

MONTENEGRO / CRNA GORA

Landscape and Biodiversity

The interweaving of climate types on the territory of Montenegro, the constant alternation of southern and northern air currents, has made these areas a suitable habitat for as many as 3,600 plant species, and among them are a large number of endemic and relict ones. As many as 212 endemic species in the Balkans and 22 endemic species in Montenegro. Especially significant is the richness of medicinal and aromatic herbs, wild fruits and edible mushrooms. Dark coniferous forests (spruce, pine, fir) are also responsible for the country's name – Montenegro.



By: Mustafa Seven / Spirit Of Merit Collection

HYDROLOGICAL CHARACTERISTICS

Hydrographic feature is the existence of two, approximately equal catchment areas, from which surface and ground water bodies flow towards the Danube River Basin (Black Sea catchment area) and the Adriatic Sea Basin.

The total area of the Danube River Basin is about 6727 km2 (48.7% of the total area), and the main water bodies are rivers Lim, Tara, Piva, Cehotina, and Ibar. Rivers Moraca, Zeta, Cijevna, Rijeka Crnojevica and Orahovstica, and some smaller watercourses flow towards the Skadar Lake and from there to the Adriatic Sea via river Bojana.

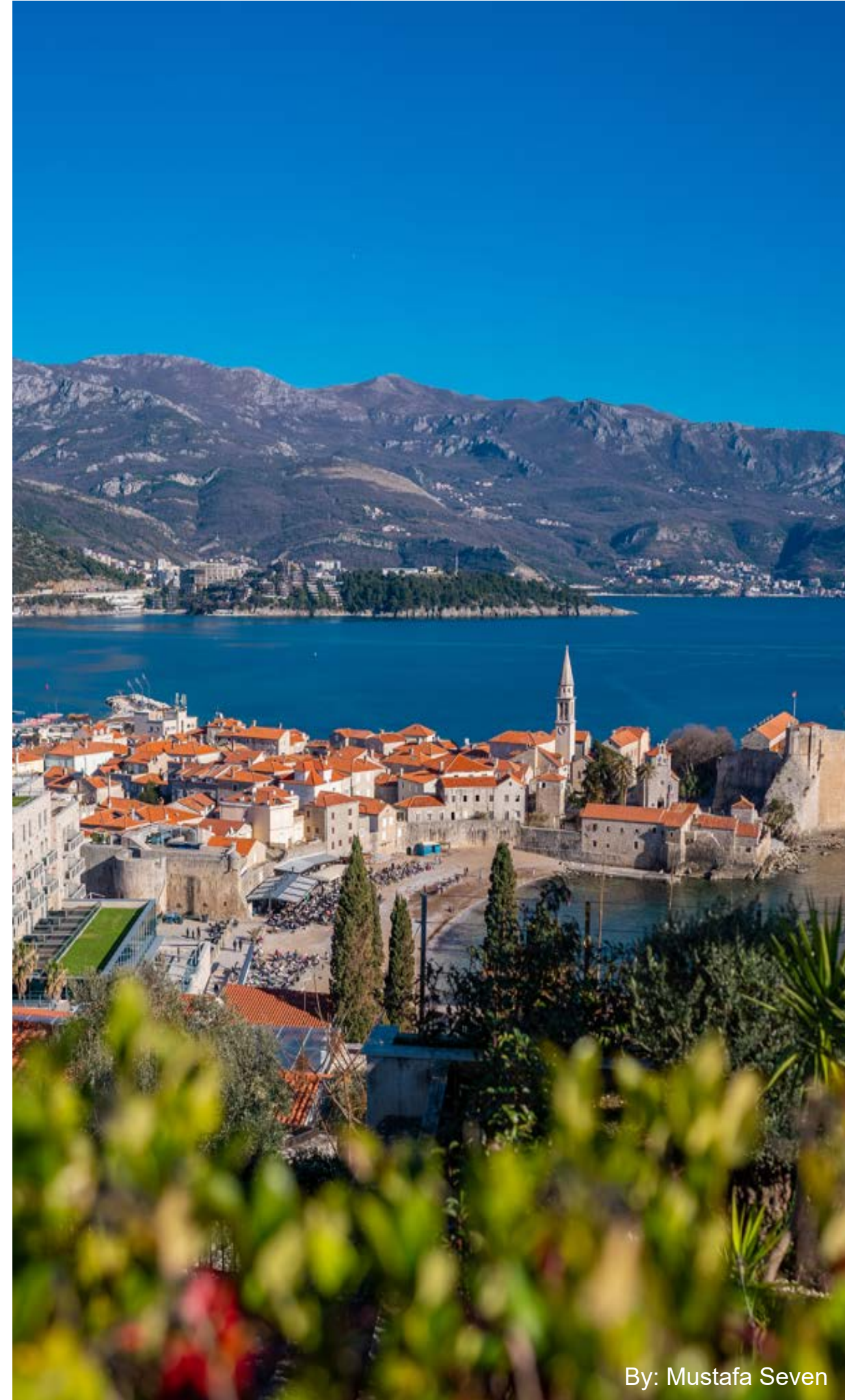
HYDROLOGICAL CHARACTERISTICS

The sea area off the coast of Montenegro is about 200 km wide and is part of the southern Adriatic valley, in which the greatest depths of the Adriatic Sea were measured - about 1400 m. The salinity of the waters of the southern Adriatic (38.6 ‰) is slightly lower than the average for the waters of the Mediterranean Sea (39 ‰).

By: Mustafa Seven / Spirit Of Merit Collection



By: Mustafa Seven



By: Mustafa Seven

It is also home to one of Europe's two primeval forests, Biogradska gora.

In Montenegro 2880 species and subspecies of higher plants such as ferns and flowering plants grow wild, among which 212 are endemics of the Balkan Peninsula, and 22 species are endemic to Montenegro. The territory of Montenegro can be divided into three ecoregions: Illyrian deciduous forests, Mediterranean vegetation on the coast, as well as two subtypes of mixed forests.



On the territory of Montenegro, as a percentage compared to Europe, there are 70% of mammal species, 75% of bird species, 50% of freshwater fish species. Also, 79% of marine fish species, 30% of plant species, as well as a significant number of relict and endemic species.

On the territory of Montenegro, 430 animal species are under protection, of which the following can be found in the forests of national parks: brown bear, wolf, wild lynx, wild cat, wild boar, chamois, several species of eagles, grouse and partridges. Lake Skadar, which is the largest bird reserve in Europe, is home to three-quarters of Europe's ornithofauna. Colonies of pelicans can be found here, as well as cormorants, herons, water bull, black ibis and many other birds.

By: Mustafa Seven

CULTUREL PATTERN

Coastal Region

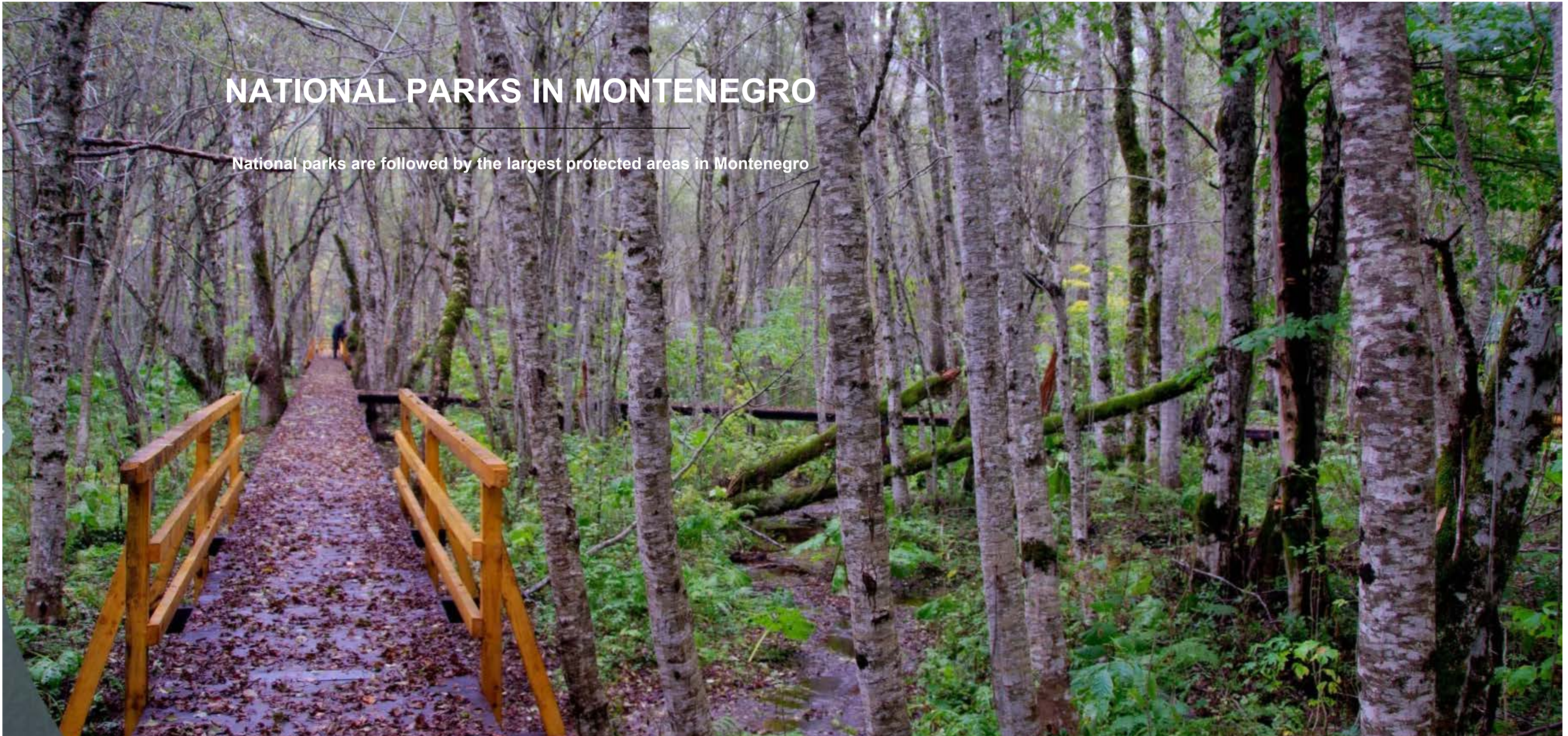
- Rural settlements on traditional agricultural fields
- Rural settlements with traditional terraces
- Traditional terraces with olive groves
- Coastal urban and suburban settlements, semi-urban settlements
- Industrial zones, storage and service areas
- Devastated areas (quarries, landfills)

Skader Basin

- Urban settlements
- Suburban settlements with agricultural fields, orchards and vineyards
- Coastal and rural settlements with traditional terraces in the area of Skadar Lake
- Rural settlements in the hilly area
- Industrial zones, storage and service areas

NATIONAL PARKS IN MONTENEGRO

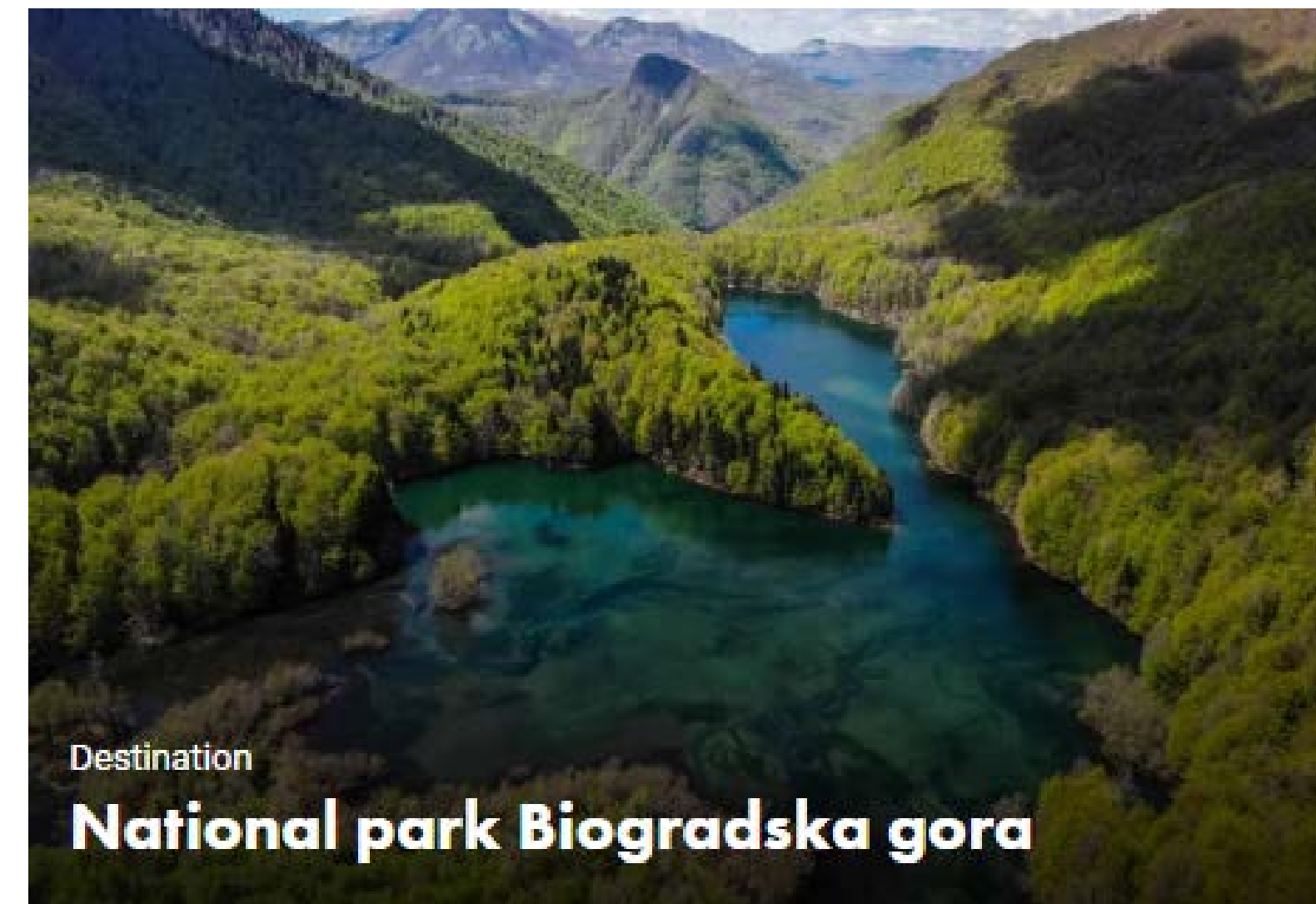
National parks are followed by the largest protected areas in Montenegro



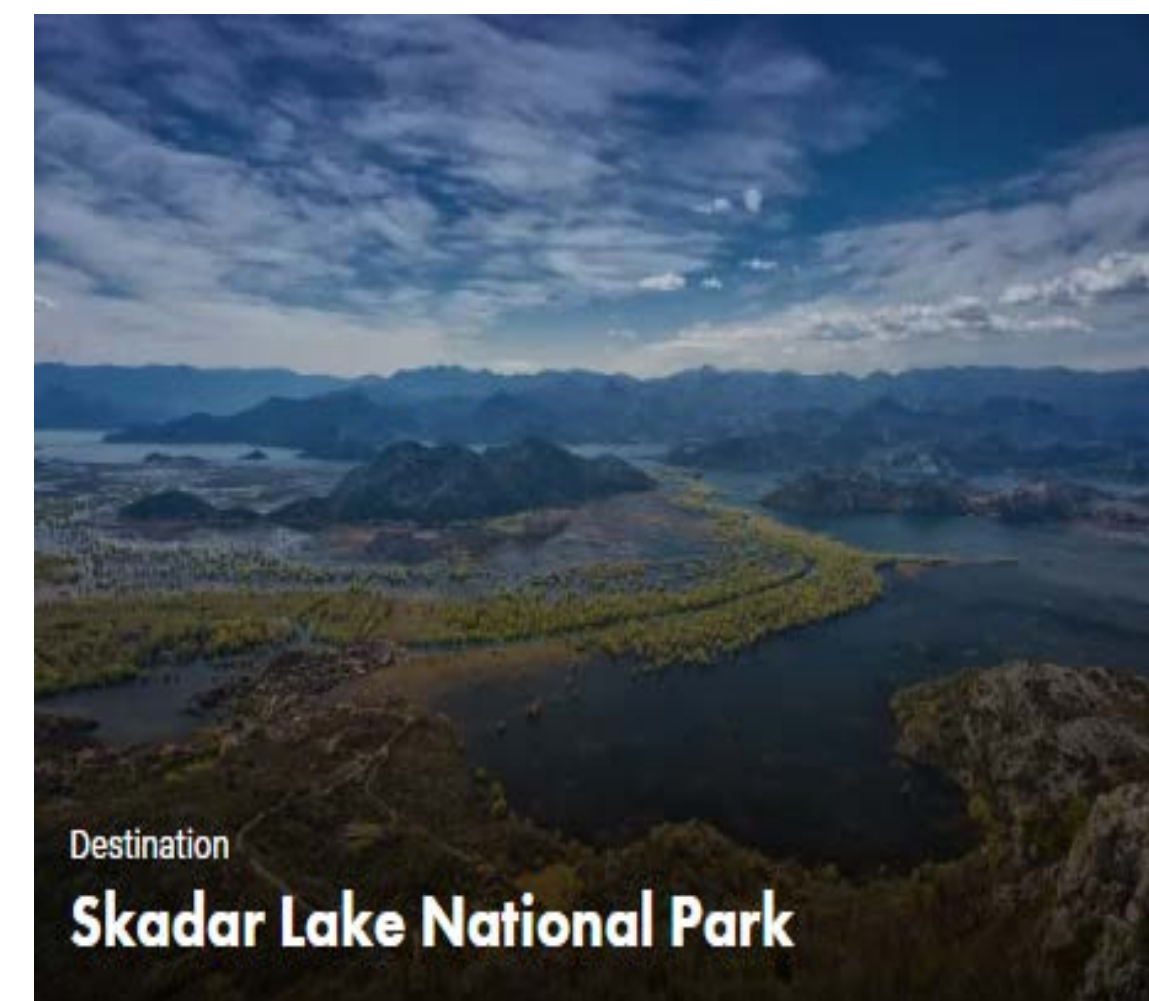
You will not be far from them no matter which side of Montenegro you turn to

Fascinating wild side of a small country, as represented by its five very different national parks, which account for 8% of the country's total territory.

