Clement, Vlaka, Dobri otok, Stambedar, Pločice, Gojca, Borovac, Planikovac, Marinkovac, Jerolim, Galešnik and Pokonji dol. Only 3 islands have some built facilities. The

largest island is St. Clement, where three settlements are occasionally inhabited.

The vegetation cover is mostly Mediterranean macchia and Aleppo Pine stands, with some agricultural areas (olive grove and grape plantations), giving them a characteristic green color. The coastline is mostly rocky, with fewer sandy and gravel beaches.

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network the Paklinski Islands are identified as the area of the ecological network under the code HR3000095 for the purpose of preserving dense meadows of *Posidonia* (*Posidonium oceanicae*), sandy bottoms permanently covered by the sea, reefs and flooded or partly flooded shore caves.





The rocky coastline of the Paklinski Islands is covered with halophilic vegetation of the *Crithmo-Limonietea* class. The sea-sprays and the salted soil with a lot of sunshine are favorable to plant species that inhabit this habitat. Such plants include the Rock Samphire (*Crithmum maritimum*) and the Sea-Lavender (*Limonium cancellatum*). Rock Samphire, also known as a sea fennel is used as a



supplement to Dalmatian cuisine and is most commonly acidified. This flower in stone is mentioned in Greek mythology. In the myth of Poseidon and Zeus's favorite nymph Dahomar and their forbidden love story on the coast of the Adriatic Sea, Greek historian Teopomp wrote that lovers were lying on a rock samphire which flourished from Poseidon's semen in the cracks.

The Jerolim island

Rock Samphire

(*Crithmum maritimum*)



The habitat of the halophilic communities of the coastal rocks

Sea-Lavender

(Limonium cancellatum)



The Marinkovac island

The Galešnik island



The islands of divine beauty got the name after the pitch, the resin that was used to coat the ships.

Because of many small coves that hide beautiful gravel beaches and crystal clear sea, Paklinski Islands are extremely attractive for tourists.



ŠĆEDRO

The Šćedro island, since 1968 protected by the category of significant landscape, is an island of exceptional beauty, situated on the southern coast of Hvar and 2.7 km far from Zavala on the island of Hvar. Its surface area is 8.36 km². Šćedro is separated from Hvar by Šćedorski kanal and from Korčula by Korčulanski kanal. Besides Hvar, the nearest land to Šćedro are the Lukavci islets - three islets about 3 km west of Šćedar. The name Šćedro comes from the *štedri*, which in Old Slavic means: mercy, because the island “mercilessly” offers the ships two deep, well-protected bays suitable for anchoring. The Latin name for Šćedro is Tauris, resulting in Italian Tauricola or Torcola, so in the historical records the island was called Torkola. It is an island of distinctly indented coastline and covered by the characteristic Mediterranean vegetation of the macchia and the Aleppo pine forest. According to the Hvar Statute of 1331, it was a general good and reserved for grazing. Šćedro was very fertile because it has a milder climate than the neighboring Hvar and due to night dew it was also used for cereal growing. Long ago on the island were inhabited places of Mostir and Nastane, which are now

mostly abandoned (except restaurants and other tourist facilities in the summer season). Today there live about 30 people and in the winter about 15. From the cultural facilities on the island there is the Church of Our Lady of Mercy and the remains of the Dominican monastery founded in Mostar cove in 1465 and abandoned in the 18th century. In the Church of Our Lady of Mercy, once a year, on the first Wednesday of July, there is still held a church service. There is also an old quarry of Stare Stine whose gypsum was used in the construction of the Baroque chapels of the Cathedral of Hvar. This is an island that without electricity or water today, so there are used for cisterns, aggregates and solar energy.

Underwater area of the northern side of Šćedro is abundant with archaeological sites that are connecting to two ports, Veli Porat and Mostir, which are located on the northern side of the island and well protected from all winds, along with the water source of Studenac in the Mostir cove. But approaching the coves in bad weather and ignoring the local maritimes, often ends up tragically.

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of the Šćedro island is defined as the area of the ecological network under the code HR3000119 for the purpose of preserving flooded or partially flooded marine caves, cliffs, dense meadows of *Posidonia* (*Posidonium oceanicae*), sandy bottoms permanently covered by sea and large shallow coves and bays.



ZEČEVO

The Zečevo island, since 1968 protected in the category of significant landscape, is located in the Adriatic Sea, in the Hvar Channel, located 2 km northeast of Vrboske on the island of Hvar and belongs to the Middle Dalmatian group of islands. The direction of the island is east - west, the so - called "Hvar direction". The climate is typical Mediterranean and



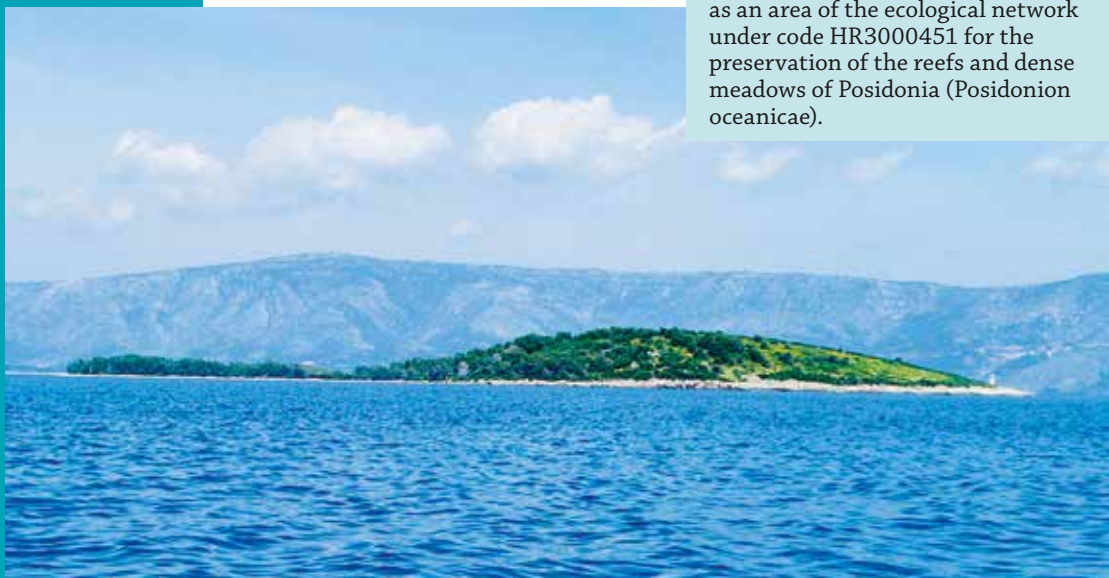
European Hare

(*Lepus europaeus*)

is a vegetation-like island located within the Mediterranean climate. The island of Hvar has an average of 2,722 sunny hours a year. According to the data for the island of Hvar, the average annual temperature measured in the period of 60 years is 16.2 ° C, and the total annual precipitation is 772 mm. The length of the coast of the island of Zečevo is 1,539 m and occupies an area of 113,288 m². Zečevo is uninhabited, which excludes anthropogenic influence on the composition of the flora

and vegetation dynamics of this island. The island is covered by the characteristic Mediterranean vegetation of the macchia and the Aleppo Pine. The vegetation on the northern part of the island indicates the dominant and strong influence of the strong northeastern wind. So far 217 plant species have been recorded on Zečevo, of which five are endems. According to the Red Book of Vascular Flora of Croatia, the Bertoloni's Bee Orchid (*Ophrys bertolonii* Moretti), Early Spider-Orchid (*Ophrys sphegodes* Mill.) and Prickly Saltwort (*Salsola kali* L.) belong to vulnerable (VU) species, while the Yellow-horned Poppy (*Glaucium flavum* Crantz) and the Long-bracted Sedge (*Carex extensa* Gooden) are endangered (EN) species. In the flora of Zečevo there are also three plant species that are very rare in Croatia: Liburnian Yellow Bee-Orchid (*Ophrys liburnica* Devillers et Devillers-Tersch), Cretan Coropincul (*Scaligeria cretica* (Mill.) Boiss) and Late Narcissus (*Narcissus serotinus* L.). Long ago the population of the hares was very numerous on the island, so the island was named after it.

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of Hvar - the island of Zečevo has been identified as an area of the ecological network under code HR3000451 for the preservation of the reefs and dense meadows of Posidonia (*Posidonion oceanicae*).



VIDOVA MOUNTAIN

(Croatian: Vidova gora)

It was declared a significant landscape in 1970. It is located on the island of Brač, with an area of 1880 hectares. The protected part belongs to the three municipalities: Bol, Nerežišća and Postira. It is the highest peak of Brač and all Adriatic islands (778 m).

It was named after the church of St. Vid that was placed at the top of the hill long ago, and today is in ruins. The church was built in the 13th or 14th century. From ancient times people from Brač has linked this mountain, which was an inspiration for many fantastic stories, with the old Slavic god of Svevid, because some other names of the locali-

ties on the island of Brač have old-Slavic origins.

The Vidova Mountain hides many natural attractions of the Dalmatian karst: from dense forests of autochthonous Austrian pine or Black Pine (*Pinus nigra* ssp. *dalmatica*) and rich plant and animal life to numerous caves and caverns.

In the woods of the Dalmatian black pine you can often hear the song of crickets. 26 types of crickets have been recorded on Brač so far. The loudest among them is the manin or ash cricket. These are insects whose sounds are recognizable melodies of the summer months.

The Vidova Mountain preserved an indigenous look and untouched nature and in its surrounding the local people is still engaged in cattle breeding in the old way - which contributes to the preserva-

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of the Vidova Mountain has been identified as an area of the ecological network under code HR2000937 for the preservation of the Greater Horseshoe Bat (*Rhinolophus ferrumequinum*), Blasius's Horseshoe Bat (*Rhinolophus blasii*) and Geoffroy's Bat (*Myotis emarginatus*) and the habitat types of Evergreen oak/Holly Oak (*Quercus ilex*), Pseudo-steppe with grasses and annuals (Thero-Brachypodietea), Eastern submediterranean grassland (*Scorzoneretalia villosae*), carbonate rocks with hazmophytic vegetation and Mediterranean forests of endemic pines.





tion of nature and gives a special charm to the idyllic atmosphere of this extravagant oasis of peace.