They are perhaps the country's most popular attraction. When you take into account the beauty of the sea coast with which it is compared, this is truly an amazing area.



The area of the national parks "Durmitor", "Skadar Lake", "Lovćen", "Biogradska gora" "Prokletije" is characterized by mountain landscapes, stunning glacial lakes, incredible biodiversity, and much more.





LOVCEN NATIONAL PARK

"Montenegrin pride and the heart of Montenegro: Lovcen "

Lovcen National Park was declared a protected area in 1952. The park includes the central and highest part of Lovcen massif. The area of the park is 6,220 ha. It rises in close proximity of the sea and it is a significant mountain in the oro-Mediterranean part of Montenegro. The highest peaks of the park: Stirovnik (1749 m) and Jezerski vrh (1657) are surrounded by deep karst depressions: Ivanova korita, Dolovi, Kuk, Veliki and Mali Bostur and others.

The special value of the park is represented by 1,300 registered plant species, which makes 1/3 of the total Montenegrin flora, out of which a large number is endemic.

a symbol of freedom and a "holy altar" for the inhabitants of Montenegro.



LOVCEN NATIONAL PARK

"Montenegrin pride and heart of Montenegro : Lovcen"

Lovcen has over 200 species of birds that nest here. We single out some of them such as: robin, black-tailed bush, black-headed herb, rocky yarrow, small nightingale and many others. Of the birds of prey, the most famous are: golden eagle, peregrine falcon, bird sparrow, various species of owls. Of the mammals in this area can be found: wolf, roe deer, wild boar, bear, squirrel, hedgehog, dormice and many others. There are numerous representatives of insects: flower flies, deer, ants, diurnal and nocturnal butterflies.

Natural values, rich flora and fauna in Montenegro, deserve today's man to pay full attention to them, to protect them from endangerment, various forms of degradation and especially to preserve them from complete destruction, and also to enable their study, improvement, preservation and protection. It is difficult to find a smaller country in Europe, and probably in the world, with more diversity, such plant and animal wealth as Montenegro has. It is up to us to preserve its beauty, natural and cultural values.



LOVCEN NATIONAL PARK

"Montenegrin pride and heart of Montenegro : Lovcen"

LNjegos's mausoleum in the Lovcen National Park is considered a masterpiece of sculptor Ivan Mestrovic, who combined architecture with art. It is the tallest mausoleum in the world and the final resting place of Petar Petrovic II Njegos. Petar II Petrović Njegos is the author of the most famous epic called "The Mountain Wreath", which has become the most widely read book among the South Slavs. He built a church on Lovćen, dedicating it to his famous uncle Peter I, later St. Peter of Cetinje. In 1916, Njegos's remains were secretly transferred to a monastery in Cetinje. During the war, the Austro-Hungarian army greatly damaged the church, and a few years later, in September 1825, the then Yugoslav authorities built a mausoleum and decided to transfer the remains of Petar II Petrovic Njegos to it.

From the top of Njegos's mausoleum in the Lovcen ps. A statue of Petar II Petrovic Njegos, which weighs 28 tons, was placed in the chapel of the mausoleum.



BIOGRADSKA GORA NATIONAL PARK

"The smallest national park in Montenegro is a haven for one of Europe's last primeval rain-forests!"

It is located in the north-eastern part of Montenegro, in the central part of the Bjelasica mountain. It covers an area of 5,650 ha. Bordered by mountain heights, crisscrossed by streams and bays, decorated with beautiful lakes, decorated with centuries-old forests and gentle meadows, the Biogradska Gora National Park represents a magnificent gift of nature.

However, the most important natural value of this national park is the Biogradska Gora rainforest, which occupies an area of 4,500 ha and is one of the last primeval forests in Europe. It has the character of a strictly protected reserve. The rainforest was donated to Prince Nikola in 1878 and has been under state protection ever since. It is unanimously shared by 26 plant communities, more than 200 species of birds, and many wild animals have found a home in it.



BIOGRADSKA GORA NATIONAL PARK

"The smallest national park in Montenegro is a haven for one of Europe's last primeval rain-forests!"

In the heart of the rainforest lies the beautiful Biograd Lake, the largest and most famous in a series of glacial lakes in the area of the national park. The clear water of the lake reflects all the beauty of the ancient forest, giving it a blue-green color and making the landscape such that it leaves the impression of a deep impression. In addition to Biograd, the following can be distinguished with their beauty: Pešića Lake, Ursulovac Lakes (Malo and Veliko) and iška Lakes (Malo and Veliko). It is also important to note that there are a large number of mountain peaks over 2,000 m high. Of these, the highest mountain peak on Bjelasica is Crna Glava at 2,139 m above sea level.

The Biogradska Gora National Park is characterized by the diversity of animal life. An interesting fact is that in this park the roe deer is an indigenous species and is protected by law. Biogradska Gora National Park is the only habitat of a small species of bat known as the Water Evening Mouse. Mammals include: common and forest dormouse, field and forest mouse, hare, squirrel, hedgehog, blind mole, mountain shrew, water shrew, badger, weasel, marten, roe deer, deer, fox, wolf, bear. Protected species of reptiles in the Park are: pond turtle, wall lizard, mountain lizard, gray lizard, marsh white-eared lizard, river white-eared lizard and smuk.



DURMITOR NATIONAL PARK

"Emerald in the crown of national parks of Montenegro: Durmitor!"

The most famous of all of Montenegro's national parks, Durmitor is simply spectacular

Just as the emerald is a rare, precious gem, a symbol of untouched beauty - so is Durmitor. A mountain giant, whose highest peak Bobotov Kuk is unrivaled in excitement for many mountaineers.

It's home to 18 glacier lakes including the famed Black Lake, which you can access from a 3km walk from the town of Zabljak – the park's main gateway, as well as 48 limestone peaks that stand over 2,000 metres tall.

A popular ski resort in the winter months, Durmitor is an outdoor adventure hotspot in the summer.

One particular draw is the Tara River Canyon which is one of the deepest in Europe and a popular place for white water rafting.



DURMITOR NATIONAL PARK

"UNESCO World Heritage Site."

In 1952, Durmitor National Park was granted the status of a national park. The area of the park is 34,500 ha. It includes the massif of the Durmitor Mountain, the canyons of the rivers Tara, Sušica, Komarnica and Draga. The highest peak on Durmitor is Bobotov kuk 2,525 m above sea level, while around them 48 peaks reach a height of over 2,000 m above sea level. Durmitor is adorned with 18 glacial lakes that are known as mountain eyes. The largest and most famous is the Black Lake. The Black Lake consists of the Great and Small Lakes, which are connected by a narrow isthmus. An interesting fact is that the water from it flows into the rivers Tara and Piva, which is an exceptional rarity in nature.

In addition to the exceptional beauty of the landscape and fascinating geological heritage, Durmitor National Park is home to impressive biodiversity. The richness of flora and fauna, the complexity of the ecosystem and the representation of over 1,300 species of vascular plants, have enabled Durmitor had an international protection status as a UNESCO World Heritage natural site since 1980,

Crno Jezero (the Black Lake in spring, Durmitor National Park)



DURMITOR NATIONAL PARK

"UNESCO World Heritage Site."

In Durmitor National Park, the animal world is very diverse. So far, we know that there are about 52 species of mammals such as: bear, wolf, rabbit, hedgehog, chamois, roe deer, wild boar, fox, weasel, marten, ferret, badger, otter, squirrel, forest mouse, dormice and many others. The park is home to 172 species of birds, of which 125 are species of nesting birds such as: the snake eagle, the meadow lizard, the Mosor lizard, the blue lizard, the greenfinches and the snake: the slender eagle, the aesculapian swordfish, the white-eared snake, the fisherman, the viper, the shark and the karst scorpionfish. So far, about 1000 insects have been registered in the Durmitor National Park, many of which are protected by law. The most important protected species are: red deer, forest ant, Apollo butterfly, swallowtail butterfly and swallowtail butterfly.

In the Durmitor National Park, forests occupy 34.5% of the total area of the park. One of the exceptional values of the park is the black pine forest at the site of Crna poda, whose magnificent trees up to 50 m in height resist time for over 400 years. Of the 1,600 species of plants of Durmitor and the surrounding canyons, 898 species belong to the high mountain flora. Over 40 species of wild edible mushrooms grow on Durmitor, which makes it a special reserve in Europe. Especially significant is the richness of medicinal and aromatic herbs as well as wild fruits.



SKADAR LAKE NATIONAL PARK

"The Balkans' largest lake: a cradle of culture and history"

Nestled in the centre of Montenegro lies the Balkan's largest lake, Skadar. Sharing borders with Albania, it's one of Europe's most important wetlands for bird-watching. In fact, the area is home to 257 species of bird, including the endangered Dalmatian pelican. The lake was also once a favored visit of the former royal family.

Within this 400m2 national park, you'll find an array of steep mountains, hidden villages, island monasteries and floating waterlily meadows.

The wreck of the steamship Skenderbeg

Skenderbeg, a passenger steamship, was built in Trieste in 1916. For nearly three decades, it sailed the Crnojevića Rijeka - Skadar line. It sank near Karuč Bay on Skadar Lake in 1942. Today, you can visit the remains of the ship at the Organization of Diving Clubs.



By: Mustafa Seven / Spirit Of Merit Collection

SKADAR LAKE NATIONAL PARK

"The Balkans' largest lake: a cradle of culture and history"

All that wildlife needs plant life to match and amongst the huge diversity sit more than 25 species named as rare and endangered, including a varietal of water chestnut, the Dalmatian crocus and numerous protected orchids.

Bamboo is frequently visible on the lake's shore, while some of the most photogenic flowers have to be the white and yellow water lilies popping out of the marshes.

It may not be as pretty, but there are hundreds of types of algae, many of which again are rare or unique. Forests also cover much of the surrounding landscape, including white willow and oak.



PROKLETIJE NATIONAL PARK

"The Alps in the South of Europe"

The southernmost part of the Dinaric Alps, majestic Prokletije was only awarded its national park status in 2009 – and only the 160km² within Montenegro's borders.

However, there are plans to name the whole national park the Balkans Peace Park, offering 192km of hiking trails between Montenegro, Kosovo and Albania.

The park encompasses most of the Prokletije mountains, which form the natural border between Montenegro and Albania.

It is located on the territory of the municipalities of Plav and Gusinje. In the Park there are a large number of springs, sources of drinking water, smaller watercourses, but also numerous glacial lakes, the most beautiful of which is Hridsko Lake, which is popularly known as the Lake of Happiness because there is a belief that swimming in it brings happiness, beauty and health. Also, it is believed that your wish will come true if you insert a metal coin into it. Prokletije is said by many to be "the Alps in the south of Europe".

Although the name Prokletije refers to something damned, the park itself is more than a paradise for all mountaineers and adventurers who want to explore the most challenging area of Montenegro.



PROKLETIJE NATIONAL PARK

"The Alps in the South of Europe"

The Prokletije National Park is characterized by the richness and diversity of the animal world. About 60 endemic species of insects and about 130 species of butterflies have been registered. 161 species of birds have been recorded in the area of Prokletije. Their habitats are high mountain regions, the valleys of Ropojana and Grebaja, forest ecosystems, mountain lakes and rivers. The most important bird species are: gray heron, spoonful heron, harrier, bearded vulture, griffon vulture, snake eagle, hawk, sparrow, mousetrap, swallow falcon, peregrine falcon, hazel grouse, crossbill, etc. The fish fauna consists of autochthonous species such as: brown trout, bream, grayling, fry, chub, river hellebore, etc. Prokletije are the most important center of herpetofauna diversity. Of the 40 species of amphibians and reptiles in the wider area of Prokletije, 9 species are endemic. In the massif of Prokletije there is the extreme southeastern part of the island range of the species of black salamander (*Salamandra atra*), protected at the national and international level. The only find in Montenegro is on the mountain Bogicevica, at an altitude of 1,952 m. A significant number of species are represented by bats and rodents, and other species of mammals: rabbit, wolf, brown bear, wild cat, wild boar, chamois and roe deer.

More than 1,600 species of plants have been registered in the Prokletije National Park, which represents 1/2 of the flora of Montenegro.

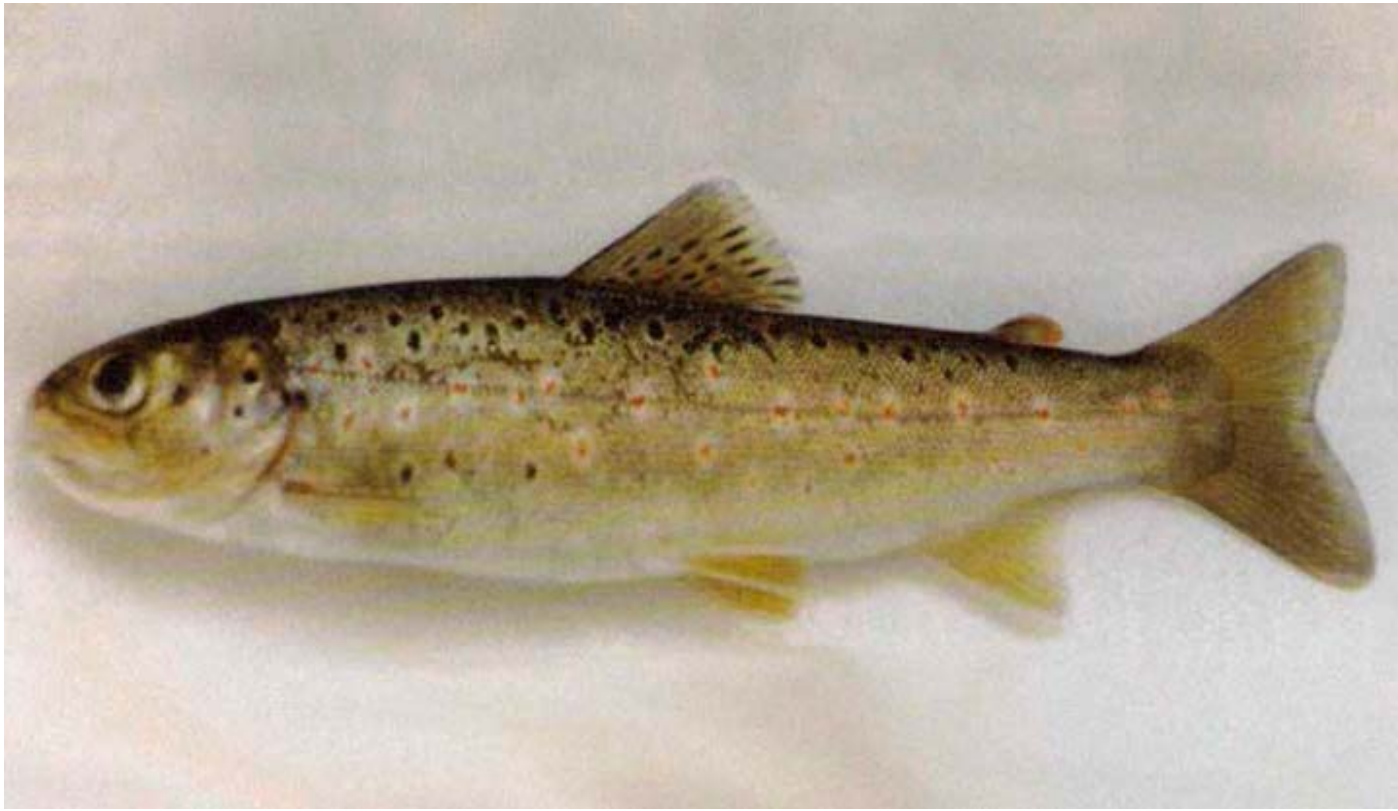
MORE SEA



By: Mustafa Seven / Spirit Of Merit Collection

RARE FISH MONTENEGRO

Freshwater fish found exclusively in Montenegro include the Zeta Trout (*Salmo taleri*), the Zeta Softmouth Trout (*Salmo Zetensis*), the Zeta Stone Loach (*Barbatula Zetensis*), the Wite Roach (*Leucos albus*), and the Montenegro Goby *Kipowitschia Montenegrina*.



Zeta Trout

was first described in 1933 by the Macedonian biologist Stanko Kraman (Stanko L. Karaman, 1889-1989). The maximum recorded length of this fish is 30 cm. It feeds mainly on invertebrates and insects.

It is a rare inhabitant of the upper reaches of the Zeta and Moraca rivers and their tributaries (Montenegro).
(*Salmo taleri*. Foto M. Kottelat, J. Freyhof. [ittiofauna.org](#))



Zeta Softmouth Trout / Adria Trout.

The softmouth trout, softmouth trout or Adriatic trout (*Salmo obtusirostris*) was first described in 1851 by the Austrian zoologist and ichthyologist Johann Jakob Heckel (1790-1857). It lives in smaller rivers with fast flowing water and whose water is rich in oxygen, and usually keeps to greater depths. It forms schools. The maximum recorded length is 70 cm. It feeds on invertebrates. (Photo [ratschan.at](#))



Zeta Stone Loach

Barbatula zetensis, also known as the Zeta stone loach, is a species of Cypriniformes fish in the genus *Barbatula*. It is found in the drainage of the River Morača in the Lake Skadar basin in Montenegro. It is common in streams and rivers with stone beds.

(Original photo by Kelvin K. P. Lim.)



White Roach (*Leucos albus*)

Leucos albus, the white roach, is a species of freshwater ray-finned fish belonging to the family Leuciscidae, which includes the daces, Eurasian minnows and related fishes. This species is found in the Lake Skadar drainage system Albania and Montenegro.
(Original photo by Ernesto Cavallini)



Kipowitschia Montenegrina

is a species of freshwater goby endemic to the Moraca River in Montenegro where it prefers shallows and small pools with algae covered gravel substrates. This species can reach a length of 2.8 centimetres

PLANKTONIC COMMUNITIES



Phytoplankton algae are the primary organic producers who, directly or indirectly, maintain all living organisms in water. These microorganisms form the initial link in food chains.

A total of 192 species of plankton have been recorded in the Bay of Kotor. A total of 90 species of diatoms were found, 83 species of dinoflagellates, 14 species of coccolithophorids, four species of silicoflagellates, and one species of euglenophytes. During the analysis of phytoplankton communities in the coastal area, a total of 94 species were identified.



Jellyfish

In the research conducted so far, seven species of Scyphozoa - real jellyfish have been recorded. Among them are Aurelia spp. (common jellyfish), Discomedusa lobata, Chrysaora hysoscella (compass jellyfish), and Cotylorhiza tuberculata (Mediterranean jellyfish) that occur periodically in large numbers. The compass jellyfish belongs to the group of dangerous jellyfish and can cause irritation when in contact with the skin.

Ichthyoplankton

The greatest diversity of species was determined in the Kotor-Risan Bay, and on the stretch from Bar to Petrovac, ie near the MPA Katič. The Bays of Kotor and Risan are areas of special importance as spawning and nursery zones of juvenile and adult fishes, so urgent protection of this area is necessary.



Phytobenthos

There are several Mediterranean endemics, but there is only one endemic of the Adriatic Sea, the so-called Adriatic wrack *Fucus virsoides*, for which the Bay of Boka Kotorska is the southernmost border of distribution. This brown algae grows in places where there are more sources of fresh water along the coast or under the sea (wellsprings), which significantly reduces the salinity and temperature of sea water.



Seagrass Posidonia oceanica

The most typical seagrass biocenosis in the Montenegro as well as in the Mediterranean is the meadow of seagrass *Posidonia oceanica*, commonly known as Neptune grass. The little Neptune grass, *Cymodocea nodosa* is much smaller and more resistant to pollution, while similar in structure, but more vulnerable and relatively rare in Montenegro is *Zostera noltei*.

If you find sea balls while walking along the beach, it means that the seagrass *Posidonia oceanica* meadow is present in the immediate vicinity. In our sea, this species can inhabit the seabed at depths of up to 30 m, and its companion in shallow waters little Neptune grass, i.e. *Cymodocea nodosa*, inhabits depths of 1 to 10 m.



All seaweed, apart from the primary production of organic matter, play an important role in enriching the lower layers of water with oxygen, in creating biocenoses suitable for inhabiting, feeding and reproduction of many flora and fauna species, and in stabilizing sediment and protecting the coast from erosion.

MARINE INVERTEBRATES

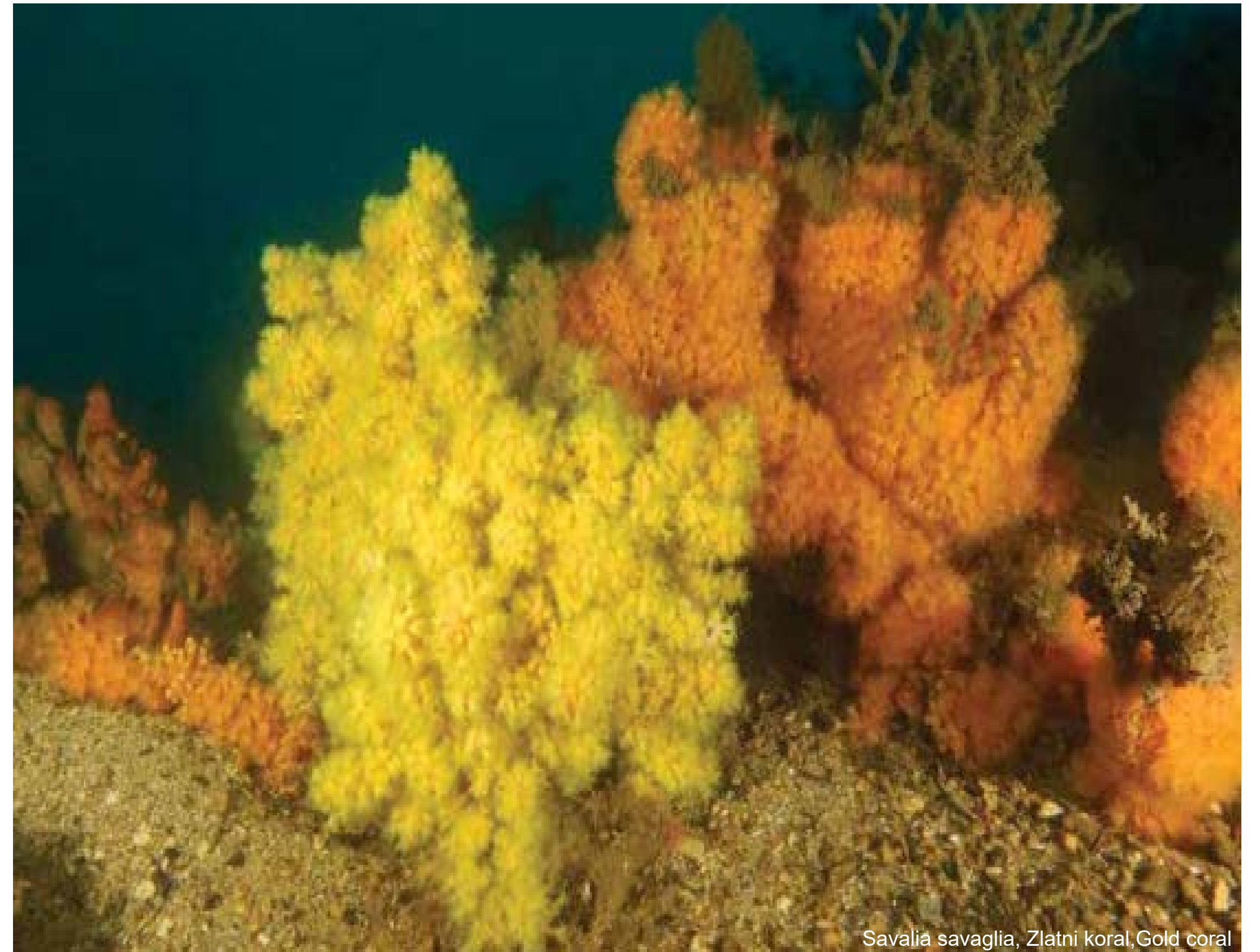
Benthic biocenoses on the open sea of the Montenegrin coast is a home for 729 species of invertebrates. Out of the total number of recorded species, the group of sponges accounts to 64 species, 49 species belong to cnidarians, 354 species to molluscs, 27 species to annelids, 95 species to arthropods, 49 species to bryozoans, 63 species to echinoderms and 29 species to tunicates. Among the species that inhabit the benthic communities of the seabed of the Montenegrin coast, 30 are protected by national and international legislation, while 19 are considered introduced species.



Ophidiaster ophidianus, Morska zvijezda, Sea star

COEALLIGENOUS COMMUNITIES

Localities where coralligenous communities have been developed are a special features of the Bay of Boka Kotorska. Dražin vrt and Sopot stand out as such, where dense colonies of gold coral *Savalia savaglia* begin to grow at a depth of 12 m. Apart from the fact that the populations of this coral are the most numerous in the Mediterranean, they are also the shallowest, because such habitats are existing at much greater depths. The specificity of these localities is the presence of groundwater sources, the so-called vrulja, which create an ambience similar to the one that prevails at depths of several tens or even hundreds of meters. In addition to golden corals, these habitats are true treasury of sea sponges, coral, bryozoans and other marine invertebrates.



Savalia savaglia, Zlatni koral, Gold coral

CEPHALOPODS

Cephalopods (Cephalopoda) are a class of exclusively marine organisms which belong to the phylum Mollusca. It is estimated that more than 1000 species of cephalopods inhabit the world seas, while about 30 species have been recorded in the Adriatic. The most famous representatives of this group are common octopus *Octopus vulgaris*, which is widespread globally. Two other species of octopus are also found in Montenegrin waters – musky *Eledone moschata* and horned/curled octopus *Eledone cirrhosa*. Other well-known cephalopod species are common cuttlefish *Sepia officinalis*, European squid *Loligo vulgaris* and broadtail shortfin squid *Illex coindetii*.

Do you know?

They have three hearts, blue blood and they are boneless
Common octopus, *Octopus vulgaris*,
Hobotnica



Common octopus, *Octopus vulgaris*, Hobotnica



Common cuttlefish *Sepia officinalis*, (Sipa)

SEA CRUSTACEANS

When we talk about crustaceans in general, we mean the ten-legged crabs Decapoda, i.e., crustaceans with ten legs, which represent the most numerous order within the Crustacea subphylum and which include all well-known species such as lobster, crayfish, shrimp, prawns, crabs. Total of 241 species of Decapods have been recorded in the Adriatic Sea. Given that 383 species of decapod crustaceans have been recorded in the Mediterranean, we can conclude that the Adriatic Sea has been qualitatively well researched. Based on the available literature, 62 species of decapods live in the Bay of Boka Kotorska, and total of 95 species in the territorial waters of the Montenegrin coast.



Palinurus,elephas,Jastog



Callinecte ,sapidus, Plavi rak

SEA FISH

The Adriatic is one of the richest seas in terms of species, while it is one of the poorest in terms of population density and possibilities of exploitation of these species. A total of 407 species and subspecies of fish (excluding Cyclostomata) were recorded in the Adriatic Sea: 353 species and subspecies from the Osteichthyes group and 54 species from the Chondrichthyes group, representing 70% of known fish species and subspecies in the Mediterranean (about 580 species and subspecies).

Thus, smaller demersal species of sharks and rays can be found, the most common of which are the small-spotted catshark *Scyliorhinus canicula*, the smooth-hounds *Mustelus* spp., and rays species such as the blue rye *Raja miraletus* or the thornback ray *Raja clavata*. On the other hand, the Adriatic is inhabited by large pelagic predatory and planktivorous species of cartilaginous fish. Of the predatory species, the most common is the blue shark *Prionace glauca*, and the shortfin mako *Isurus oxyrinchus* is also observed. According to some authors, 205 species of fish live in the southern Adriatic, and 140 of them inhabit the Bay of Kotor.



Seahorse

Hippocampus spp. is the only species of fish where a male gives birth to the young. During mating, a female deposits her eggs into a male's brood pouch. He fertilizes them inside, carries them and keeps them until they mature, and then expel the juvenile seahorses into the sea. The seahorse is the only fish that swims vertically, using its tail to attach to plants and corals. The two protruding eyes function independently allowing him to look both back and forth.



Hippocampus guttulatus, Morski konjić

SEA FISH



Sloane's viperfish *Chauliodus sloani*
As part of FAO AdriaMed Deep Sea Expedition of southern Adriatic, in August 2008, trawl nets and deep longlines were lowered to 1,200 meters for the first time. A fish of great depths, Sloane's viperfish *Chauliodus sloani*, was caught. The jaws of this fish are bordered by needle-like teeth, so large that they cannot fit in the mouth. They hold the record for the largest teeth in relation to the size of the head among the fish. They are adapted to life in great depths and in eternal darkness, so they have bioluminescent organs.



Sloane's viperfish *Chauliodus sloani*



Exocoetidae, i.e. flying fish.
The inhabitants of the Adriatic Sea also include species from the family Exocoetidae, i.e. flying fish. The pectoral fins of these species are unusually large in comparison to other marine fish, and they use them so that they could float above the surface of the sea. They got their name after it, and they developed the ability to float so that they could avoid predators in the open sea, where it is difficult to find shelter. They inhabit mainly tropical and subtropical regions, and there are few in the Adriatic, although they are its natural inhabitants. They have no economic value in the fisheries of the Adriatic Sea and are caught by accident.



Exocoetus volitans, Riba poletuša

SEA TURTLES



Caretta caretta, Glavata kornjača. The Loggerhead turtle



Sea turtles are long-lived, slow-growing, migratory species of animals. In the Adriatic Sea, the presence of three species of sea turtles is identified: the loggerhead turtle *Caretta caretta*, the green turtle *Chelonia mydas*, and the leatherback turtle *Dermochelys coriacea*.