In the summer months, shepherds live with their herds in a small shepherds' settlement of stone cottages and Gažuls, pens for cattle. This village is recognizable for its rustic stone dwellings amid the old tall pines. At the end of July in Gažul is organized a farm fair. This event is one of Brač tourist attractions as well.

Long ago the resin extraction and tapping was practiced on the Vidova Mountain. The old black pine trees were incised and the collected resin was used for various purposes. Hundreds of



people were involved in resin tapping as a part time job to be able to feed big families. Today, these practice is has extinct and there are only "wounds" on the pines.

Shallow water habitats, the ponds, contribute to biological and landscape diversity of Vidova Mountain, which are today neglected and endangered. Lokve is a home to the only two amphibians on the island of Brač - the European Green Toad (*Bufo viridis*) and the Marsh Frog (*Pelophylax ridibundus*).

The animal life of the island of Brač also contains some animal species that have recently been brought on the is-





Beech Marten

(*Martes foina*)

Common Chaffinch

(*Eringilla coelebs*)

land. Among them the most widespread is Wild Boar (*Sus scrofa*) and the representatives of island native fauna are the Mouflon (*Ovis musimon*) and the Common Pheasant (*Phasianus colchicus*).

The island of Brač is rich in medicinal herbs such as Rosemary (*Rosmarinus officinalis*), Curry plant (*Helichrysum italicum*), Common Sage (*Salvia officinalis*), Rockrose (*Cistus* sp.), heath (*Erica* sp.), Oregano (*Origanum* sp.)...

The natural and cultural features of Brač are presented on the educational track "Vidova Mountain". The track is 19.7 km long and it contains 14 informative and educational panels, and it was

designed by the work and collaboration of the Public Institution, elementary schools of the island of Brač, Hrvatske šume company - Brač Forestry, Brački zbornik magazine and the local government and self-government units.

There is the Vičja pit (Croatian: Vičja jama) at the Vidova Mountain. A large funnel-shaped opening is awe-inspiring if you find yourself on its edge and hear the sound of the stone thrown into the abyss. After a few initial breaks the sound is completely lost in its depths.

The Brač population believes that Vičja pit is directly connected to the Vičja bay (Croatian: Vičja luka) on the western



**European
Green Toad**

(Bufo viridis)



Oregano

*(Origanum
vulgare)*



**Montpellier
Cistus**

*(Cistus
monspeliensis)*



Curry Plant

*(Helichrysum
italicum)*



Wild Boar

(Sus scrofa)



coast of Brač, a distance of fifteen kilometers. According to the legend, once upon the time the oxen that pulled the plow fell into Vičja pit. After a couple of days, the plow and the yoke appeared and came ashore in the Vičja bay near Bobovišće.

From the top of Vidova Mountain yields a breathtaking panoramic view to the south. Deep down is the Golden Cape that turns its top, depending on the winds at a certain time of the year, east or west. All over the Hvar channel, which is the narrowest here, lies the fertile valley of the island of Hvar, between Old Town in the west from one side and Vrboska and Jelsa in the east on the other side, while behind them is a long chain of highlands of the island. At clear weather can be seen other islands, from Pelješac peninsula on the east, across Korčula, Vis, Biševo to the distant cliffs of the island of Jabuka. When the weather is especially clear, the Italian coast can be seen as well.





**Short-toed
Snake Eagle**

*(Circaetus
gallicus)*



**Olive-tree
Warbler**

*(Hippolais
olivetorum)*



Horned Viper

*(Vipera
ammodytes)*



**Italian Wall
Lizard**

(Podarcis sicula)



IMOTSKI LAKES - GAJ

Imotski Lakes - Gaj is an area north of the town of Imotski, protected in 1971 in the category of significant landscape. The protected area, 354.52 ha, is mostly covered with black pine (*Pinus nigra*).

Despite the drastic changes of recent years, the divine blue shade of one and slightly enigmatic depth of another pearl of Imotski completes the variety of plant and animal life.

The composition of the black pine that covers the area around the Im-

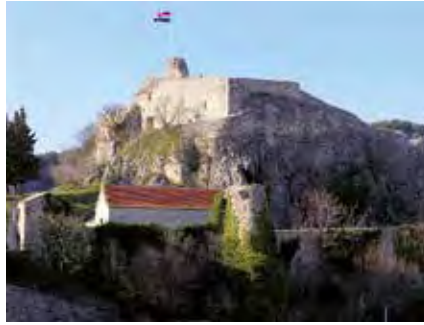
otski Lakes is artificially planted. The planting of Gaj was organized by Russian refugee Boris Hiperborejski, a forestry engineer who, besides the karst afforestation itself, also set up a nursery and designed paths and other construction landscape elements in the forest. Thereby the area of Gaj, especially its eastern part, became a true city park, which gave Imotski another important feature of the city. Today's protected area is wider than that park itself and includes both Imotski Lakes.

In the composition of a significant landscape there are significant geomorphological monuments of Blue and Red Lakes. In 2015, an 8.53-km-long educational track was designed in this area, featuring 8 informative-educational panels, info-points, sanitary facilities at Blue and Red Lakes and parking space was constructed as well. The funds for building of educational track are secured by the World Bank loan.

feature of the city. Today's protected area is wider than that park itself and includes both Imotski Lakes.



This area in its geobotanical sense belongs to the submediterranean vegetation zone. The most important edifying species of this zone is the Oak tree (*Quercus virgiliana*), which together with the Oriental Hornbeam (*Carpinus orientalis*) makes the forest community of *Carpino-Quercetum virgiliana*. This forest community is not developed due to the presence of artificially planted pine, but its elements are represented on the ground layer. In addition to the Oak of Virgil and Oriental Hornbeam in this area, there are also the Cypress (*Cupressus sempervirens*), Montpellier Maple (*Acer monspessulanum*), Mediterranean Hackberry (*Celtis australis*), Scorpion Senna (*Coronilla emerus* subsp. *emeroides*), Jerusalem Thorn (*Paliurus spina christi*), Prickly Cedar (*Juniperus oxycedrus*), Autumn Moor Grass (*Sesleria autumnalis*) and Ivy-leaved Cyclamen (*Cyclamen nea-*





Oak tree

(*Quercus virgiliana*)



Black Pine

(*Pinus nigra*)



**Ivy-leaved
Cyclamen**

(*Cyclamen neapolitanum*) -
protected native
wild taxon



politanum). In the area around the pearls of Imotski, some grassland elements can also be observed: Yellow Bluestem (*Bothriochloa ischaemum*), Sprawling Needle Sunrose (*Fumana procumbens*), Winter Savory (*Satureja montana*), Rock Fescue (*Festuca illyrica*), Mediterranean Junegrass (*Koeleria splendens*), Early Penny-Cress (*Thlaspi praecox*), Savory (*Micromeria juliana*), Amethyst Sea Holly (*Eryngium amethystinum*), Feather Grass (*Stipa eriocalis*), Tomasini's Starthistle (*Centaurea tommasinii*) and others.

On the eastern side of Blue Lake there is an old fortress of Topana, believed to be older than a thousand years. This fortress had a very strategic significance throughout history and was mentioned several times in the charters of Croatian and Bosnian kings and was inhabited until 1816. Inside its walls is the church of Our Lady of Angel, patron of the Imotska krajina, built in 1718, and in its vicinity was built a monument to all the victims of Imotski in the Homeland War. The feast of Our Lady of Angel, celebrated on August 2, is written in golden letters in the history of the Imotska krajina. On that day in 1717, after 224 years, the Croatian army managed by the command of Venetian officers to rid of Turkish rule over the Imotska krajina. After that liberation from the Turks, the distance between the Venetian Republic and the Ottoman Empire was determined from this fortress, by the range of cannon, and today is the border between Croatia and Bosnia and Herzegovina.

Topana is a sight-seeing toda, and in the summer cultural events are held there.

At the foothills of Topana there is the Gospin dolac, a football stadium that was named after the votive church of Our Lady of Angels.

PROLOŠKO BLATO

Prološko Blato is a flooded area in the western part of the Imotsko field, which is part of the year under water, and only smaller parts are under water all year long (several small lakes, the largest and the deepest is Prološko Lake). The swamp of Prološko Blato was protected in the category of significant landscape in 1971 and covers an area of 10.24 km². It is a typical example of floodplain fields in the karst in Dalmatia, which today are mostly destroyed by drainage for the purpose of expanding of agricultural land. In the rest of the area of Imotski Field there are cultivated agricultural areas under corn, wheat, barley, vineyards and vegetable cultures, some pastures and quite a lot of neglected, untreated agricultural areas. In addition to the landscape, ecological value of the Prološko Blato is significant, primarily as habitats of swampfish and endemic fish species.

Among the endemic fish species, the Basak (*Rutilus basak*), a strictly protected wild taxon, and a new species of loach (*Cobitis illyrica*), are particularly outstanding.

Prološko Blato is a genuine shelter for numerous swampfish, especially for migration of: the Little Egret (*Egretta garzetta*), the Grey Heron (*Ardea cinerea*), the Gadwall (*Anas strepera*), the Wigeon



Mallard

(*Anas platyrhynchos*)



(*Anas penelope*), the Teal (*Anas crecca*) and various species of waders. In nesting, particularly numerous birds are the Great Crested Grebe (*Podiceps cristatus*) and the Little Grebe (*Tachybaptus rufi-*

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of Prološko Blato has been identified as an area of the ecological network under code HR2000932 for the preservation of White-clawed Crayfish (*Austropotamobius pallipes*), Spotted Minnow (*Delminichthys (Phoxinellus) adpersus*), Illyric Spined Loach (*Cobitis illyrica*), Minnow Nase (*Chondrostoma phoxinus*) and the Makal Dace (*Squalius microlepis*) and habitat types of occasional karstic lakes (Turloughs), hard oligomezotrophic waters with bottoms overgrown in Chlorophyta (Characeae) and natural eutrophic waters with Hydrocharition or Magnopotamion vegetation.

collis), the Mallard (*Anas platyrhynchos*), while Coot (*Fulica atra*) and common Moorhen (*Gallinula chloropus*) are nesting in a smaller number. The Woodpigeon (*Columba palumbus*) nestles on artificially planted poplars and willows, which is easily recognizable due to its size, white spots on the side of the neck and a wide white longitudinal stripe on the upper side of the wings.