The green turtle is only occasionally present in the Adriatic. The length of the shell of this species can be up to 150 cm, and the body weight up to 400 kg. In the Mediterranean area, this species is most present in the Levant Basin, in Greece and Libya. It lays eggs on the beaches of Turkey, Cyprus and Syria. Only two sightings of the green turtle have been recorded in Montenegrin waters. The leatherback turtle is very rare in the Adriatic Sea

MARINE MAMMALS

Marine mammals are highly migratory species. Certain species of whales pass a huge distance of as much as 10,000 km in a month during breeding season. In view of this characteristic, all registered species of marine mammals of the Adriatic Sea at the same time belong to the fauna of the Montenegrin coast. So far, seven species of marine mammals have been registered in the Adriatic.

All species of marine mammals are on the list of endangered species due to overfishing, underwater noise, heavy maritime traffic.



Balaenoptera physalus, Veliki kit

The bottlenose dolphin Tursiops truncatus is a species that permanently inhabits the Adriatic Sea. They are very social animals and they live in the Montenegrin coast in groups of 2 to 14 individuals. Striped dolphin Stenella coerulealba is a smaller dolphin that occasionally inhabits the open seas of the Adriatic, as well as the continental shelf of the Montenegrin coast.a



Delphinus delphis, Delfin

LAND



FUNGI



Fungi belongs to the group of important organisms, both for their role in ecosystem functioning and their paramount importance for humans.

Although richer in species than flora and fauna, the kingdom of Mycota used to be researched poorly for a long time. Currently, there are 120.000 confirmed species of fungi in the world, and according to some estimates, up to 2.2 million species in total might be expected.



FUNGI



Poronia erici

Poronia erici

It develops on mammalian excrement of horses and cows in our case, during the wet period from October to May. It is registered on Kakaricka gora above Podgorica and in the massif of Komovi. Due to the increasing use of pesticides and industrially processed food in livestock, the survival of the species is jeopardized.



Hygrocybe punicea, elika via nica

Hygrocybe punicea

Major disturbance factor of this species is habitat degradation and disappearance. The area under this type of habitat is rapidly decreasing due to the abandonment of traditional livestock, the increasing use of chemicals in agricultural practice as well as due to diverting agricultural land.



Suillus americanus, Mollkin vu ji hljebac

Suillus americanus

Chicken fat mushroom grows in symbiosis with five needle pines (Pinus strobus, P. monticola, P. lambertiana, P. longaeva, P. ayacahuite, P. cembra, P. peuce, P. wallichiana) in natural and cultivated forests. It is widespread in the northern hemisphere. In Montenegro, S. americanus has been recorded in high mountain forests of endemic species of Macedonian pine (Pinus peuce) in a small number of localities.

FUNGI



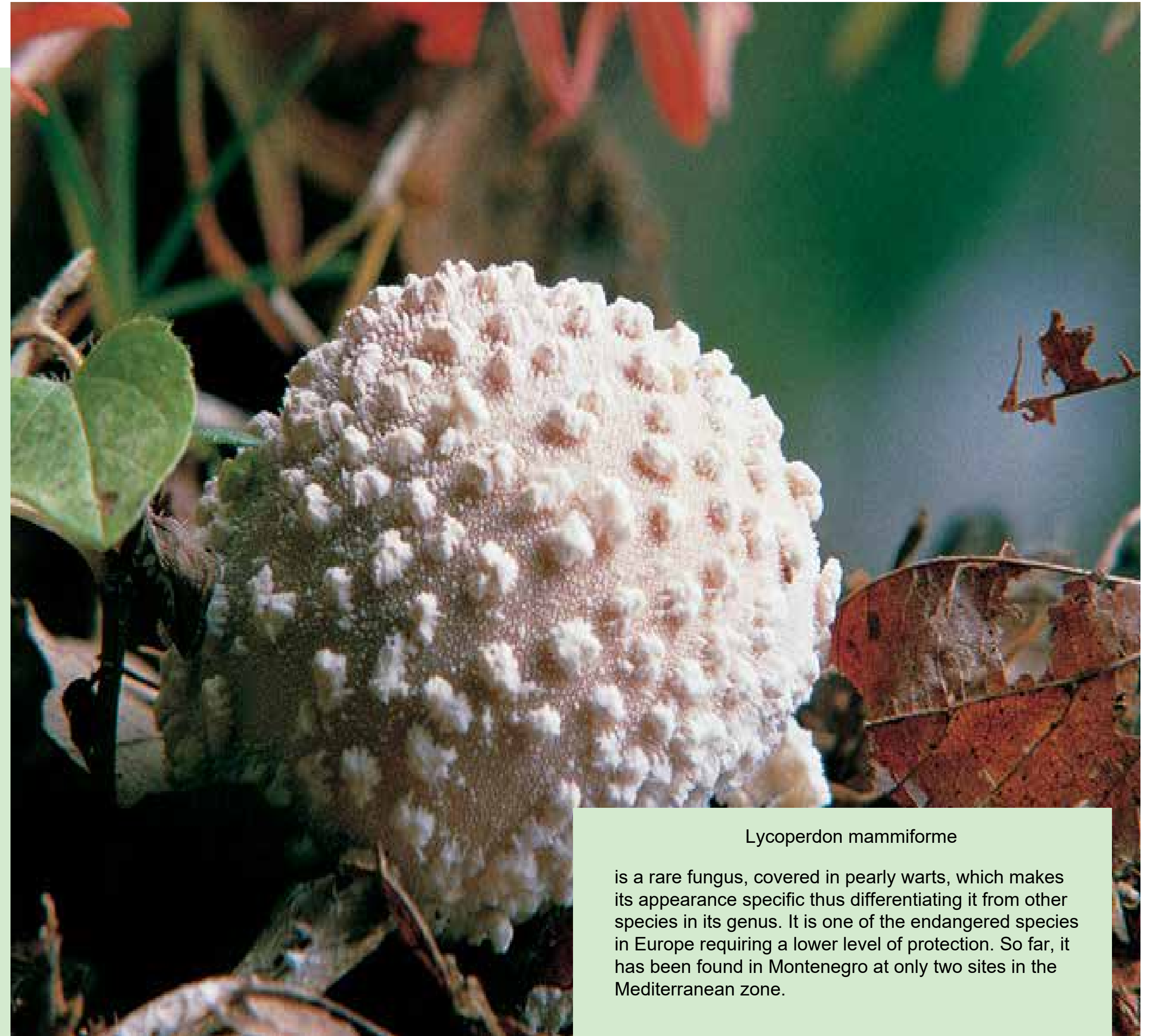
Alpova komovianus

is the first newly described species from the territory of Montenegro. It lives in an ectomycorrhizal community with alder, while being difficult to detect due to its hypogeous lifestyle. Its systematic research has been going on for more than two decades, and there are only one more new genus and three new species discovered so far in this area.



Hygrocybe spadicea

is a rare and endangered species from the European Red List of endangered fungi, among the most endangered ones.



Lycopodon mammiforme

is a rare fungus, covered in pearly warts, which makes its appearance specific thus differentiating it from other species in its genus. It is one of the endangered species in Europe requiring a lower level of protection. So far, it has been found in Montenegro at only two sites in the Mediterranean zone.

FLORA

It is estimated that there are slightly more than 3600 plant taxa of the species and subspecies level in Montenegro. For comparison, the flora of Great Britain has about 1400 and Poland has about 1700 species.

There are 372 Balkan endemic taxa (species and subspecies levels) in the vascular flora of Montenegro, out of which 39 are distributed only in Montenegro. The mountain massifs of Orjen, Lovćen, Rumija, omovi, Durmitor, Prokletije and others stand out with their exceptional wealth of endemic taxa.

In endemic species, local endemics that have a narrow distribution are of special value - e.g. species distributed only in Montenegro: *Androsacae komovensis*, *Asperula baldaccii*, *Draba bertisceae*, *Edraianthus wettsteinii* subsp. *lovcenicus*, *Iris orjenii*, *Pedicularis ernesti-mayeri*, *Protoedraianthus tarae*, etc.



FLORA



Edraianthus wettsteinii, Lovčenski zvončac

Edraianthus wettsteinii subsp. lovcenicus

a typical taxon of the Oromediterranean region (Southern European mountainous region) it is described from the findings at the area of Lovćen and it represents an endemic subspecies of this mountain. Type subspecies E. wettsteinii subsp. wettsteinii is described from the mountain Rumija and is endemic to Montenegro and Albania. Both taxa are protected in Montenegro.



Cymbalaria ebelii

Cymbalaria ebelii

iCymbalaria ebelii is described according to the material collected by W. Ebel in 1844 in the vicinity of Skadar Lake. The species was described by Cufodontis in 1936 and is endemic to the Skadar Lake basin in Montenegro and Albania.

FLORA

Great Yellow

Great yellow gentian grows wild on mountain pastures and meadows between 750 and 2200 meters above sea level. The name Gentiana has been known since the first century AD, from the Illyrian king Gentius who ruled the area around Skadar Lake and who discovered the healing properties of this plant and used it to treat plague. The great yellow gentian - the empress of mountain pastures, stands out with a tall and strong stem, with dotted golden-yellow inflorescences, looking just like crowns. The root of this strictly protected and endangered plant can live to the age of 60 and weigh about 6 kg. The great yellow gentian has been classified as a heart plant for centuries because it was thought to help the weak heart, hence the name heart plant. In addition to being the empress of mountain pastures and rocks, this plant is also the empress of bitter tastes, due to the content of amarogentin - one of the most bitter natural substances.



FLORA

Moltkia petraea

Moltkia petraea is a perennial plant from the sharp-leaved family. This shrubby and bushy plant, with stems covered with tiny, white hairs and a lush blue of flowers and has found its home among the rocks. Moltkia petraea is a plant spread from the south to the highest mountains, find it in sunny and well-drained habitats. The name of the species petraea indicates that it grows in rocky places (Greek word petros - stone).

Moltkia petraea is a highly prized honey plant, and its roots bind the soil in limestone rocks.

It is endemic to Balkan peninsula and grows on the slopes of Lovćen, Orjen, Rumija, Durmitor, Lisinje, Piva Mountain and near Podgorica, Medun and Bioč.



Moltkia petraea, Medun



Moltkia petraea

FLORA



VYŠNIAUSKIJ GELES

Iris orjenii

If a mountain needs to be singled out for a large number of endemic and endangered species, then it is certainly Orjen. One of these rare and critically endangered species is Iris orjenii, a stenoendemic that lives in only one small area and nowhere else on the Planet. According to legend, the name Iris comes from Irida, the messenger of the Greek gods, who sent messages to Earth with lightning and thunder. Where lightning strikes the ground, a beautiful flower would sprout. The same legend is associated with the Slovenian god Perun, who illuminated the mountains with lightning, and where the rainbow touched the ground, irises of various colors sprang up. Iris orjenii grows on grassy slopes, at altitudes between 1500 and 1700 m above sea level, in sunny or slightly shaded habitats within communities with Bosnian pine.



Iris orjenii



Scilla litardierei

Meadow Squill It grows on wet floodplain meadows, mostly in karst fields, from Slovenia to Montenegro. All species of the genus Scilla contain cardiotonic glycosides, substances that are both a medicine and a strong poison. That is why these plants of unsurpassed beauty and color should be admired from a distance. She just didn't get the name Scilla just like that. Namely, in Greek mythology Scilla is described as a beautiful nymph who was turned into a monster by the poisoner and sorceress Kirke, who then haunted many heroes, including Odysseus. It grows on Orjen mt. in Montenegro.

Scilla litardierei, Livadski procjepak

FLORA



Androsace komovensis, Mužika sa Komova

Androsace komovensis

Androsace komovensis is an endemic, extremely rare plant in Montenegro. Rock jasmine from Komovi belongs to the Primrose family. The name and etymology of the genus come from the Greek words andros - man (that is why it is called mužika), and sakos - shield, due to the shape of the leaves. It was found in a narrow locality, on the southern slopes of the Kom where it grows in rock crevices and on slopes facing south. The population which was found contains a very small number of individuals (only ten), but it is believed that the actual size of the population may be much larger because parts of the Kom mt. are inaccessible and insufficiently researched.



Pinguicula balcanica, Debeljača

Pinguicula balcanica

is a perennial insectivorous plant, a Balkan endemic, rare and protected. It has long sticky leaves and the flower is blue-purple, we will find it as flower from May to August. The plant, with its sticky leaves, stuns and traps insects, which it later decomposes and compensates for the poor mineral intake. They are unique because they conquer niches and habitats where other plants cannot grow. Its habitats are shaky.



FORESTS

Having the forest cover percentage of 59.5% (0.9 ha of forest per capita), Montenegro is one of the most densely afforested countries in Europe, following Finland, Sweden and Slovenia.

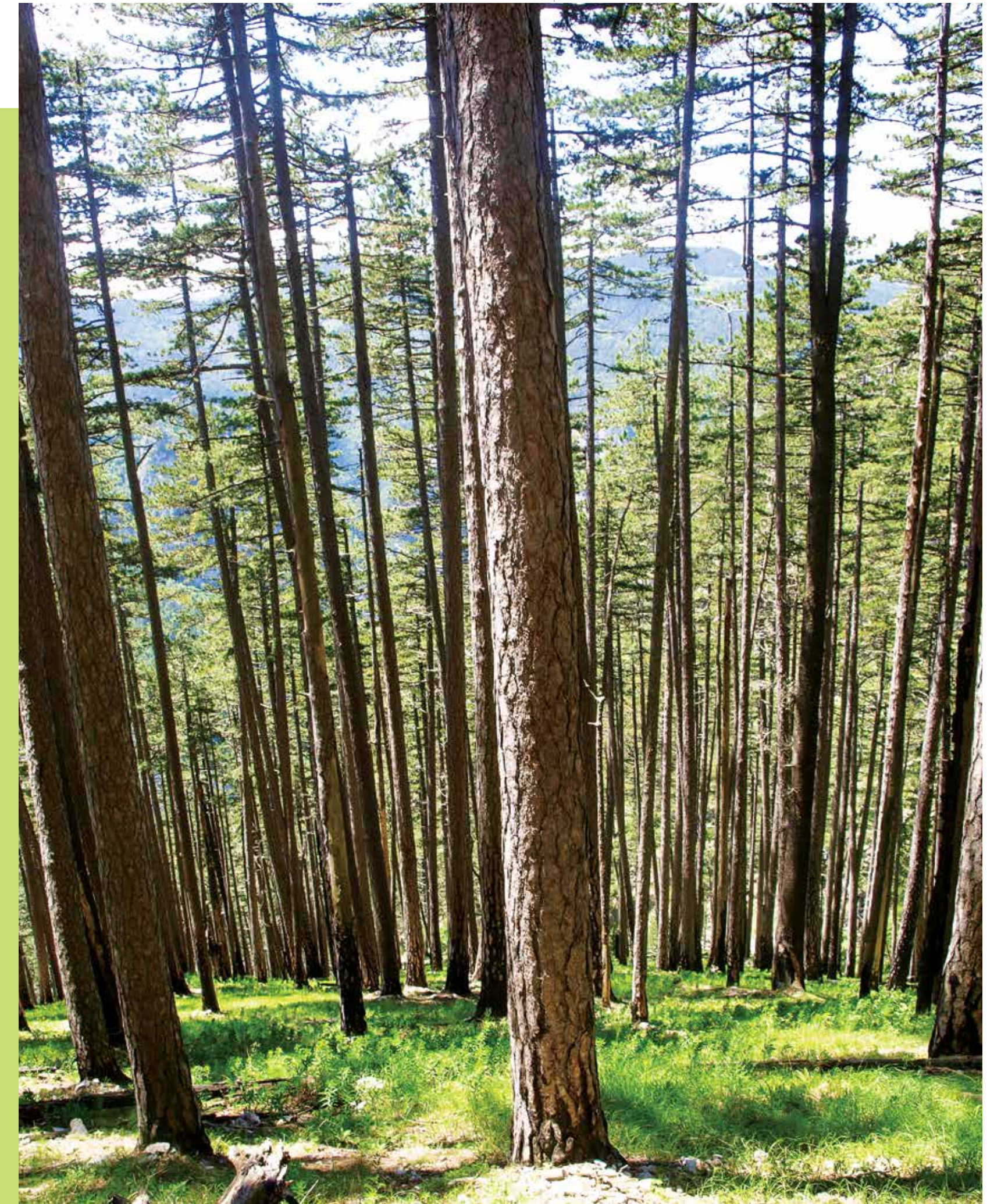
It has a large number of forest plant communities, with an even larger number of associations and species. Montenegro is characterized by a domination of broadleaf trees with 76.2% of area covered by its forests, while the percentage of coniferous volume is 40,2%. Dominant species are beech, oaks, spruce, fir and species of pine.



FORESTS

Moving from the coast line to the high mountains, forest vegetation alternates. Moving through the zones, the types adapted to these zones alternate as well. Thus, black oak (*Quercus ilex*) can be found in the Mediterranean zone and it is adapted to drought with its leathery leaves, indentation formed in stomata and large root system. There are well preserved forests of sweet chestnut and oak (*Quercus Castanetum*) in coastal zone and partly around Skadar Lake. Maquis is an important component of the vegetation of the southern part of the country – communities of sclerophyllous evergreen types of shrublands dotted with trees. Maquis are well adapted to dry habitats and high temperatures.

Higher altitude of the southern part of the country brings typical karst vegetation which occupies large area of Montenegro and Hercegovina's karst. Beside white hornbeam, common species found in these communities are as follows: manna ash, downy oak, black hornbeam, cornelian cherry, etc. Community of Turkish hazelnut and black hornbeam, which represent remains of relict forests, is common around inlets and sinkholes in karst area.



FORESTS

Old Olive Tree

Old Olive Tree in the City of Bar (Maslina u Starom Baru), since 1968 protected as a monument of nature it is more than 2100 years old and one of the three oldest olive trees in the world.



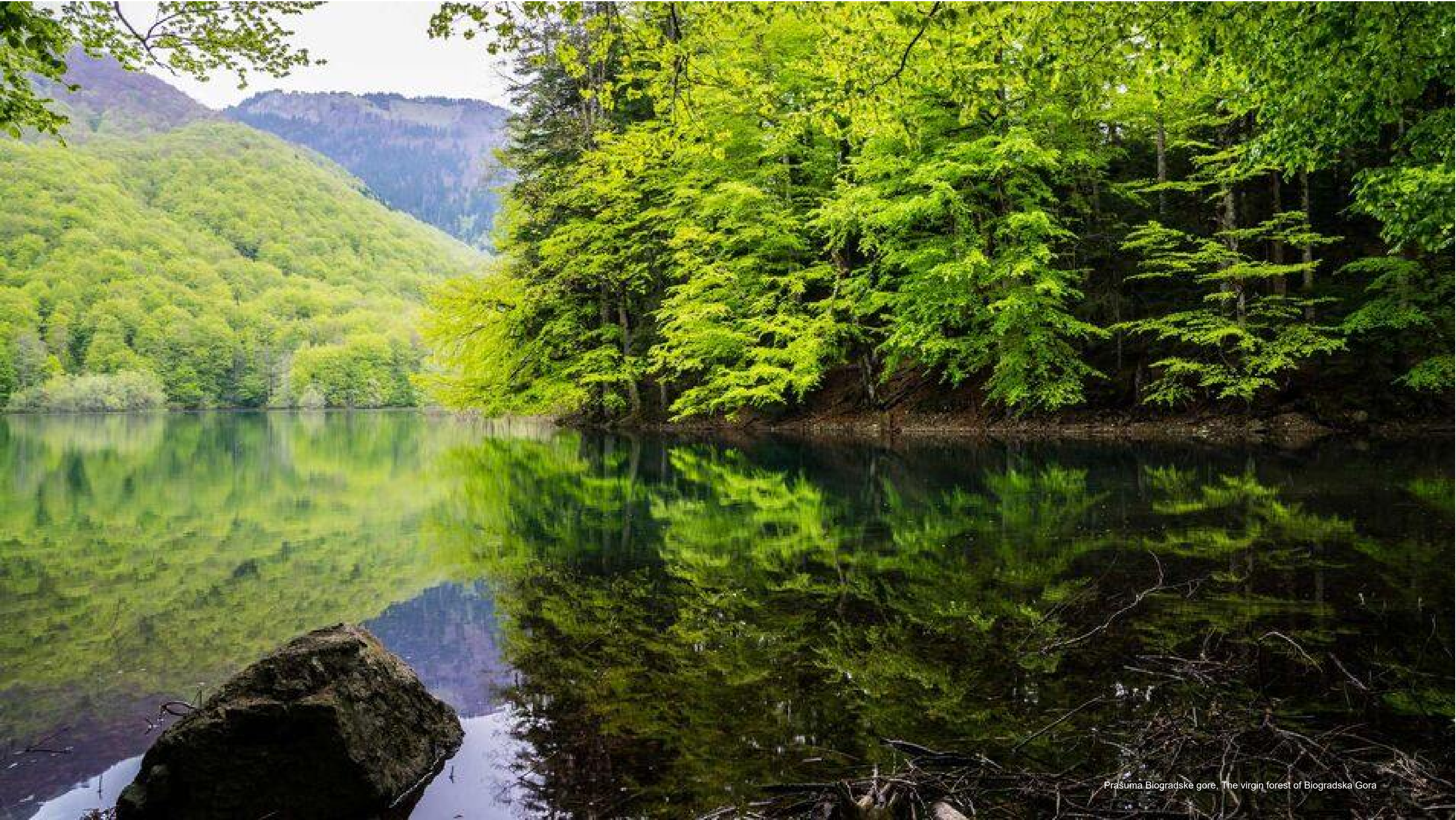
Old Olive Tree in the City of Bar

FORESTS

The virgin forest of Biogradska Gora

Near Crna Poda, in the catchment area of Biogradska River and Jezerstica, one of the largest rainforests in Montenegro and one of the oldest protected areas in the world is settled. This forest is known as 'Knjazev zabran' or 'Branik'. There are 90 species of dendroflora in the rainforest.

Age of certain trees of the rainforest is estimated to more than 400 years, while certain trees are more than 40 and even 60 meters tall.



Prasuma Biogradske gore, The virgin forest of Biogradska Gora

FORESTS

Montenegrine *Picea abies* forests

In the area of the mountain Ljubišnja near Pljevlja, spruce forests are so imposing and special that the international habitat classification EUNIS has accepted them as a special habitat type named Montenegrine *Picea abies* forests with the code G3.1E3. The European Environment Agency has its own information system EUNIS and all states are obliged to report on the state of habitats, species and other segments of the environment through it. Therefore, Montenegro has contributed to international science with its specificity of these forests.



Ljubišnja: Montenegrin *Picea abies* forests

FORESTS

Pine Trees

FForests of black pine tree are the most beautiful ornament of deep river canyons and one of the symbols of recognizability of Montenegro. In the River Tara Canyon, between Bistrica and Dobrilovina, at an altitude of 950 meters, Crna Poda, a rainforest of black pine tree, is settled. This complex of pine forest covers the area of 20 ha, while the average age of trees reaching the height of up to 45 m is 400 years. Total wood volume in Crna Poda is 1,465.57 m³/ha and it represents the largest wood volume per hectare in Europe.

The two most famous species of trees in Montenegro are Balkan pine (molika) and Heldreich's pine (munika). Endemic and subendemic species of the Balkan Peninsula keep a claw grip on the rocks and survive harsh conditions.



FORESTS



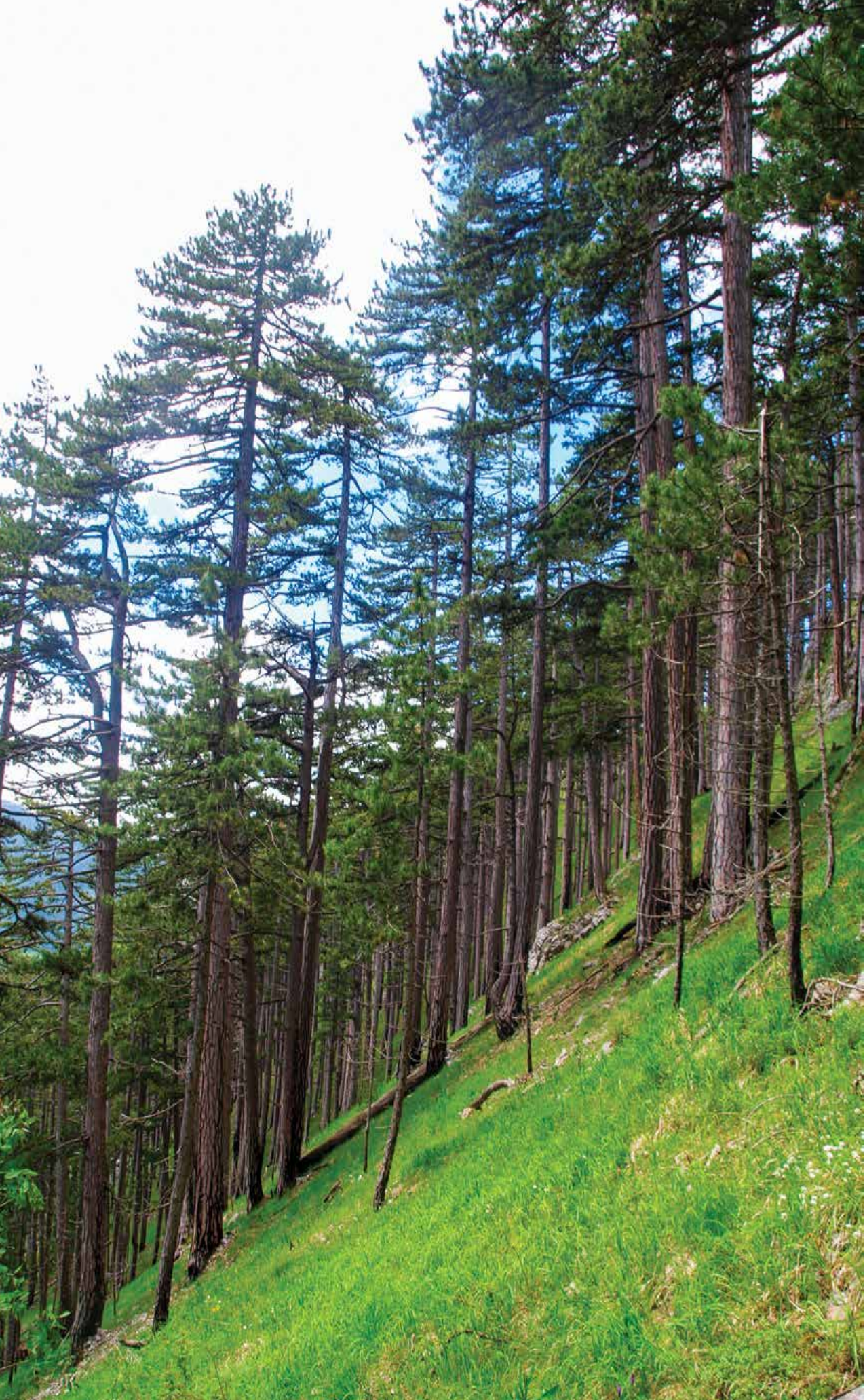
Bryophytes are widespread plant

Estimated number of species on Earth is between 20,000 and 27,000. So far, more than 700 species have been registered in Montenegro, which indicates a high degree of diversity of this group of organisms.

MOSS Bryophyta Buxbaumia viridis is a boreal -mountain species that was first recorded in Montenegro in the middle of the 19th century, on Durmitor Mountain, and later, also in the most of mountain massifs. It grows on rotten stumps and trunks, in moist deciduous-coniferous forests, in sheltered or shaded places

Black pine tree (Pinus nigra)

is present in NP Durmitor, in the strict reserve Crna Poda, with an incredible height of 47.4 m, while sliver fir (Abies alba) reaches a height of almost 60 m in the rainforest of Biogradska Gora.



FORESTS

Sphagnum peat bogs are rare and unique habitats with a specific hydrophilic and amphibious bryophyte flora dominated by bryophytes of the genus Sphagnum.

They are located mainly in the north of our country, on the mountains at the altitudes over 1000 m and represent the extreme southern branches of these habitats of Central and Northern Europe.

They are considered as critically endangered habitats, because they have become rare, isolated and the area they cover decreases over the time. So far, it is known that sphagnum peatlands in our country are located on the following mountains: Durmitor, Semolj, Hajla, Bjelasica, Prokletije, Visitor, Zeletin, Rusolija.

In Europe is present 61 species of sphagnum mosses, of which 19 have been recorded in Montenegro so far.



Semolj, tresetište sa sfagnumskim mahovinama

FORESTS

Travertine

Travertine (sometimes also called tufa) is formed in cold hilly and mountain springs and watercourses that are saturated with calcium carbonate.

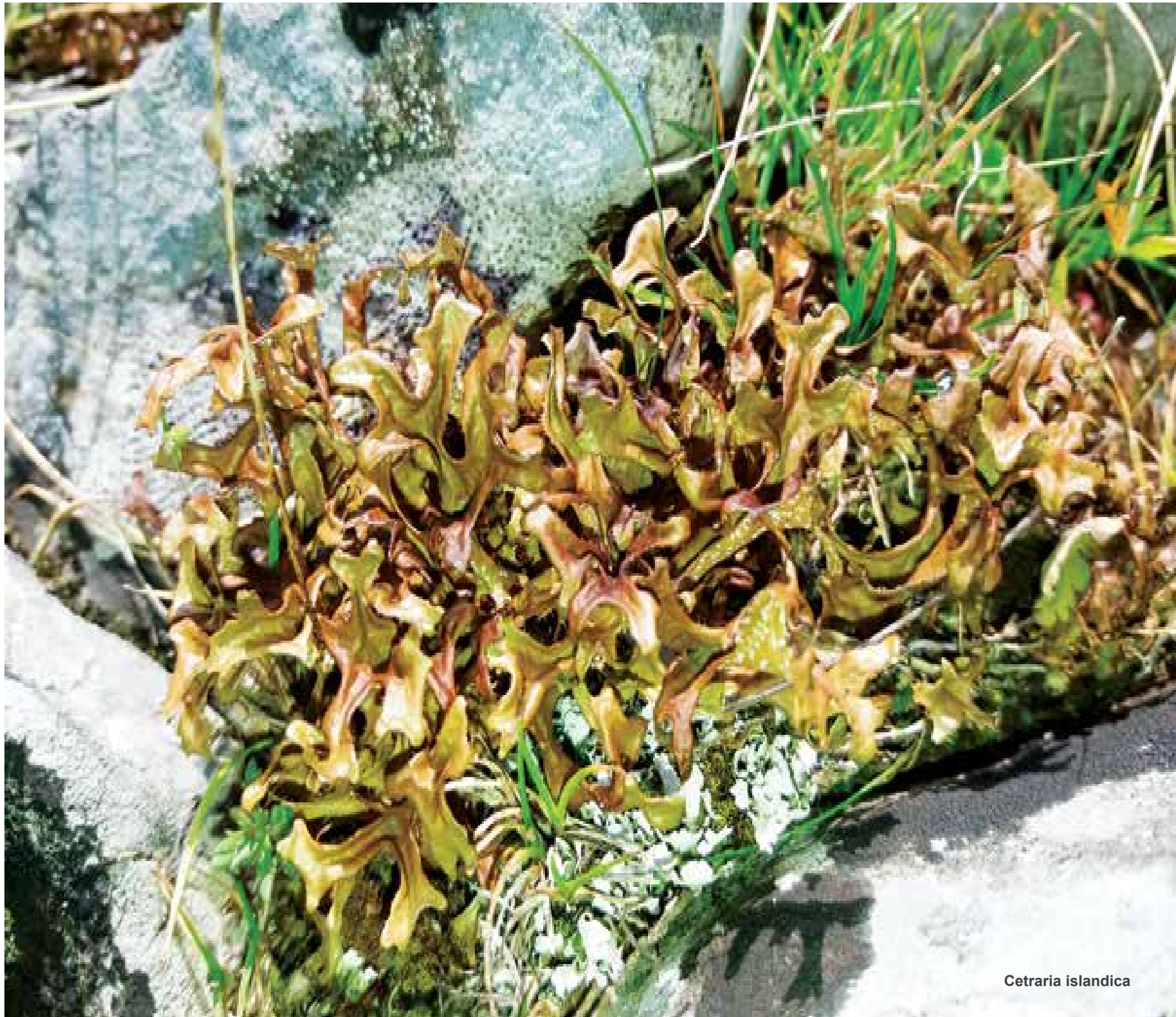
In Montenegro, travertine deposits are the most often formed by bryophytes: *Cratoneuron filicinum*, *Cratoneuron commutatum*, *Eucladium vericillatum*, *Rhynchostegium riparioides* and others.