In the period of high waters, when the whole of Blato is under water, but as an islet remains the hill of Manastir (monastery), that was named after the remains of the Franciscan monastery. The folk tradition says that the friars, in fear



of frequent Turkish attacks, had flooded the abyss through which the water was running, to keep it all year long and thus protect the monastery on the island.

As a part of Prološko Blato swamp area there are also several deep lakes in the karst, as well as several sink-holes, the so-called dry lakes.

Lokvičić Lake, Knezovići Lake and Galipovac, are three lakes that together with the Prološko Blato area, including Krenica and Bučuša, form a unique whole. These lakes are not as well known as Blue and Red Lakes, though they are no less attractive. The largest among

them is Galipovac, located at the northernmost point of Imotsko polje. Its rocks are extremely steep, and the depth is greater than 60 m.

The water in these three lakes is oscillated by ten meters, but it never dries up nor does the lake surrounding ever lacks for water. Lokvičićka lakes and Blato are intertwined with sink-holes and hills with scattered gardens, cascading vineyards, fortresses and many archaeological sites that can be found there.

There is an opportunity of recreational fishing in Prološko Blato.



Moorhen
(*Gallinula chloropus*)



THE BLACA VALLEY

The Blaca Valley was protected in the category of significant landscape in 1986. It covers the Dragovode area up to the Blaca cove in length of about 3,500 m and in average width of 700 m, with an area of about 211,77 ha. The dominant natural feature is the canyon character of the whole area.

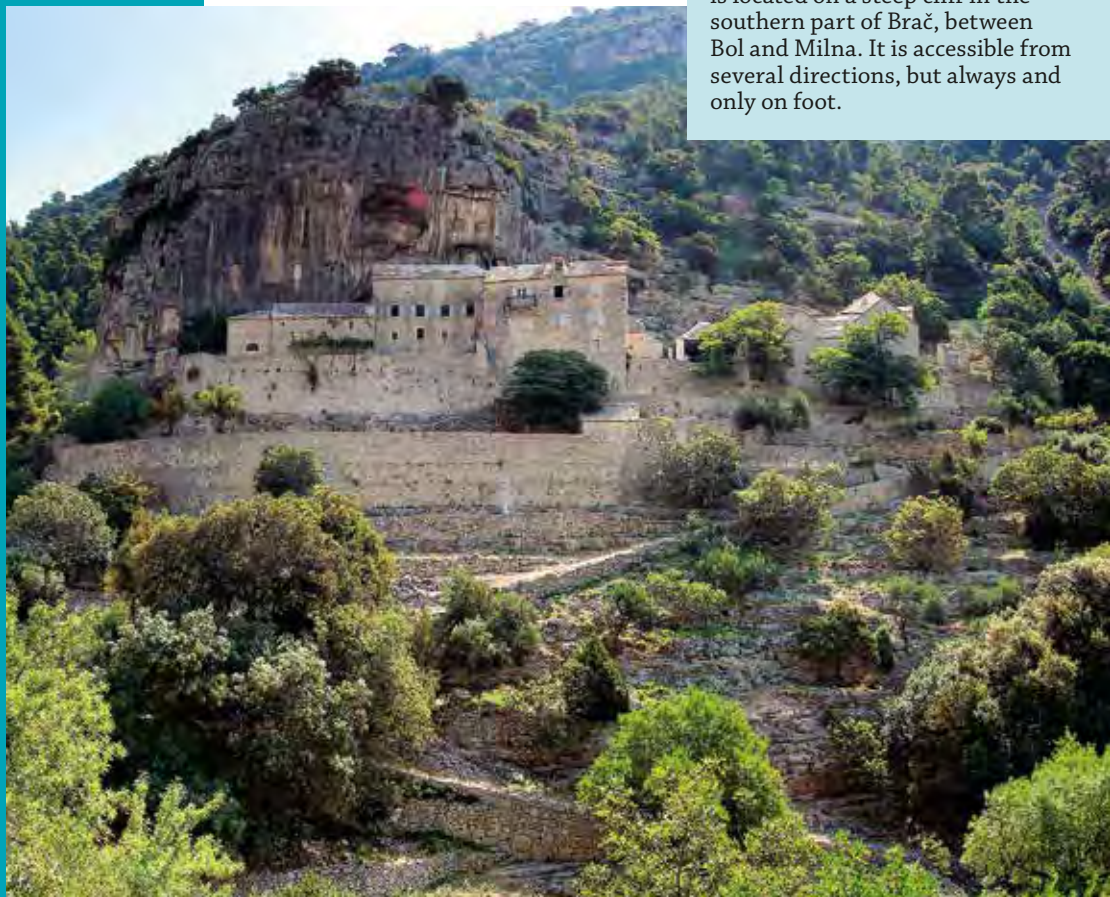
On the vertical rocks developed specific rock vegetation, the stenoendemic community of Portenschlagia and the Dalmatian Bellflower (As. *Portenschlagiello-Campanuletum portenschlagiana*). In floristic composition of this community stands out: Dalmatian Bellflower (*Campanula portenschlagiana*), Three-edged Fibigia (*Fibigia triquetra*), Lucania Moon Carrot (*Portenschlagiella ramosissima*), Inula (*Inula verbascifolia*), Southern Adriatic Iris (*Iris pseudopallida*), Chimney Bell-

flower (*Campanula pyramidalis*) and Croatian Centaury (*Centaurea ragusina*).

Geomorphologically, it is a rocky valley in limestone, nowadays quite dry, somewhat picturesque canyon physiognomy and a depth of about 200 meters.

The former natural plant cover has been modified by the long-lasting influences of man, but the total surface is relatively good, and it is made up of elements of Holm/Holly oak community with a large presence of Aleppo pines and Macchia. Vineyards and olive groves are

In the cave called Ljubitovica, in 1551, on the run from the Turks, two Glagolitic priests from Poljica found a shelter that soon developed into a monastery. The monastery is located on a steep cliff in the southern part of Brač, between Bol and Milna. It is accessible from several directions, but always and only on foot.



also present, especially in the area closer to the sea.

Soil and climate have the greatest influence on vegetation. Since in the summer there are severe droughts, Mediterranean vegetarian communities are present there because they can bear such conditions. In the lowest parts, a substantial part of the plant world is made up of a Mediterranean macchia, which represents a degraded forest community of Holly oak and Myrtle, Spruce, Strawberry Tree and Spanish Broom. Grazing of the goats and the influence of man affected the macchia to degrade to garrigue and karst terrain. Deciduous tree species in this area are Ash, Hornbeam, Downy Oak, Field Maple, Jerusalem Thorn, Blackthorn, Turpentine Tree and others. On these surfaces grows a wide variety of aromatic and medicinal herbs: Sage, Curry Plant, Montpellier Cistus, Winter Savory, Oregano, Lavender and others.

The natural landscape look is refined by partly altered by centuries-old human activity in traditional agriculture. Within the protected area there is particularly noted a special cultural and historical complex, a desert monastery.

People from Blaca were under the rule of Polish priests who were often from the same family. Living for centuries in solitude, Glagolitic priests nurtured love, peace, harmony and work. They helped the poor and beggars, developed and improved viticulture, olive growing and livestock production and produced large quantities of wine, oil and honey. The monastery owned a printing machine, and a wealthy library fund, of which only a small part is preserved, testifies of the intellectual efforts of these hermit philosophers. At the beginning of the 20th century, the monastery was considered the most famous observatory in the southern part of Europe.

In the entire complex of the monastery walls, today there is solitude and peace, and the bones of the Blaca hermits lie and rest in stone graves in front of the church.



Inula

(*Inula
verbascifolia*)

Dalmatian Bellflower

(*Campanula
portenschlagiana*)

Croatian Centaury

(*Centaurea
ragusina*)

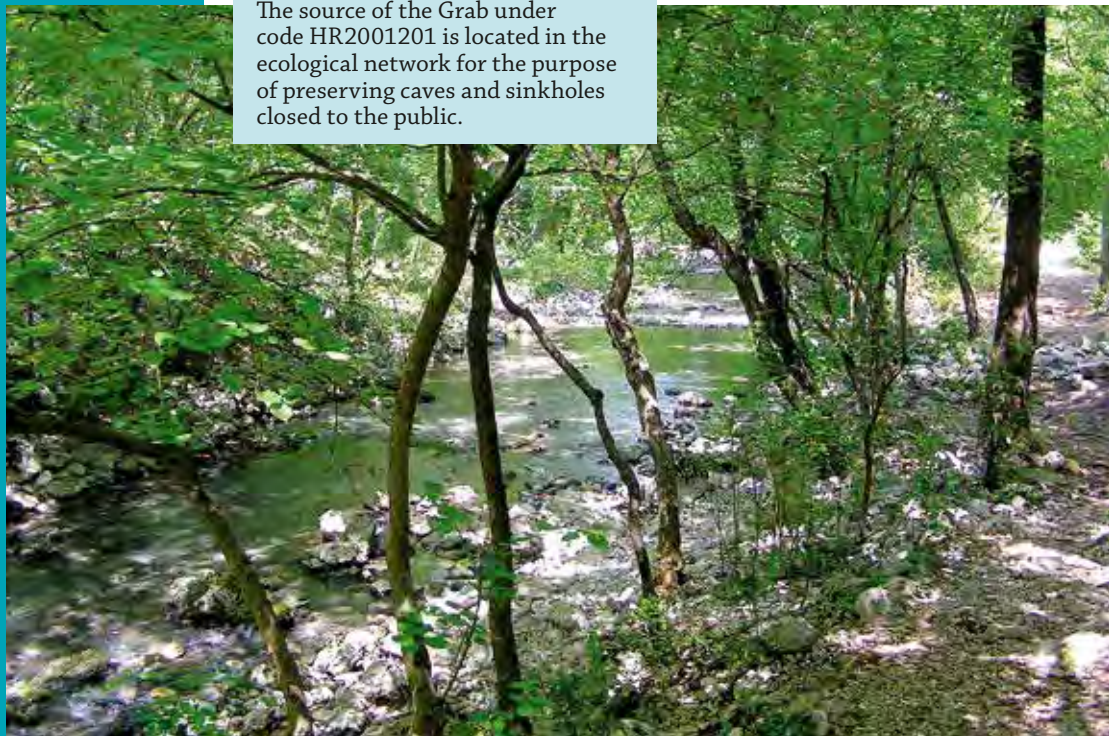
THE GRAB

The Grab river area was protected in 2000 in the category of significant landscape. It covers an area of 39, 5 ha. As part of a significant landscape, there is the source and the upper flow of the Grab stream, which are preserved in its natural appearance. The stream of Grab is a tributary of the Rude river, in the area of Trilj. It is protected due to the aesthetic value of its source, the upper flow and the area around the mills, which, as an example of folk architecture, harmoniously fit into the landscape.