So far, known sites where travertine deposits have been formed are in the canyons of the following rivers: Mrtvica (Bijeli Nerini), Morača (spring, Tušina River), Tara (Bailovića and Jovičića sige), Lještanica.



Semolj, treseti te sa sfagnumskim mahovinama

FORESTS



Cetraria islandica

Cetraria islandica

It is one of the few species known as Icelandic lichen and belongs to the group of fruticose lichens. In Montenegro, it has been recorded mainly in the northern and northwestern regions and around Podgorica, between 1350 and 2460 meters above sea level, in calcareous and silicate soils and in the Pinus peuce species. It has a medicinal use thanks to its strong antibiotic effect and is mainly used to relieve respiratory ailments.

Licens

Lichens are complex organisms, made up of at least one species of alga and/or cyanobacterium and one species of fungus. The substrate on which lichens live is very diverse - rocks, soil, tree trunks and branches, and in tropical areas they also live on the leaves of plants. Their presence was also recorded on substrates such as insect bodies and artificial materials such as iron, resin, charcoal, bones, linoleum, wool fabrics, porcelain. To date, it is estimated that approximately 20,000 species of lichens are known in the world.

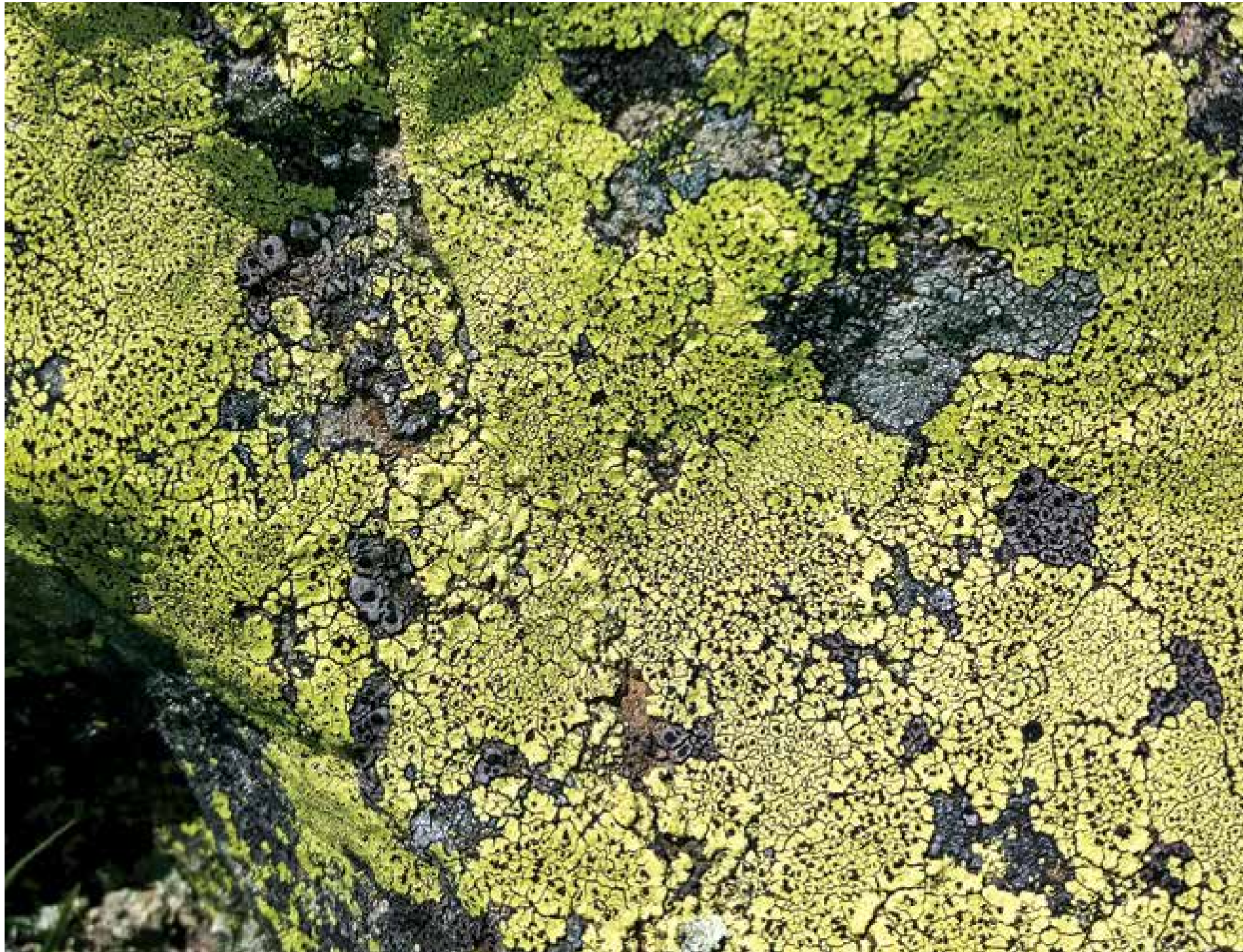
Lobaria pulmonaria

One of the first two species recorded in Montenegro. It belongs to the group of foliose lichens, characterized by a large thallus up to 30 cm in size. It inhabits mostly shaded habitats, sensitive to anthropogenic pollution, and is an indicator of healthy, preserved ecosystems. In Montenegro, it has been recorded in numerous sites, from the coastal area through the central part to the high mountains in the north, in the altitude range of 475–1810 meters, on various species of deciduous trees.



Lobaria pulmonaria

FORESTS



Rhizocarpon geographicum

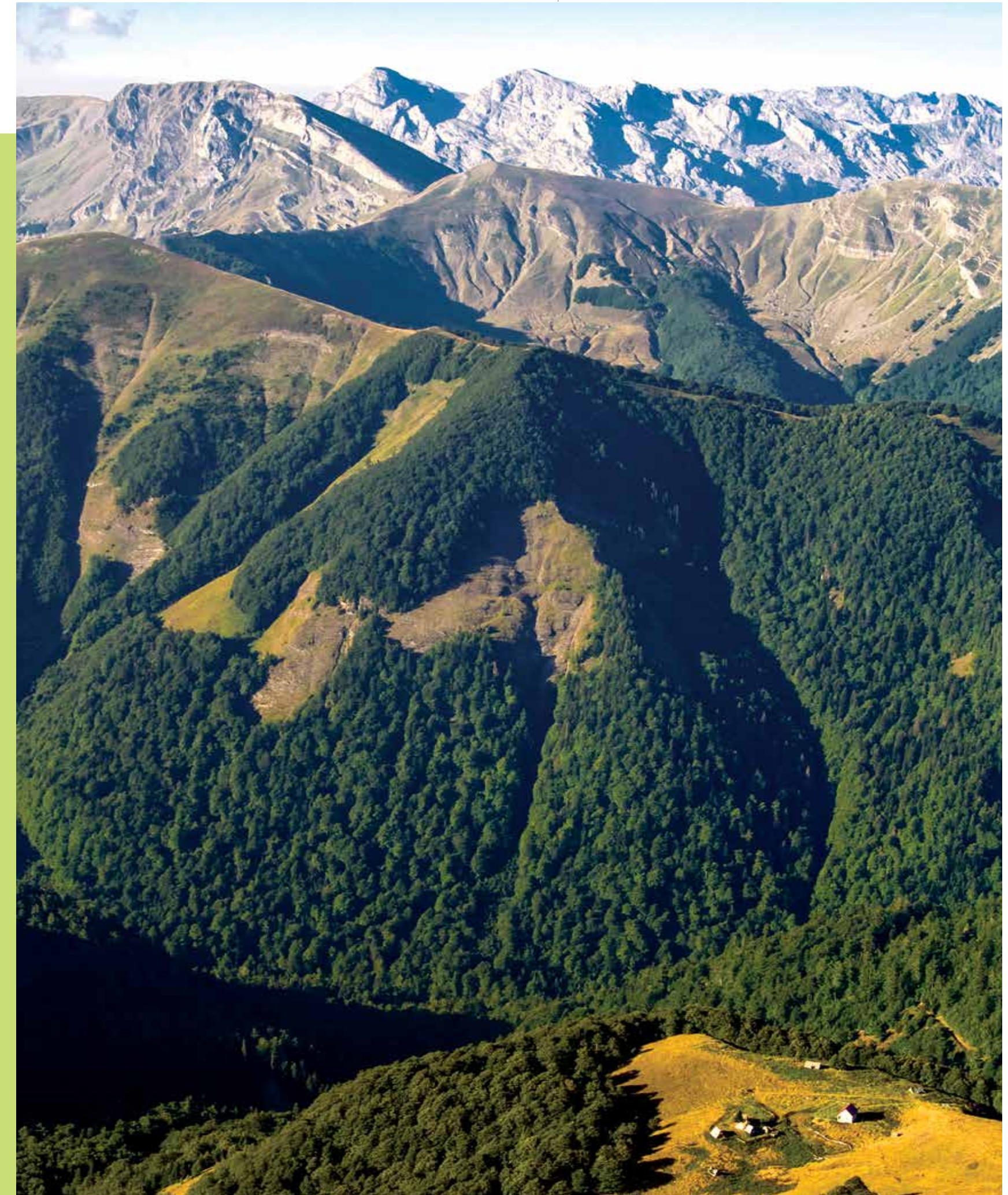
subsp. geographicum - belongs to the group of crustose lichens, grows on rocks, partially growing into them. It inhabits areas characterized by low levels of pollution.

Individuals that have an almost rounded thallus are used in lichenometry, a procedure that determines the age of rocks. An individual of this species, found in the Arctic, has been rated the oldest living organism on the planet, with an estimated age of 8600 years.

In Montenegro, this lichen is recorded in several, mostly mountainous localities, in the altitude range from 600 to 2403 meters.

Licens

The first known lichenological data on Montenegro was collected back in the first half of the 19th century. By now, approximately 900 species have been registered in our country, which, considering the area of our country and the number of species recorded in the region, indicates the rich diversity of this group of organisms. Based on the outer appearance, lichens are commonly divided into three main morphological groups - crustose (80% of the known species), fruticose (the most sensitive to air pollution) and foliose lichens



WILD LIFE / Invertebrates



Saga natoliae, Vrač žbunar

Invertebrates

are the most numerous group of living beings on the planet, which is crucial for the survival and functioning of the biosphere. About 1.7 million species have been described, and it is estimated that there are up to 30 million species. Due to their number, invertebrates have been the least studied so far.

More than 6000 species of terrestrial, freshwater and marine invertebrates have been recorded on the territory of Montenegro. Based on comparative data with the countries of the region and the number of unexplored groups, it is estimated that the number of species inhabiting the territory of Montenegro is between 30,000 and 40,000.

The invertebrate fauna in Montenegro is extremely rich. During the last decades, intensive research has been conducted, so that a significant number of species that are new to science have been described. Numerous species that are new to the fauna of Montenegro have also been registered. Over 4000 terrestrial and freshwater invertebrates have been recorded in Montenegro.

On the territory of Montenegro, over 350 terrestrial and freshwater species are registered, which are on the global or European IUCN Red List. Sixty-nine species of invertebrates are protected by law.

The most common invertebrate endangerment factors: habitat fragmentation, habitat degradation and habitat disappearance, urbanization, pollution, climate change, introduction of alien or invasive species



WILD LIFE / Snails & Insects



Limax wohlberedti, Endem Crne Gore

Snails

Five species of snails are protected in Montenegro. *Tandonia reuleaxi*, *Limax wohlberedti*, *Deroceras maasseni*, *Helix vladika* and *Helix dormitoris dormitoris*.

Species *Limax wohlberedti* has been registered mainly on rocky calcareous habitats or in dry rocky shrubs that are not significantly endangered by human activities. Our research has found this species in the whole territory of Montenegro, both in the Mediterranean and in the highlands and at an altitude of over 2000 meters above sea level.

502 species and subspecies of terrestrial and freshwater snails have been recorded on the territory of Montenegro. Of that number, 380 belong to terrestrial and 119 to freshwater snails. Three species are edible: *Helix pomatia*, *Helix lucorum* and *Helix aspersa*.

The territory of the former Yugoslavia has the largest number of naked snail species in Europe. The presence of 46 species of naked snails was determined in a relatively small area. Only Greece is ahead with 56 species. There are 25 species of naked snails in Montenegro, of which nine species are endemic.

So far, nine species of endemic snails have been registered - endemic:

Limax wohlberedti, *Limax graecus*, *Limax conemenosi*, *Tandonia albanica*, *Tandonia budapestensis*, *Tandonia reuleaxi*, *Malacolimax mrazeki*, *Deroceras turcicum* and *Deroceras maasseni*.



Rosalia alpina, Alpska strizibuba



Helix dormitoris dormitoris, Endem Crne Gore

Insects

are the most numerous group of invertebrates, and at the same time the most numerous group of living beings on the planet. They make up more than 60% of species biodiversity and are one of the most important segments in the functioning of the biosphere. Their participation in food chains, the circulation of matter in nature and the pollination of plants, are of great importance.

WILD LIFE / Butterflies

Butterflies

Out of the approximately 17,280 described species of diurnal butterflies in the world, 576 are known in Europe and 192 in Montenegro, which makes up 33% of the European diurnal butterfly fauna. Butterflies are well researched in Montenegro. The fauna of moths includes about 250 species. Butterflies and moths are important as plant pollinators. They are endangered due to habitat degradation and disappearance.



Parnassius apollo, Apolonov leptir

The Apollo butterfly is protected by national legislation. Apollo's butterfly inhabits mountain pastures and meadows, and it needs plants from the *Crassulaceae* family to reproduce. It is endangered due to pasture healing.



Papilio machaon, Lastin rep

In Montenegro, the following species are protected by law:
the Apollo butterfly *Parnassius apollo*,
Scarce swallowtail *Iphiclides podalirius*, Old
World swallowtail *Papilio machaon* and the
Mediterranean swallowtail *Papilio alexanor*.

WILD LIFE / The Myrmecofauna

Ants
are a widespread group inhabiting all continents except Antarctica. By number of species, they amount to only 1.5% of the total insect fauna, but more than 10% of the total biomass of all animals. Approximately, a total of 12,000 species of ants have been registered, while the myrmecofauna of Montenegro consists of 140 species. Research that began in the 19th century was mainly conducted in the southern part of Montenegro. This resulted in a much higher number of species (97) registered in the south in comparison to the north (48 species) and central part (51 species)..

Based on the known areal distribution, three species are endemic to Montenegro *Crematogaster auberti savinae*, *Crematogaster gordani*, *Crematogaster montenigrinus* and three belong to endemic species of the Eastern Adriatic Coast.

National legislation has recognized the red wood ant in Montenegro as a species of *Formica rufa*.

So far, three species from the *Formica rufa* group have been registered on the territory of Montenegro: Based on decades of field research, the most common is *Formica pratensis* which inhabits open habitats and can be found in coastal mountains above 850 m. *Formica polycтена* and *Formica rufa* were found only in the mountains of northern Montenegro, above 1100 m in forest habitats.

Comparing the number of myrmecofauna of neighboring regions and countries and the diversity of ecosystems in them, we expect that Montenegro is inhabited by approximately 180 species of ants.



WILD LIFE / Hoverflies

Syrphidae (hoverflies) represent one of the most numerous families of dipteran with about 6000 species described so far in the world. 815 species of syrphid flies have been registered in Europe, while 390 species have been recorded in Montenegro so far. Syrphid flies are one of the best researched insect groups in our country, and research has been especially intensified since the 1980s. The result of these surveys is 76 species new to Montenegro, registered in the last twenty years. This group of organisms plays an important role in nature, especially when it comes to plant pollination.

As many as half of these species, according to the latest estimates, have UC categories endangered (E) and vulnerable (U) at the European level. The main reason for the endangerment of certain species is the loss of natural habitats necessary for the survival of the species (due to fragmentation, deforestation, fire, draining or drainage, land conversion, various types of pollution, etc.).



A species described as new to science in 2017 based on specimens collected in the omarnica canyon
Several species new to science have been registered and described in Montenegro

Having in mind the size of the territory in relation to other European countries, Montenegro has a very rich and diverse fauna of hoverflies, with a significant number of endemic, rare and endangered species. Of the total number of registered species, almost a quarter of them (about 90 species) are considered rare and endangered, either at the level of Europe, the Balkans or Montenegro.



S. petronillae Spiximorpha

This species of syrphid flies is very similar to wasps in appearance and body color. It mainly prefers old thermophilic oaks or humid forests of oak, chestnut and laurel, especially those trees on which we find the saproxylic species of ants Liometopum microcephalum, which indicates that the tree is hollow. It is endemic to the Balkans and the Apennines and so far only a few specimens have been recorded in Montenegro, Italy, Serbia and Greece. The species is considered endangered (EN) at the European level, and so far it has been recorded only in Morinj (Boka Kotorska), with only one specimen. Habitat degradation is the main cause of endangerment of this species.

WILD LIFE / Ladybugs & Beetles

Ladybugs

Coccinellidae due to their appearance and color belong to the group of the most attractive and popular insects. About 6,000 species have been described worldwide. So far, 6 species have been registered in Montenegro. During the previous 10 years, detailed research was conducted, during which 36 new species were found for Montenegro. Ladybugs are extremely important because of their diet. Most species feed on plant lice, which is very important in agriculture.



Cerambyx cerdo, Velika hrastova strižubica

Cerambyx cerdo

The great oak longhorn beetle is protected by national legislation. The oak longhorn beetle most often inhabits oak forests, but it is also registered on other deciduous trees. It is endangered due to fragmentation and habitat loss.



Lucanus cervus, elenak



Oryctes nasicornis, nosorog

Beetles

Coleoptera is the most numerous group of insects, and living organisms on the planet in general. About 30,000 species have been registered in Europe. In Montenegro, this group of insects has been partially investigated. Based on available data, about 900 species have been recorded so far



Coccinella septempunctata, Sedmota kasta bubamara

The fauna of ladybugs in Montenegro is endangered due to anthropogenic activities, habitat loss and intensive spread of invasive Asian ladybug Harmonia axyridis, which significantly reduced the number of domestic species of seven-spotted ladybug Coccinella septempunctata.

WILD LIFE / Dragonflies

Dragonflies

Dragonflies Odonata are an old group of insects, whose life cycle is related to aquatic ecosystems. Today, about 5,700 species are known worldwide. 1 3 species of Odonata have been registered in Europe, while 67 species or 7% of European fauna have been found in Montenegro. During the last fifteen years, 16 new species for the fauna of Montenegro have been recorded in Montenegro. Many species of dragonflies are used as indicators of environmental quality. They are extremely important as predators of parasitic dipteran insects. 52 species of dragonflies have been registered on Skadar Lake, which is why it represents a hot spot of biodiversity for this group of insects.



Cordulegaster heros, Veliki potočar

Cordulegaster heros
Balkan goldenring is Balkan endem. Significant populations of this species are present in Montenegro.

Montenegro is home to globally endangered, significant species of dragonflies such as Balkan goldenring *Cordulegaster heros*, bladetail *Lindenia tetraphylla* and Eastern Spectre *Caliaeshna microstigma*.

Dragonflies are endangered due to anthropogenic influences and climate change.



Lindenia tetraphylla, Veliki perorepi konjic

Lindenia tetraphylla
The largest population on the global level lives on Skadar Lake. t inhabits stagnant waters and slow flowing rivers. t is endangered due to habitat loss.

WILD LIFE / Freshwater ichthyofauna

Today, five autochthonous species of freshwater Crustaceans from the Astacidae family live in Europe. Previous research in Montenegro has identified three indigenous European species, namely *Austropotamobius pallipes*, *Austropotamobius torrentium*, *Astacus astacus*. These crustaceans inhabit different habitats - cold waters rich in oxygen, fast currents and higher altitudes, or habitats of calmer waters in which the temperature in summer must be above 10 degrees Celsius.



All species prefer habitats that provide many favorable shelters or allow crustaceans to dig them themselves. Crustaceans are nocturnal animals. During the day, they stay in shelters under rocks, roots or holes they drill in the banks of streams, rivers and lakes. In the shelter, they are placed with their head towards the exit, and the claws are held out forward. At night, they come out of the shelter and look for food. Nocturnal activity is the adaptation of animals to avoid predators that are mostly dependent on species, although the possibility of crustaceans hunting at night is not excluded because their prey is also active.

These crustaceans are essential consumers in many food chains and can dominate the biomass of bottom living communities in lakes and streams. They are also predators, herbivores and detritivores, but they can also be prey for terrestrial animals, especially after changing and hatching. That is why they are the key organisms of many food chains and an important catalyst for the turnover of organic matter.

Austropotamobius pallipes

They up to 1 cm, while males are always larger than females of the same age. They reach full maturity in the second or third year at a length of up to 6.5 cm. The number of eggs they lay ranges from 25 to 50, depending on the size of the female. It is widespread in the lower course of the Zeta River in Montenegro.



WILD LIFE / Birds

So far, 352 bird species have been registered in the country, out of which 215 are breeding birds. Compared to Europe (533 species), that is 66% of the total bird fauna of the Old Continent. Compared to other European countries, the number of nesting birds is relatively high, taking into account that Montenegro is one of the smallest countries. For example, Montenegro is in 39th place in terms of area, while in terms of the number of breeding birds it is in 22nd place.

The Bojana river delta stands out with the Ulcinj saline as the most important bird habitat on the eastern Adriatic coast, which, together with the Bojana Delta, hosts millions of birds annually for breeding, wintering or flying to Africa and vice versa. More than 250 species of birds fly over this area during the year.

After flying over olive groves, Mediterranean maquis, mountain pastures and cliffs of Orjen, Lovćen and Rumija, the rocky sea of the central part of the country or Skadar Lake awaits them if they fly through the Bojana valley. The European bird airport, the Amazon of this part of Europe and the ornithological paradise, are just some of the synonyms for Skadar Lake. The capacity of the lake for wintering hundreds and thousands of breeding pairs of birds, primarily cormorants, coots, several species of herons and terns, including the well-known Dalmatian pelican, makes the lake a real bioreactor.



Ostrigar

WILD LIFE / Birds

The Skadar basin goes in three directions, two are through the canyons of Cijevna and Morača, deeper into the karst and the central part of Montenegro, and one along the valley of the river Zeta towards the Zetačko polje. The Zeta river valley is an important bottleneck for bird migration, where thousands of predators, shorebirds, passerines and, especially cranes, in the spring pass by on their way to north.

Karst fields are important habitats for resting, wintering and nesting of birds. The largest karst field in Montenegro, the Zetačko polje, with artificial water reservoirs is one of the most important places for birds in the country. Floodplain meadows, river meanders, extensive agriculture, are the conditions that have ensured that this field is a refuge for species such as corn crakes, grey shrike, barred warbler, resting and wintering grounds for grebes, cranes, coots, as well as large number of waders.

The rest of Montenegro is intertwined with canyons, plateaus and mountains. The richness of forests makes Montenegro one of the richest countries in Europe, which contributes to the presence and abundance of species such as capercaillies, hazel grouse, several species of owls and all ten species of woodpeckers present in Europe. Durmitor, Biogradska gora, the karst, Ljubinj, are just some of the so-called hot spots of the ornithological diversity of Montenegro, in which Durmitor leads with 172 registered species or almost half of the total registered in the country.



Short-toed snake eagle

It is the first bird from Montenegro whose migration was monitored via satellite. From Montenegro she flew to Sudan and back to Turkey. To its wintering ground, located 2,300 km in a straight line from the nest in which it originated, it spread its wings over 12 countries, namely Albania, Macedonia, Greece, Turkey, Syria, Jordan, Israel, Lebanon, Egypt, Sudan, Chad and Libya.



Pelikani

Pelicans

Dalmatian pelican, a nesting bird of Skadar Lake, is one of the most recognizable bird species in Montenegro and is a trademark of the Skadar Lake National Park. Pelicans start nesting in reeds or on floating islands of peat in December. As the water level of the lake rises after heavy rains, the eggs or young are submerged, so the success of nesting of this species on the lake was often zero. The setting up of the first artificial islands for their nesting began in 2003. By upgrading the island and setting up rafts in other locations, this problem was successfully solved, so in 2021, this species had a record-breaking 150 birds and pelican was finally rescued.

WILD LIFE / Birds

The international program Natura 2000 in Montenegro has identified 33 potential Special Protection Areas under the Birds Directive), which is almost 55% of the country's territory. Thanks to birds, we have three Ramsar sites in Montenegro (wetland of international importance) - Skadar Lake, Tivat saline (Tivat solila) and Ulcinj saline (Ulcinjaska solana).



Flamingos
Flamingos are the species with the most counted rings in our country - as many as 78. Most of them are from Italy 35, from France 20, Spain 16. Particularly interesting is the individual that was ringed in Turkey on August 16th, 2009, which resided in Greece during 2010 and 2011, then in France and in 2012 and 2013 in Italy. After a short break, she was in Greece, in 2016. She was registered at the Ulcinj Salina on April 5th, 2018.



WILD LIFE / Mammals

Mammals

play a very important role in regulating our ecosystems and in their stable functioning. About 270 species of mammals have been registered in Europe so far. Most European terrestrial mammal species are tiny forms of flying and non-flying mouse-like mammals. Out of the total number of European species, 85 terrestrial mammals have been recorded in Montenegro so far, which represents 1/3 of the mammal fauna of Europe on only 0.1% of the surface of the European continent.



The largest European bat is also a resident of Montenegro. The largest bat species in Europe was recently found on the southern slopes of mountain Orjen. The greater noctule bat is a bat with a wingspan of up to 46cm. Although Europe's bats feed exclusively on invertebrates, small birds such as the robin or the wood warbler can also be found on the menu of this bat during spring and autumn.



WILD LIFE / Mammals

The mammal fauna of Montenegro is characterized by very interesting, rare and endemic species, whose ecological types are reflected through underground, aboveground, aquatic and flying species. The combination of a low level of mammal research and physical-geographical characteristics of Montenegro, opens the possibility of finding many more species from this animal group. In the last three years, three new species of mammals have been discovered for Montenegro: the marbled polecat, the mediterranean long-eared bat and the greater noctule bat.



The presence of mongoose species in Montenegro is also a call for the urgent creation of an invasive species management strategy. The small Indian mongoose comes from Asia. It is one of the 100 most invasive species in the world and does enormous damage to native species. In the hinterland of Jaz beach, three mongooses have been marked, which are tracked using GPS devices that will help reveal more details from the ecology, behavior and biology of the small Indian mongoose in Montenegro.



Through CZIP Programme for Large Carnivore Conservation, in October 2020 in Nature Park Piva, for the purpose of better understanding of the ecology of brown bears, a bear with the official name “Borko” was equipped with the GPS-transmitter by the Center for Protection and research of Birds (CZIP). The transmitter will help answer the questions of seasonal dynamics of the species, feeding, size of the territory, preferred den sites, etc. Also, based on the genetic analysis of feces, the presence of 19 males and 7 females was determined in Piva. At the time the collar with GPS-transmitter was placed, Borko’s weight was 148 kg and he was five years old. For the first two days since marking, he crossed nearly 15 km and during the first autumn he swam across Piva lake as many as ten times.

WILD LIFE / Mammals

Hooves like ice axes, and the heart of an athlete. The Balkan chamois, the alpine antelope of the Balkan Peninsula, is one of the most endangered subspecies of the alpine chamois. About 1,500 chamois live in the Montenegrin mountains, of which 1/3 of the population is concentrated in the Durmitor National Park. It used to be densely distributed in Bjelasica, Komovi, Vojnik, Moračke and Kučke mountains, in the Montenegrin part of Prokletije, and today it can be very rarely registered there.

Although there are many suitable habitats for it in Montenegro, the species has disappeared in many due to poaching.



FRESHWATER FISH

There are 89 species of fish registered in the waters of Montenegro, out of which 14 species have not been caught for years. Most of these species were imported from China in the 1970s and failed to adapt to the new conditions. The current state of the ichthyofauna consists of 62 indigenous species, while 13 species have been introduced. There are 48 species of autochthonous, resident (non-migratory) or typically freshwater species, as well as 14 migratory species (autochthonous) and species that inhabit brackish waters. The water of Montenegro belongs to two basins, Adriatic Sea and Black Sea. There are significantly more species (43 autochthonous) in the Adriatic basin than in Black Sea (19 autochthonous) due to brackish habitats of Bojana river and small coastal tributaries.

Four species are endemic to Montenegro: *Salmo zetensis* – Adriatic trout, *Gobio skadrensis* - Skadar gudgeon, *Barbatula zetensis* - Zeta stone loach, *Knipowitschia monteneginus* - freshwater goby endemic to Morača River. In the Skadar Lake basin (Montenegro and Albania), eight species present only in this basin (endemic) have been registered. In the wider catchment area or in the southeastern Adriatic ecoregion, there are 18 endemic species registered in Montenegro.

Five exotic species (from other continents) are present in the waters of Montenegro, while the rest are autochthonous in the neighboring waters outside Montenegro. Several species have been translocated from one basin to another in Montenegro and they are not placed in the category of introduced species for the whole area. This is the case with European grayling (*T. thymallus*), introduced in Morača, or Skadar chub (*Squalius platyceps*), introduced in the Piva basin. Such species are allochthonous for the basin into which they are translocated and are included in the list of allochthonous species for that area.

With these species, Black Sea basin has seven non-native species, and there are 13 species in the Adriatic. They do not include *C. carpio* - a carp that probably reached Skadar Lake during the Roman Empire. Habitat protection, compliance with laws and international agreements, protection against illegal exploitation of fish are key activities in the protection of the fish stock of Montenegro.



FRESHWATER FISH

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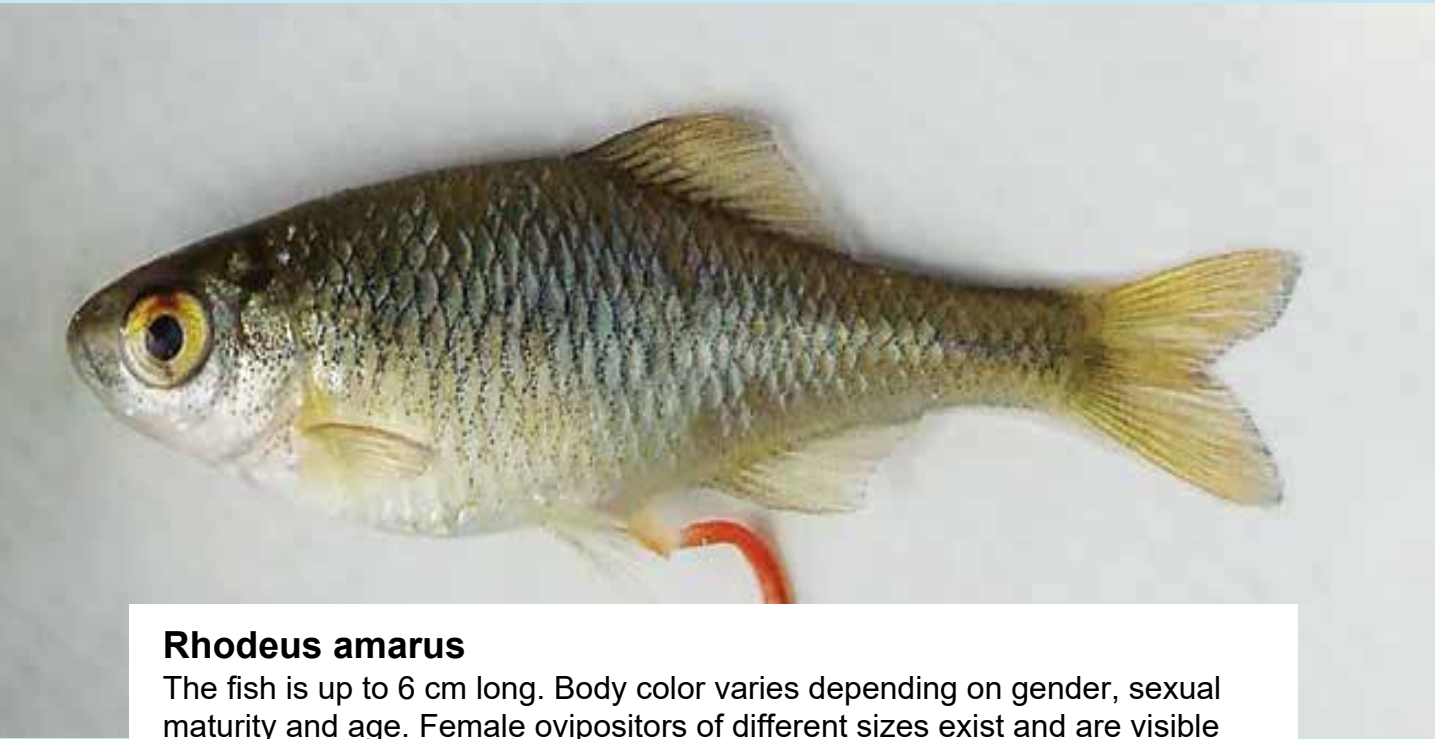


Gasterosteus gymnurus

They can grow up to 10 cm. The fish is known as a caring parent because it builds a bird-like nest and keeps the eggs until they hatch. Males build a nest of plant material and secure it with secretions from their mouth. In one nest, several females lay their eggs. Males take care of the offspring, protecting the eggs and offsprings. During that time, they are very territorial and aggressive. Due to this feature, this species is very interesting in aquaristics. It is an indicator of unpolluted water.