Apart from its geomorphological and hydrological traits, the area of the Grab river is both significant landscape and stands out for its flora and fauna. The

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of the Grab river has been identified as an area of the ecological network under code HR2001395 for the preservation of White-clawed Crayfish (*Austropotamobius pallipes*). The source of the Grab under code HR2001201 is located in the ecological network for the purpose of preserving caves and sinkholes closed to the public.

source of the Grab is located at the foot of steep cliffs in the shade of Oriental Hornbeam trees (*Carpinus orientalis*). Almost at the source itself, the Grab divides into several streams, making the small ponds surrounded by Purple Willows (*Salix purpurea*), several Pyramidal Black poplars (*Populus nigra pyramidalis*) and an old tree of White Willow (*Salix alba*). On the steep cliffs around the source in spring bloom daffodils (*Narcissus* sp.) and Fritillary (*Fritillaria* sp.) and by the river flow the Common Viola (*Viola odorata*). Steep cliffs are the habitat of Raven (*Corvus corax*) and Kestrel (*Falco tinnunculus*), and there nest Eagle-Owl (*Bubo bubo*), too. In the woods usually live common Blackbird (*Turdus merula*), the Great Tit (*Parus major*), Chiffchaff (*Phylloscopus collybitus*), Golden Oriole (*Oriolus oriolus*) and Goldfinch (*Carduelis carduelis*). Next to the lake we can come across the Water Rail (*Rallus aquaticus*) and Dipper (*Cinclus cinclus*). After heavy rains, the rushing of the Grab spring, pop to the surface from its underground habitats the olm (*Proteus anguinus*), an endemic species





of Dinaric karst. There are also some amphibians like Marsh Frog (*Pelophylax ridibundus*), Agile Frog (*Rana dalmatina*) and Fire Salamander (*Salamandra salamandra*). Typical lizards that live here are Dalmatian Wall Lizard (*Podarcis melisellenis*) and Italian Wall Lizard (*Podarcis sicula*), then some snakes like the Balkan Whip Snake (*Hierophis gemonensis*), Grass Snake (*Natrix natrix*), Dice Snake (*Natrix tessellata*) and Horned Viper (*Vipera ammodytes*). Ithiofauna is not sufficiently explored, but several endemic can be expected.



The traditional architecture of more old mills - the watermill, fits into the landscape and is a monument to the former lifestyle of the local population, which was in harmony with nature.

In the significant landscape of the Grab there is no possibility of sport-recreational fishing.

Italian Wall Lizard

(*Podarcis sicula*)

Agile Frog

(*Rana dalmatina*)

Olm

(*Proteus anguinus*)



THE RUDA

The area of the Rude river was protected in 2000 in the category of significant landscape. It covers an area of 34 ha. The river canyon and the old mill are the most distinctive features of the protected source of the Rude river, the largest tributary of Cetina.

The canyon upper flow of the river is picturesque and unusual in its appearance and is an example of a specific karst morphology.

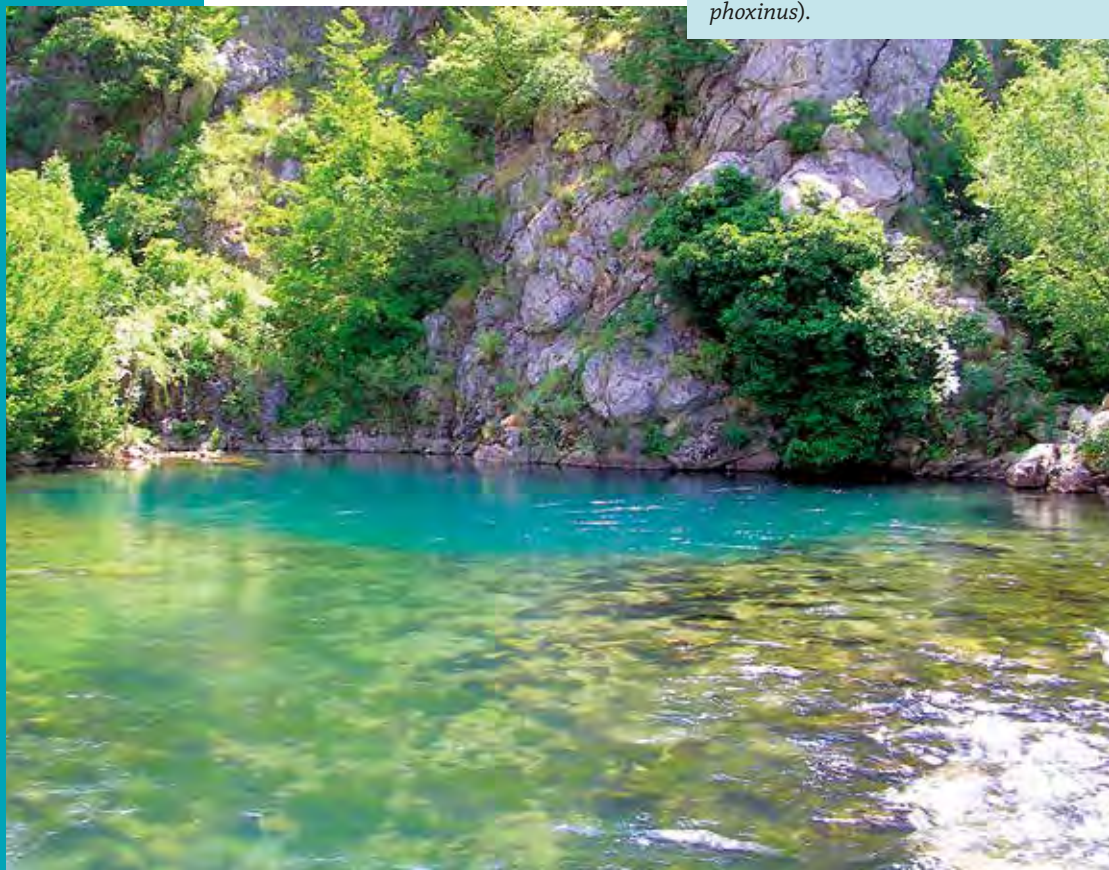
Most part of the Rude is made of limestone and dolomite and has no permanent surface watercourses. They are formed only by very strong flurries in the form of torrent flows. The source of the river belongs to the typical karst limno-centric springs from which water flows from deep depression where the aquifer is higher than the base forming the lake in the dell, in which the spring water flows

The Balkan Whip Snake

(*Hierophis gemonensis*)



By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network, the area of ruda river has been identified as an area of the ecological network under code HR2000936 for the preservation of White-clawed Crayfish (*Austropotamobius pallipes*) and Minnow Nase (*Chondrostoma phoxinus*).





continuously and flows farther in the form of stream.

The source of the Rude is at the bottom of the gorge overgrown by European Smoketree (*Cotinus coggygria*) and Jerusalem Thorn (*Paliurus spina christi*), while by the water grow Purple Willow (*Salix purpurea*). Ivy (*Hedera helix*), Old Man's Beard (*Clematis vitalba*) and Raspberry (*Rubus dalmaticus*) are intertwined on drystone walls and rocks. Of a treeplant species, along the willow, there are Oriental Hornbeam (*Carpinus orientalis*), Oak of Virgil (*Quercus virgiliana*), European Hop-Hornbeam (*Ostrya carpinifolia*) and Fig (*Ficus carica*).

Cold and fast spring water of the Rude is a habitat of the Marsh Frog (*Pelophylax ridibundus*). The cliffs and karst and the water habitats of the significant landscape of the Ruda area are the ideal habitat for a large number of reptiles. So we can come across some snakes like the Balkan Whip Snake (*Hierophis gemonensis*) and Grass Snake (*Natrix natrix*), while in the calmer parts of the flow the Dice Snake (*Natrix tessellata*). The only snake dangerous for people is the Horned Viper (*Vipera ammodytes*). On this small area are even four species of lizards: common



Minnow Nase

(*Chondrostoma phoxinus*)



Grass Snake

(*Natrix natrix*)



**The Sharp-
snouted Rock
Lizard**

*(Dalmatolacerta
oxycephala)*



Wall Lizard (*Podarcis muralis*), Dalmatian Wall Lizard (*Podarcis melisellensis*), Italian Wall Lizard (*Podarcis sicula*) and the Sharp-snouted Rock Lizard (*Dalmatolacerta oxycephala*). Steep cliffs are the habitat of Kestrel (*Falco tinnunculus*), Blackbird (*Turdus merula*), Blackcap (*Sylvia atricapilla*), Grey Wagtail (*Motacilla cinerea*), Red-backed Shrike (*Lanus collurio*), and sometimes there nest common Raven (*Corvus corax*). From mammals species, there is often the Southern White-breasted Hedgehog (*Erinaceus concolor*) and sometimes to this little and by the people often visited space, wanders the Beech Marten (*Martes foina*).





**Jerusalem
Thorn**

(*Paliurus spina
christi*)



Old Man's Beard

(*Clematis vitalba*)

The Ruda is significant as a habitat of critically endangered fish species: Minnow Nase (*Chondrostoma phoxinus*), Toothtrout (*Salmo dentex*) and Ukliva Dace (*Telestes ukliva*). In Ruda live two endangered fish species: Dalmatian Barbelgudgeon (*Aulopyge huegelii*) and European Carp (*Cyprinus carpio*), as well as 4 very vulnerable, according to the Red List of Endangered Plants and Animals of Croatia: Dalmatian Spined Loach (*Cobitis dalmatina*), Brown Trout (*Salmo trutta*) Karstic waters ray-finned fish Illyrian Chub (*Squalius illyricus*) and Grayling (*Thymallus thymallus*).

In the significant landscape of the Ruda there is no possibility of sport-recreational fishing.



THE RUMIN



Common Sage

(*Salvia officinalis*)

The Rumina stream area, with a total area of 33.5 ha, was protected in 2000 as a significant landscape. The Rumin is a stream, the tributary of the river Cetina, near Hrvace, protected for the beauty and landscape value of its the source. It consists of the sources of Small Rumin (Croatian: Mali Rumin) and Big Rumin (Croatian: Veliki Rumin) with its surrounding area. While in the summer Small Rumin is dry, Big Rumin, which springs under the cliff called Greda, never goes dry.

Rocks, karst terrain, forests, the bush and waters offer a home or a feeding place for various bird species, such as Dipper (*Cinclus cinclus*), Golden Oriole (*Oriolus oriolus*), White and Grey Wagtails (*Mot-*





The landscape is preserved in its original appearance and as such characteristic for the whole region along the river Cetina. At this site, the value of the natural area is complemented by an old mill, which fits in with the landscape as a typical example of local folk architecture.

acilla alba and *M. cinerea*), Mallard (*Anas platyrhynchos*), Short-toed Snake Eagle (*Circaetus gallicus*), Kestrel (*Falco tinnunculus*) and even Goosander (*Mergus merganser*) which sometimes comes to the area of Rumin from its permanent nest at the nearby Peručko Lake, the only one in Croatia.

From mammal species we can find here the Southern White-breasted Hedgehog (*Erinaceus concolor*), the Red Fox (*Vulpes vulpes*), the European Hare (*Lepus europeus*), the Beech Marten (*Martes foina*) and the Eurasian Badger (*Meles*

meles). Among the snake that live in this area, points out the Horned Viper (*Vipera ammodytes*), and the most usual lizard is Dalmatian Wall Lizard (*Podarcis melisellenensis*). The wealth of ihtiofauna is reflected in a large number of endemic species, such as Ukliva Dace (*Telestes ukliva*),





**The Southern
White-
breasted
Hedgehog**

*(Erinaceus
concolor)*



**Winter
Savory**

*(Satureja
montana)*



Toothtrout (*Salmo dentex*), Minnow Nase (*Chondrostoma phoxinus*), the Dalmatian Barbelgudgeon (*Aulopyge huegleri*), Dalmatian Spined Loach (*Cobitis dalmatina*) and Illyrian Chub (*Squalius illyricus*).

The herbal cover changes from watercourse plants to petrophilic species on the cliffs surrounding the Rumin so there is has a whole range - from water plants in Rumin itself, through grassland plants such as Winter Savory (*Satureja montana*), Mountain Germander (*Teucrium montanum*), Wall Germander (*Teucrium chamaedrys*), Curry Plant (*Helicrysum italicum*), Common Sage (*Salvia officinalis*) and so on, to the deciduous bushes and trees and pine trees.

In the significant landscape of the Rumin stream there is no possibility of sport-recreational fishing.

THE SUTINA

The Sutina stream area was protected in 2000 in the category of significant landscaping. The protected area covers the canyon of the stream of Sutina, the tributary of the Cetina and its surrounding area, total area of 462.8 ha.

The stream of Sutina, a torrent stream, is poor for most of the year. Its main source is located at the foot of Mičići and Juričići villages, in the settlement of Sutina. However, the stream of Sutina gets its water from other sources as well, including the source of Bila Vrila. Next to this source there is an old mill that testifies to how the power of Sutina stream was used long ago.

By geomorphological composition, Sutina canyon is made of limestone and dolomite, and the erosive action reveals numerous fossils to the visitor's eye.

The canyon of the Sutina mountain stream, with its unusual layout of the

By the Decree of the Government of the Republic of Croatia on the proclamation of the ecological network the area of the Sutina stream is identified as the area of the ecological network under the code HR2001397 for the purpose of preserving of White-clawed Crayfish (*Austropotamobius pallipes*).



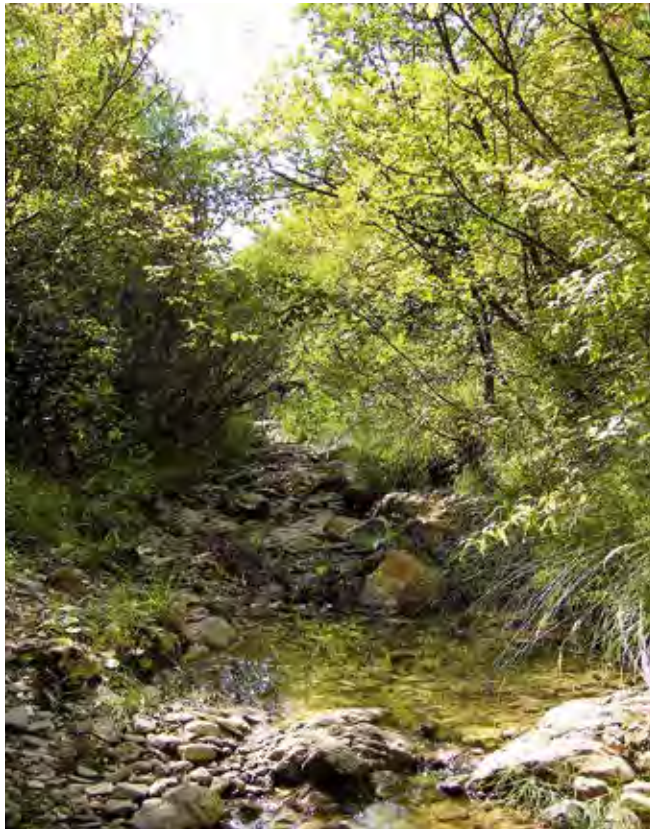
Fire Salamander
(*Salamandra salamandra*)

plant cover, is a typical example of vegetation inversion. From the lowest point of the canyon to the summits of the surrounding hills grow Common Beech (*Fagus sylvatica*), European Hop-Hornbeam (*Ostrya carpinifolia*), Oriental Hornbeam (*Carpinus orientalis*) and Oak of Virgil (*Quercus virgiliana*), while on the karst terraing meadows can be seen aromatic herbs like the Curry flower (*Helichrysum italicum*), Common Sage (*Salvia officinalis*), Winter Savory (*Satureja montana*), Oregano (*Origanum* sp.) and Breckland Thyme (*Thymus serpyllum*). In search of nectar flowers of these plants circle the butterflies like the Old World Swallowtail (*Papilio machaon*), the Black-veined White



Yellow-bellied Toad

(*Bombina variegata*)



Breckland Thyme

(*Thymus serpyllum*)



(*Aporia crataegi*) and the members of the Black-veined white family (Pieridae), Brush-footed butterflies (Nymphalidae), the Satyrines (Satyridae) and Gossamer-winged butterflies (Lycaenidae).

A diverse plant cover, bushes, tree-holes and rocks provide nesting to numerous species of birds. On the cliffs of the canyon nestles the Grey Wagtail (*Motacilla cinerea*). Thick forests of canyon habitats are to Black Woodpecker (*Dryocopus martius*). On the rocky plateau of the protected belt in the grass there are nesting the Woodlark (*Lullula arborea*) and the Rock Partridge (*Alectoris graeca*). On high pine trees make their nests Buzzard (*Buteo buteo*) and the Northern Goshawk (*Accipiter gentilis*). At the exit from the canyon where erosive activities are strong and sandy slopes are formed, there can be found the channels of the European Bee-Eater (*Merops apiaster*) in which it raises its young.



In the thick forests of Sutina, in its karst, macchia and rocky meadows, there are food and breeding grounds for mammals such as Wild Boar (*Sus scrofa*), a permanent resident of these areas, as well as the Red Fox (*Vulpes vulpes*), the European hare (*Lepus europeus*), the Beech Marten (*Martes foina*) and the Eurasian Badger (*Meles meles*).

In the waters of the Sutina we find amphibians such as the Yellow-bellied Toad (*Bambina variegata*), the Marsh Frog (*Pelophylax ridibundus*) and Fire Salamander (*Salamandra salamandra*). The shallow ponds that remain in the canyon hollows during the dry season allow trout and crayfish survival. From significant snake species that live in this area there is the Horned Viper (*Vipera ammodytes*), and the most common among the lizard is the common Wall Lizard (*Podarcis muralis*).



Wall Lizard
(*Podarcis muralis*)



MONUMENTS OF HORTICULTURAL ARCHITECTURE

- Cypress (*Cupressus sempervirens*)
- Garagnin-Fanfogna Park
- Vitturi
- The Palace hotel Park
- Cypresses next to Živogošće graveyard (*Cupressus sempervirens* var. *pyramidalis*)
- Cypresses next to the monastery of St. cross in Živogošće (*Cupressus sempervirens* var. *pyramidalis*)
- Botanical garden of the ostrog primary school
- Bald cypress (*Taxodium distichum*)



CYPRESS

(Cupressus sempervirens)

It is located in the courtyard of the Franciscan monastery on Hvar. It is protected as a monument of horticultural architecture in 1948. It is more than 500 years old and is one of the oldest trees of this kind in our country. It is specific to the lateral flattened branches, which

is rare in nature. Lower branches are supported by the supporters because of to the risk of fracture due to their own weight. Due to its great age and its specific appearance, this tree is an unusual specimen of its kind.



GARAGNIN-FANFOGNA PARK

The park was built around 1800 as a private garden of the Trogir aristocratic family Garagnin, by the synthesis of the characteristics of an agrarian estate and an experimental estate with a park atmosphere. Vegetables plantations were surrounded by trees, flowers and elegant paths, beautiful architecture and ancient monuments. In the garden were also grown and acclimatized the exotic plants. Within the horticultural landscaping, the park was given the opportunity to organize space and its content of classical gardens (artificial hills, gravel and grassy paths, wells, farm buildings and elegant pavilions, archeological monuments, dendroflora). Due to the beauty and composition of the plants in it and the remarkable stylistic features of classicism, the park was protected in the category monument of horticultural architecture in 1962. It covers an area of 1.3 ha.

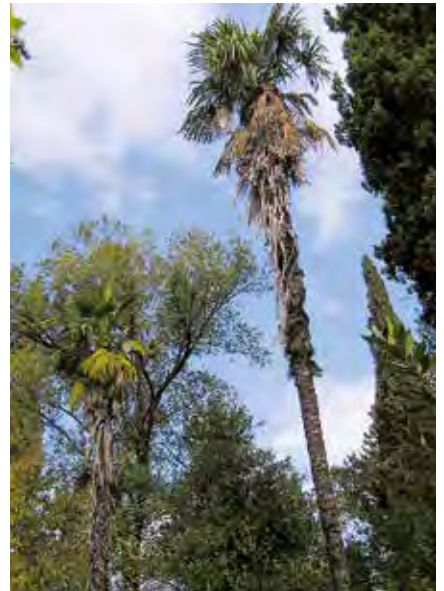


Antique monuments have been gradually taken long ago from the nearby Salona, and in the eastern wall were built antique fragments, altogether adding an extra dimension to the park, and making it a unique open-air museum.





The wells were used for watering the plants and two artificial mounds were formed of the excavated soil dug at excavation of the wells. On one of them grows the large Turkish Pine (*Pinus brutia*). Once there were 300 plant species growing in the park, while today the number is considerably reduced. There are representative the samples of Holly oak (*Quercus ilex*), Mediterranean Hackberry trees (*Celtis australis*) and the Field Elm (*Ulmus minor*), while a special attention is attracted by a specimen of Chaste tree (*Vitex agnus-castus*) that by its size exceeded all the dimensions so far known in the literature. A special Mediterranean atmosphere gives the cypresses that stand



out across the entire park. Of the exotic species, two palm trees, Washingtonia Palm and Windmill Palm are very interesting ones.

There is a tendency for the park to return to its original appearance and it is setting about to its restoration and revitalization.



VITTURI

Radoš Micheli Vitturi, a nobleman from Kaštel Lukšić, and also a well-known agricultural expert and president of the Lukšić Agrarian Academy, raised the first garden in Kaštela in the second half of the 18th century. This is evidenced by the votive painting of the Vitturis with the image of St. Rok that holds the perivoj in his palm, dating back to 1760.

Today it is known as Vitturi Park and since 1968 it has been protected as a monument of horticultural architecture.

It is located along the coast in Kaštel Lukšić and covers an area of 0.75 ha.

A very characteristic part of the Park is “parter” with a well-shaped Boxwood (*Buxus sempervirens*).



In the park inventory today, the Mediterranean elements stand out first of all: Aleppo Pine (*Pinus halepensis*), the Mediterranean Cypress (*Cupressus sempervirens*), Bay Laurel (*Laurus nobilis*) and others. The most obvious is the dimension of the old pine tree.





There are also several exotic and rare valuable samples of centuries-old trees, such as Chinese Parasol tree (*Firmiana simplex*) from the cacao-trees family.

In addition to horticultural values, the Park features classical architectural elements.

In 1968 the Park was proclaimed a monument of culture. In the explanation of the Regional Institute for the Protection of Cultural Monuments states: “Vitururi Park by its width and access from the sea represents a unique monument of our old horticulture. Similar parks in Dalmatia are rarely preserved, so this one can be counted in these rare monuments of our garden architecture.”



THE PALACE HOTEL PARK

The Palace hotel Park is located in Kaštel Stari. It is protected as a monument of horticultural architecture in 1970, with a total area of 3.73 ha. It was once one of the most beautiful and most significant

parks in the Kaštela green zone. In 1904 - 1905, the park was built by Dr. Petar Kamber, the owner of the house next to this Park, later enlarged and converted into a hotel "Palace".

Mediterranean elements dominate the park: Aleppo Pine (*Pinus halepensis*), the Cypress (*Cupressus sempervirens*) and Bay Laurel (*Laurus nobilis*), and particularly significant is the cypress alley.



CYPRESSES NEXT TO ŽIVOGOŠĆE GRAVEYARD

(*Cupressus sempervirens* var. *pyramidalis*)

The group of cypresses at the rural cemetery in Živogošće was protected in the 1970 as a monument of horticultural architecture. It is a group of tens of cypress trees, about 40 years old, and about 20 m in height and fewer shorter, 4 to 8 m in height, which are the natural off-

spring of the first ones. All the cypresses are beautiful and healthy, and they are particularly beautiful as a group. Since they are in a very prominent position, they give a significant aesthetic value to the landscape.

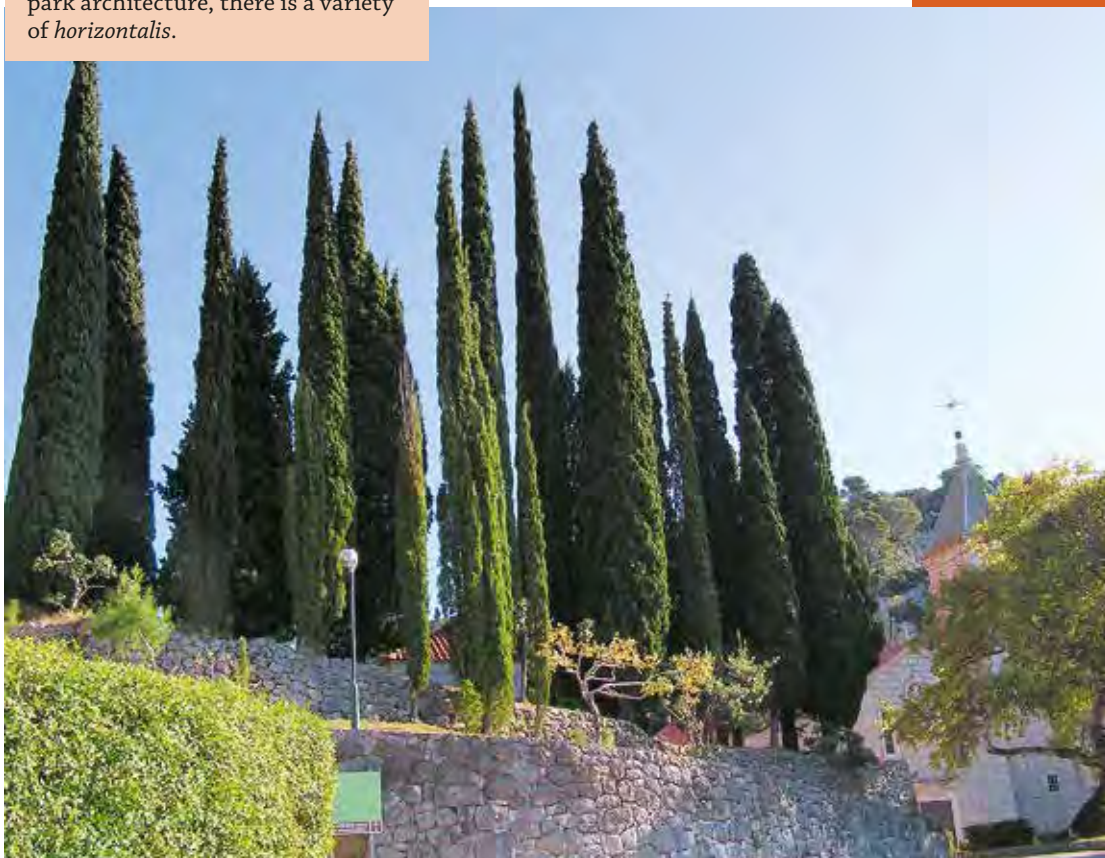


CYPRESS NEXT THE MONASTERY OF ST. CROSS IN ŽIVOGOŠĆE

(*Cupressus sempervirens* var. *pyramidalis*)

Cypress (*Cupressus sempervirens* L.) is a species that has been grown for thousands of years as an ornamental plant far from its native land - the Eastern Mediterranean. This antique symbol of sadness today is a symbol of cemeteries, both in Catholic Europe and in the Muslim world. Apart from the variety of *pyramidalis* trees which can be found in this monument of park architecture, there is a variety of *horizontalis*.

A group of cypresses next to the Monastery of St. Cross in Živogošće was protected in 1970 as a monument of horticultural architecture. It is made of the group of 12 older and 13 younger trees of pyramidal cypresses. The older ones were planted in 1929, while the younger ones are their offspring. The group of cypresses has an aesthetic landscape value, which is even more pronounced because it is located along the main road.



BOTANICAL GARDEN OF THE OSTROG

Because of the great abundance and variety of plants that grow in it, the Botanical Garden of Ostrog Primary School in Kaštel Lukšić was protected in 1986 as a monument of horticultural architecture.

The garden began to grow in 1976 next to the newly constructed school building. It was inspired by the many-years engaged teacher of Ostrog primary school - Ivna Bučan, and by the work and enthusiasm of teachers and students it has developed to the area of about 2.3 ha.

It is real from the first scratch without big ambitions, but with time it has reached enviable quality and value with a large number of autochthonous and exotic species, some of which are here for the first time successfully grown in our area. One of the main features of the Garden is the introduction of new plant species (introduction) and monitoring of their adaptation to local climatic condi-

tions (sunshine and shade of habitat, exposure to wind, water ...).

The largest part of the Garden occupy the park - arboretum, mostly in the landscape style, ie in the style of English gardens - freely deployed groups of related plants mostly by ecological and spatial principle.

The richness of autochthonous and exotic plant species is divided into themed gardens as follows:

Today in the garden grow more than 1,000 plant species from all continents, as well as numerous cultivated forms of woody and herbaceous plants. It is the richest botanical garden on the Croatian Adriatic coast and one of the richest school gardens in Europe.



PRIMARY SCHOOL

SOUTHERN GARDEN

- aromatic and medicinal herbs, camellias, citrus fruits, bamboo garden, succulents, small biblical garden, rose garden, palm trees

NORTHERN GARDEN

- small boxwood garden, oleander group, other domestic and exotic plant species and cultivars, small olive grove, large olive grove, almond orchard planting, fig plantation, nursery, greenhouse

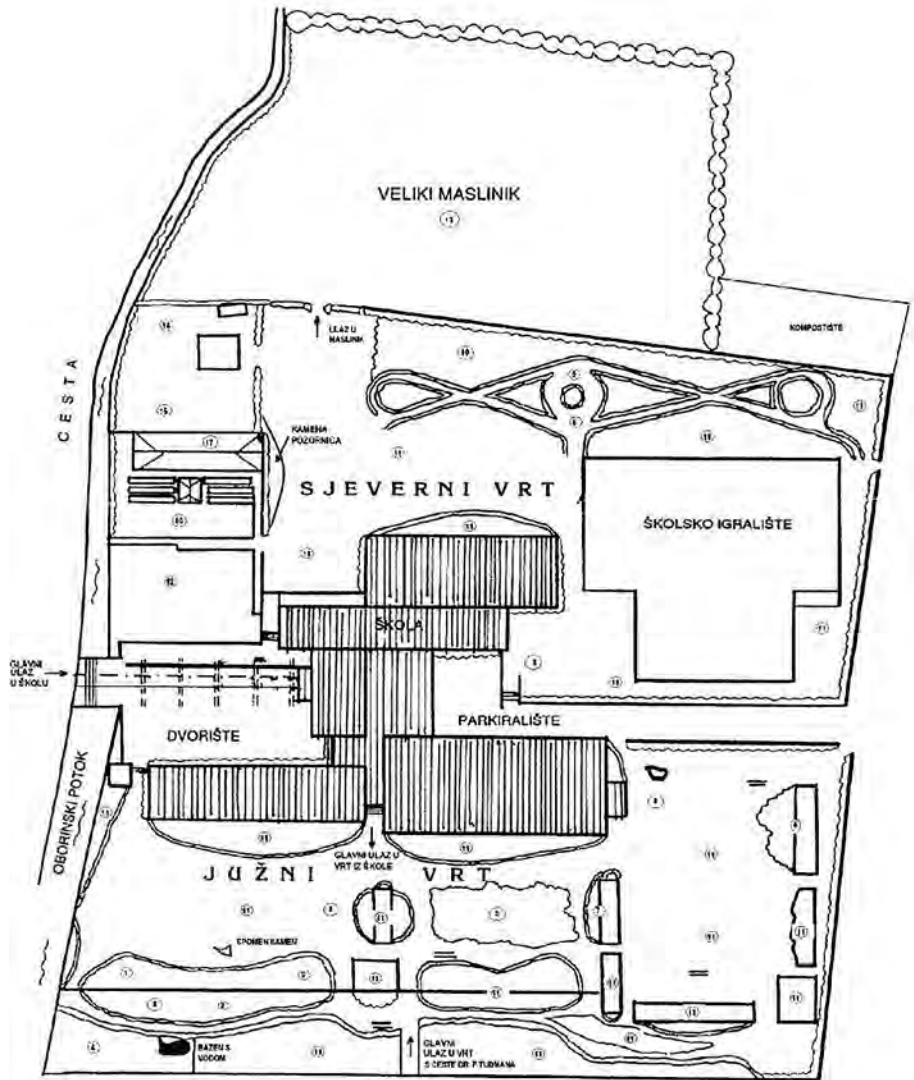
The south garden is due to its size and favorable microclimate the richest part of the garden. There are groups of indigenous and exotic trees, bushes, perennials and flowering plants. Among them are the exotic trees of Camphor Tree, Eucalyptus, Jacaranda, Avocado, Acacia and Banana, tropical bauhimi, trees from cocoa family, pistachios, feijoas, parkinsonia species and others. The special value of the southern garden is a group of camellias and small citrus trees. Likewise, there are also interesting exotic conifers of Sequoia trees, Lebanese and Himala-



yan Cedar, Japonica Japanese Cedar, the Canary Island pines, Ginkgo, African Sandarac, endemic species of Taiwanese Island - Taiwan, Australian Casuarina, Andalusian Fir Tree, mini - coniferous group and others. There are also other ornamental plants: several types of jasmine, weeping figs, pasiflora, flamed wood, gardenia, cassia, crape myrtle, bougainvillea, etc ...

The visitor's attention is also inspired by a group of aromatic and medicinal





herbs: lemon balm, aloe vera, roe, costmary, absinthe, estragon, hyssop, germanders and other.

Karst terrain with succulents is located in the center of the sunny part of the southern garden. In addition to numerous winter-resistant cactus species - opuntia and daisy anemones, here are also many types of agave, yucca, aloe, desert spoon and others.

In the southwestern part of the garden there is a bamboo garden with: Golden,

Green, Black and Short Bamboo and several kinds of willows. In the small pond there are water lilies, water hibiscus, aloca and other water plants. Egyptian Papyrus attracts a special attention.

Northern garden is a place located north of the school building, and because of the school gym, playground and lawn, it is partly used for sports and recreational purposes. There is a so-called small boxwood park, built in French style, of strictly symmetrical lines.



The landmark of this area is a rich collection of 14 varieties of oleanders with simple and full flowers - from snowy, yellow, orange to all pink and red tones.

The Northern garden also has valuable economic facilities that can serve as a starting point for education of economics, especially in traditional farming activities in this area. For this purpose, they are primarily used: olive grove, al-

mond orchard planting, fig plantation, greenhouse and nursery for the overwintering and propagation of ornamental plants. A newly built composting site has the ecological function as well.

The large olive grove was planted in 1983 and with its 170 trees and 45 sorts of olives from all Mediterranean countries, it is one of the largest collectables on the Croatian coast.







The special importance of this botanical garden is that it serves for active eco-education and for organizing intercultural competitions. It is a place of numerous pupils and student visits both from Croatia and from abroad. Here, many ideas and incentives for improving their own environment were born and started throughout Croatia, which

certainly contributed to a higher level of living culture. Thus began in 1995 the “Floral epopee” - the project “The Most Beautiful School Gardens of Croatia”, whose members are HRT (Croatian Radio and Television) (“Listen to the Earth breathing”) and the Ministry of Science, Education and Sports.

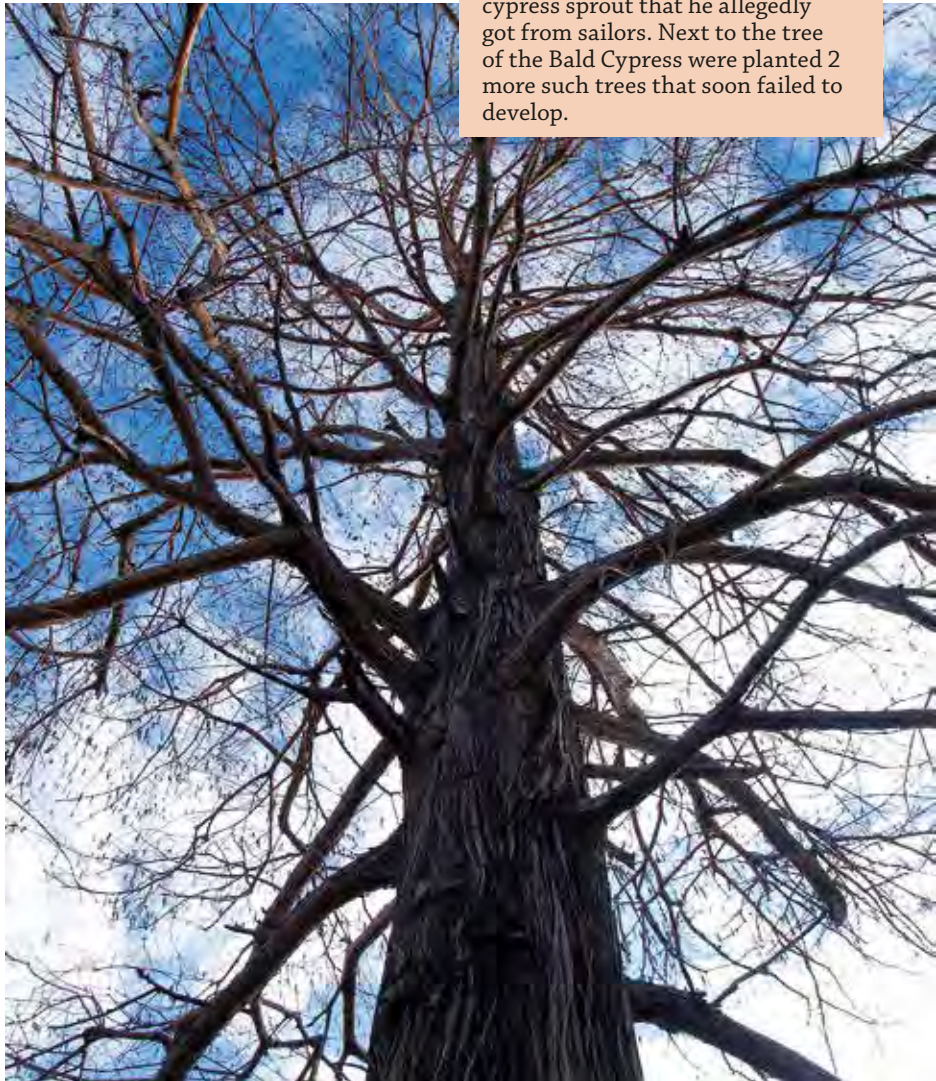


BALD CYPRESS

(*Taxodium distichum*)

Bald Cypress was protected in 1996 as a monument of horticultural architecture and is located on the right bank of the river Jadro near Solin. The age of the tree is estimated at about 100 years, and this species can live more than 1000 years. Its height is estimated at about 25 m and it can grow to 30 - 40 m. It has a wide pyramidal habitus with branches often lowered to the ground. The sam-

It is not known with certainty who planted the Bald Cypress in Solin, though there are few assumptions. According to the first, they were the sailors and to the other, the first owners of cement plant at Majdan. Although, according to the third, most trustworthy, it was the clerk Andrija Bogdan, who in the thirties of the last century planted a Bald cypress sprout that he allegedly got from sailors. Next to the tree of the Bald Cypress were planted 2 more such trees that soon failed to develop.



ples of this species are extremely rare in Croatia, and this one with their vitality and marvelous habitat dominates the landscape. The natural range of the Bald Cypress are wetland habitats and the river courses of the southeastern part of the United States and Mexico, along the coasts of the Gulf of Mexico and East Asia. In winter it rejects the needles and each spring the new ones grow, in gentle green color, so that it again gets a bronze-colored color again. Its trunk is reddish-brown and is expanded at the bottom.

Bald Cypress in its natural habitat in olderly age forms air roots, so-called *knees* through which oxygen is supplied. Most of the trees die by suffocation in ground soaked by water that prevents oxygen to reach their roots. Bald Cypress



solves this problem by those roots with lumpy “knees” that go out to the surface of the water to take oxygen from the air. Bald Cypress in Solin did not need to form such air roots because it does not grow in soaked ground.



**To visit some of the protected
natural values it is necessary to
notify us by phone:**

THE BLUE CAVE

+385 (0)21 713 849

VRANJAČA

+385 (0)98 749 000

Vranjača cave is open for a visit every day from April to October. In the rest of the year a visit to the cave is possible upon request.

THE BLACA VALLEY

+385 (0)21 637 092

+385 (0)91 516 4671

+385 (0)91 512 9312

Visit is possible every day except Monday from 8.00 am to 5.00 pm.

**BOTANICAL GARDEN OF THE
OSTROG PRIMARY SCHOOL**

School Botanical Garden is open daily during the tourist season, from June 1 to September 30, and the rest of the year upon request to the School Administration, the Kaštela Tourist Board or to the Public Institution.

In the heart of the canyon, 6 km far from Omiš, you can enjoy the richness of gastronomic offer and traditional dishes in the beauty of nature and sport activities in the restaurant “Kaštil Slanica” and the Radman Mills (Croatian: Radmanove Mlinice) excursion site.



**Tel: +385 (0)21 862 073
Fax: +385 (0)21 862 238
GSM: +385 (0) 99 314 6220
info@radmanove-mlinice.hr**

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Centar za kulturu Brač

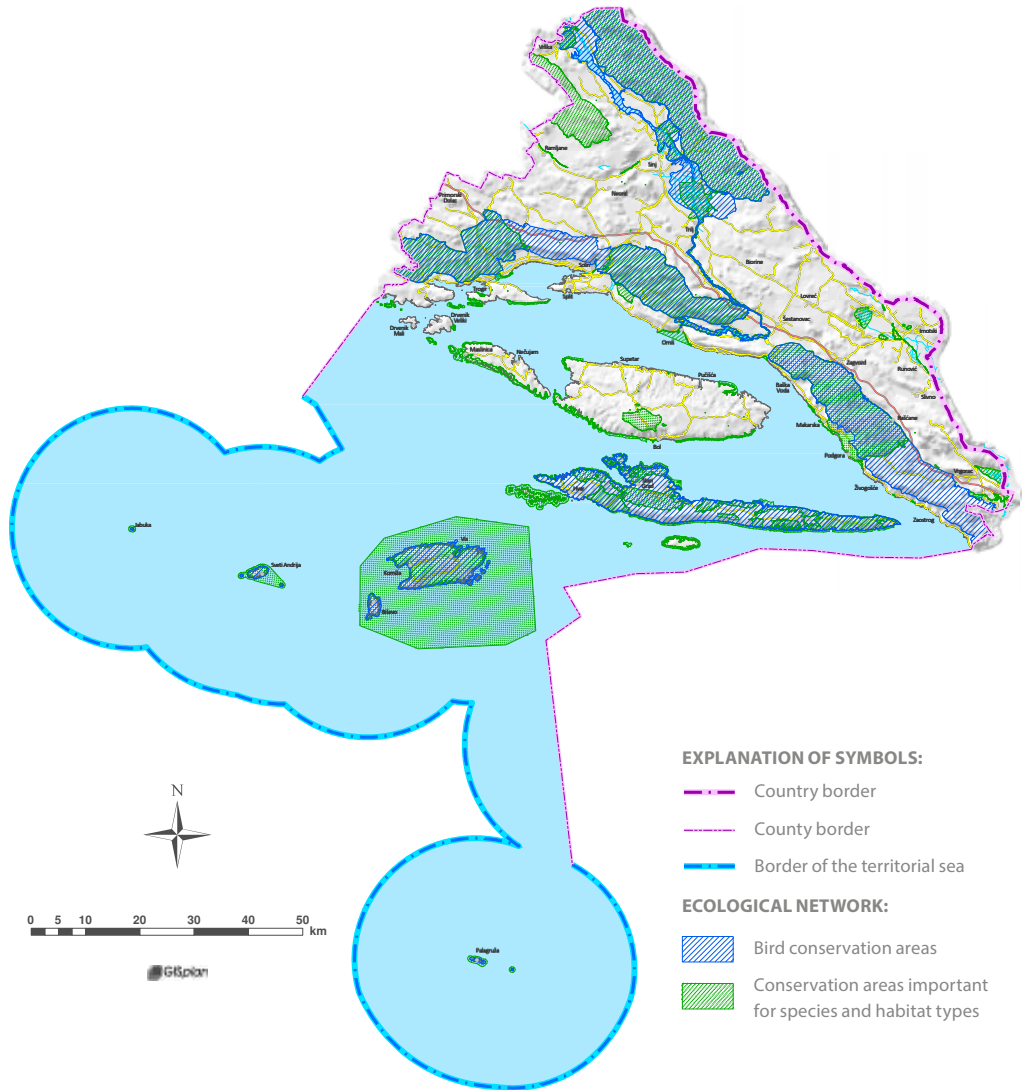
Čarolija Pustinje Blaca

Službeni akti o proglašenju
zaštićenih područja

Službeni glasnik Splitsko-
dalmatinske županije

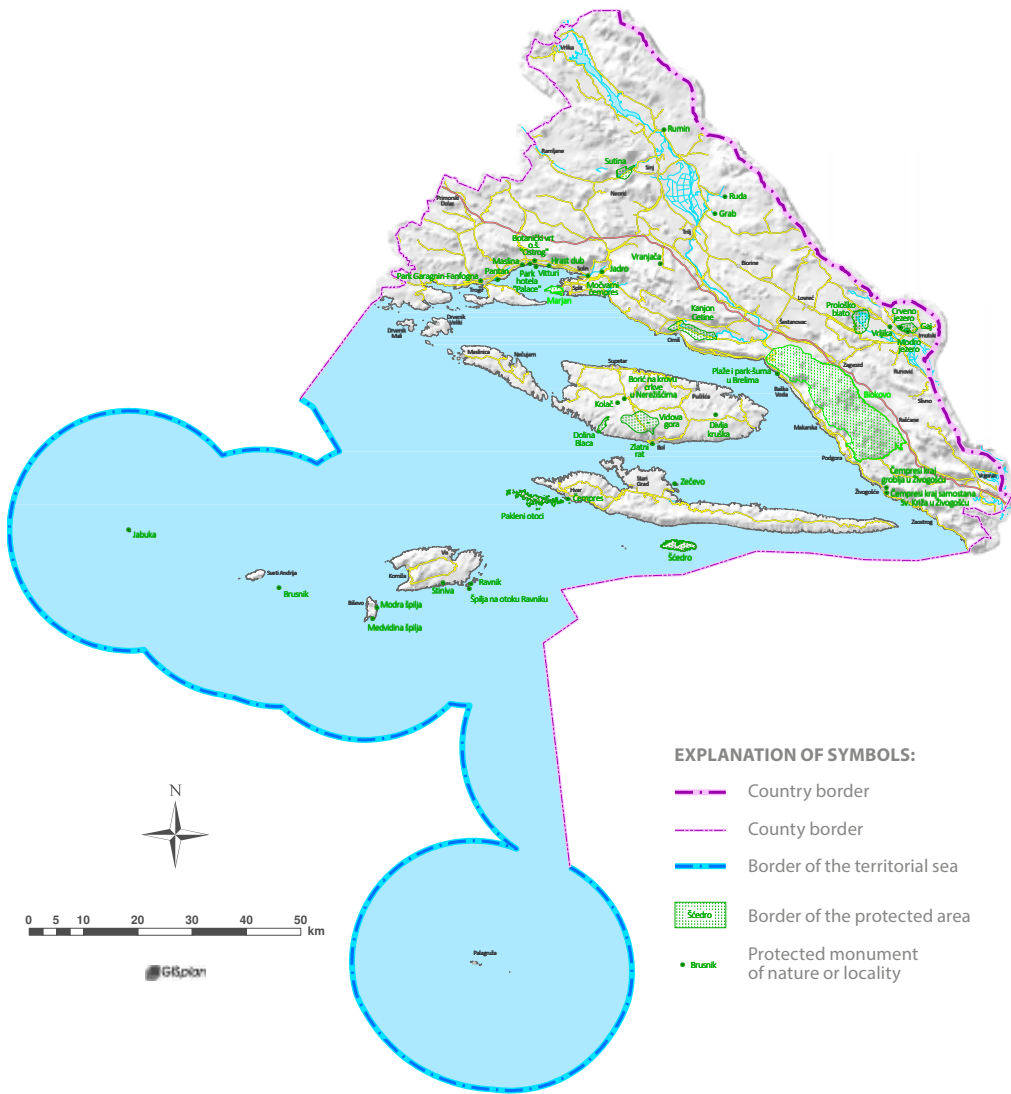
„Solinska kronika“, 15. svibanj 2010.

Časopis „Radovan“



**PUBLIC INSTITUTION FOR THE MANAGEMENT OF
PROTECTED AREAS IN THE
COUNTY OF SPLIT AND DALMATIA –
„SEA AND KARST“**

**MAP OF SPLIT-DALMATIA COUNTY WITH
THE ECOLOGICAL NETWORK AREA**



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Authors:

Ivan Gabelica, Gvido Piasevoli,
Marijana Jurić, Stjepan Mekinić,
Zora Kažimir, Nenad Pešić,
Ana Perković, Jelena Kurtović

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Piet Munsterman, Marijke Verhagen,
Peter Meininger, Piet Zomerdijk, Dirk
Hilbers, Janus Verkerk, Edwin Winkel,
Hans Dekker, Eugen Schaub, Mark
Zekhuis, Jan van der Straaten, Edo
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Jelić, Dijana Župan, Igor Boršić, Vida
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