Cottus gobio

It inhabits Tara river along the entire length of Tara's flow and tributary. It lives in the waters of the Black Sea basin. After the construction of the reservoir, it disappeared from the Piva River, but it is present in its tributaries. It is an indicator of unpolluted waters.



Rhodeus amarus

The fish is up to 6 cm long. Body color varies depending on gender, sexual maturity and age. Female ovipositors of different sizes exist and are visible during sprawling. In Montenegro, the European bitterling is widespread in the Adriatic basin. Males defend a small area around several shells. They can spawn up to five times in one season. Female bitterling uses its ovipositor to place their eggs onto the gills of a mussel, which makes it unique in Montenegro.

Carassius auratus

It is very numerous in Skadar Lake due to favorable ecological conditions, and occupies the same ecological niche as carp, so it represents its direct competitor. It tolerates polluted water and water with low dissolved oxygen concentrations. At low temperatures, it can last for several hours out of the water. Eggs can be fertilized by males of other carp fish (gynogenesis), so it is extremely invasive. It is believed that the main factor in controlling the overpopulation of this species in Skadar Lake is the presence of cormorants and pelicans that feed on it.



AMPHIBIANS

Amphibians are present in Montenegro in two groups Tailed amphibians (Caudata) and frogs (Anura).

Tailed amphibians are characterized by an elongated body and a tail approximately as long as the body. When moving, the body bends laterally. Unlike them, frogs (Anura) move by jumping, or by swimming and diving when in the water. They are characterized by the complete absence of tails.

So far, 15 species of amphibians have been registered in Montenegro: six species are Tailed amphibians and nine species are frogs, to which eight subspecies belong. The olm is mentioned as a potential representative of the cave fauna. However, its presence has not been confirmed although there are clear indications for that. The lake below Jezerski vrh of Lovćen, and other marsh habitats of this mountain represent a rich habitat of the Macedonian crested newt (*Triturus macedonicus*) and yellow-bellied toad found in Cetinje (*Bombina variegata scabra*), but also an important reproductive center of many other amphibians.

Biogradsko Lake has secondarily become a powerful reproductive center for both the Stream frog - a Balkan endemic, and other frogs and *Triturus* newts. On Durmitor, the areas important for amphibians mostly coincide with the existing strict reserves, because some species in some of these have optimal conditions for survival, such as Alpine newt (*Ichthyosaura alpestris*), Smooth newt (*Lissotriton vulgaris*), Common frog (*Rana temporaria*) in Barro Lake and its surroundings.



Lake Zminica is of key importance for the survival of the endemic Montenegrin alpine newt (*Ichthyosaura alpestris serdarus*). Uncontrolled fish stocking of this lake has decimated the populations of this subspecies, so it is questionable whether there are any in the lake at all.



Albanian pool frog

The Albanian pool frog is an endemic species of the Balkan Peninsula. It was officially described in 1987 on the basis of specimens of individuals from Virpazar. It inhabits the lowlands of southeastern Montenegro and the northern and central parts of the Albanian coast. In Montenegro, it inhabits favorable coastal habitats from the Albanian border to Buljarica, as well as the lowland southeastern part of the country - the area of the Bojana delta and Skadar Lake. Recent data indicate that the Albanian frog also spreads in marsh parts of Bjelopavlici Plain. Her body is up to 7.5 cm in size, light brown on the upper side or in various shades of green, often with large dark spots and a thin light line in the middle of the back.

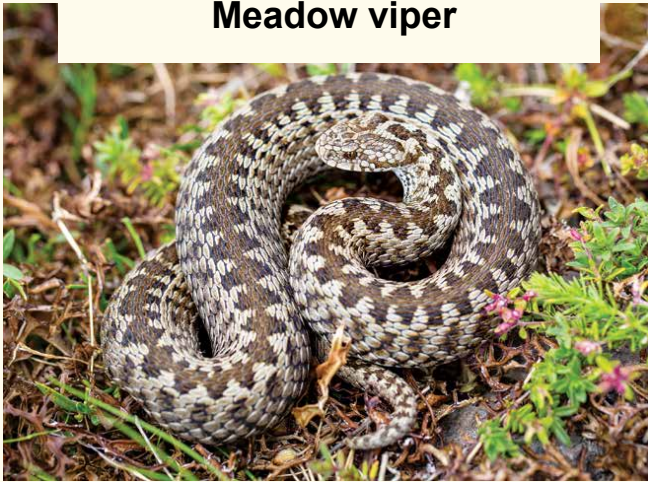
Amphibians are the most endangered vertebrate class globally. Degradation, fragmentation and destruction of natural habitats, water pollution, restocking of mountain lakes, are just some of the threats to the survival of this group of vertebrates. Climate change and an extremely high sensitivity to global warming have caused that amphibians around the world are hit by extremely deadly fungal and viral diseases in recent decades, which can decimate or completely destroy the populations of these animals in a short time.

REPTILES

Reptiles are one of the most important factors in the food chain in an ecosystem. They are irreplaceable both as predators and as prey. They regulate the abundance of insects and rodents and thus reduce the spread of infectious diseases or prevent the spread of parasites in our gardens and orchards. At the same time, they are food for many species of reptiles, birds and mammals. Three areas that stand out for the richness of reptile species and their numbers in Montenegro are: Bjelopavlička plain, the area of Skadar Lake and the delta of the river Bojana. These areas are dominated by Mediterranean and Sub-mediterranean species, many of which are locally and regionally endangered. The key problem of this group of animals is the disappearance of habitats, which is caused mostly by reckless urbanization, fires and habitat fragmentation. Increasing number of protected areas at the national level, as well as the establishment of the NATURA 2000 ecological network are promising in terms of ending the habitat loss and recovery of the reptile fauna population in Montenegro.



Long-nosed viper



Meadow viper



Elaphe quatuorlineat,
Cetvoroprugasti smuk



Prokletije rock lizard
inhabits only Montenegro and Albania.



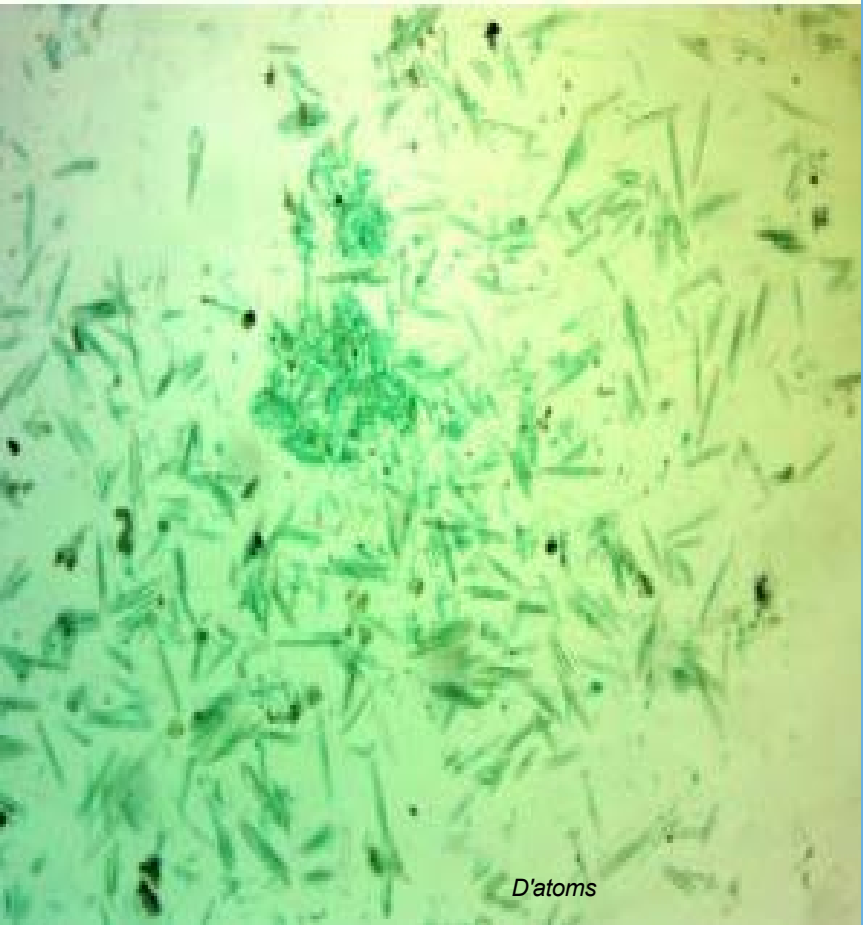
European legless lizard



A Balkan Terrapin

has a flattened olive-gray shell of 25 centimeters long. It inhabits the freshwaters of the coastal hinterland in Montenegro. It prefers rivers and streams the most, and slightly less ponds, swamps and lakes. It is tolerant to sea water. If the ponds and swamps dry up, it enters a period of dormancy, i.e. estivation. With the arrival of cold days, i.e. from November, it enters hibernation which lasts until February. It lays 4-6 eggs that are about 3 centimeters long. The fries come out after about 70 days. For the first couple of years, they feed mostly on insects, and adults on plants.

Do You Know



Diatoms



Blue-green Algae

Freshwater Algae

Algae are a diverse group of photosynthetic, mostly aquatic organisms. They do not have the right tissues and organs, which makes them different from plants. They are characterized by a great heterogeneity of organization, starting from single-celled and colonial forms (microalgae), through filamentous and crusty forms, to very complex and large forms (macroalgae) that look like plants..

When it comes to freshwater algae, over 1250 taxa of microalgae (mainly diatoms and green algae) and 38 taxa of macroalgae (charophytes) have been registered in Montenegro. The largest number of algal taxa from both groups was recorded in Skadar Lake: 1093 microalgal taxa (of which more than 700 were not recorded elsewhere in Montenegro) and 30 charophytes taxa (2 in the Montenegrin part of the lake), which is associated with a large area, spatial heterogeneity and hydrological characteristics of Skadar Lake. Two species of diatoms new to science have also been described in this lake: *Cyclotella skadariensis* and *Cymbella scutariana*, which are considered endemic to Lake Skadar.

The number of microalgal taxa in other lakes ranges from 87 (Isitorsko Lake) to 378 (Black Lake).

The flora of algae found in rivers of Montenegro has been studied far less, and taxonomic lists exist only for the systems of the rivers Tara, Morača, Zhotina, Ziva and Zomarnica.

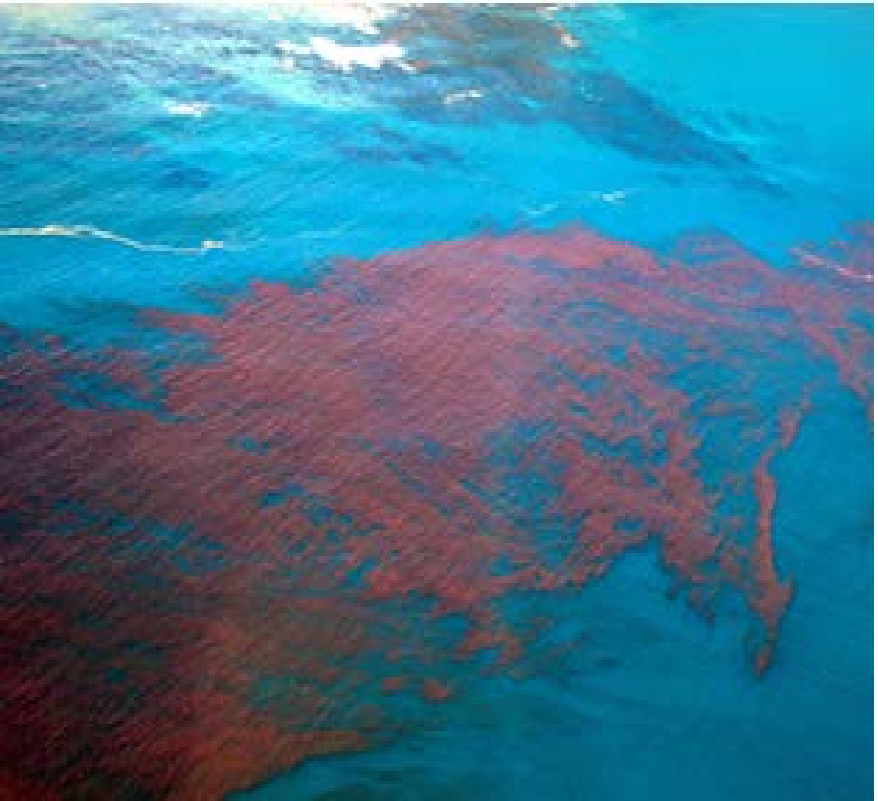
CLIMATE AND ALGAE

Although tropical forests are considered the lungs of the planet, the largest amount of oxygen on Earth is actually produced by planktonic algae. According to various estimates, the total percentage of oxygen produced by these microscopic organisms ranges from 50% to 85%. One of the smallest forms of phytoplankton, *Prochlorococcus* (so small that millions fit in a drop of water), itself produces about 20% of the world's oxygen.

On the other hand, planktonic algae simultaneously absorb a huge amount of carbon dioxide (some species have up to 50 times higher absorption rate than terrestrial plants), so they significantly reduce the amount of that greenhouse gas in the atmosphere, which significantly affects the global climate. Approximately 50 million years ago, larger and more complex algae are thought to have become more numerous and swallowed carbon dioxide so quickly that they disrupted the planet's original carbon cycle, which could have caused global cooling and glaciation responsible for the earliest known mass extinction.

ALGAL BLOOM

Some planktonic algae, under favorable light and temperature conditions and with an increased amount of nutrients in the water, can overgrow and cause the so-called algal bloom. In Montenegro, in the past, such a phenomenon was occasionally registered for the alga *Peridinium* (from the group of dinoflagellates) on the Rijeka Crnojevića during the summer months, when the water acquired a characteristic red color (due to carotenoid pigments present in the cells of these algae). Algal bloom is an undesirable phenomenon, because after their death, a large amount of biomass is decomposed, which rapidly consumes oxygen in the water, thus having a negative impact on the aquatic organisms, especially fish. This phenomenon is more common in the seas and is especially dangerous if the blooming is caused by toxin-producing species of dinoflagellates, such as in the Adriatic, for example, species of the genus *Dinophysis*.



ALGAL BLOOM IN THE LAKE ŠAS

Freshwater invasive toxin-producing species from the group of blue-green algae - *Cylindrospermopsis raciborskii*, was registered for the first time in Montenegro in the Lake Šas in 2016 and under favorable conditions could cause water blooms and poisoning of aquatic organisms, primarily fish.

Therefore, it poses a special threat if it gets into drinking water. This species is affected by a wide range of environmental conditions, which makes it difficult to predict its occurrence or overpopulation.

Water temperature and ammonium ion concentration are considered to be the most important factors required for the growth and development of this species.



Do You Know

Године 1893. ступио је у живот закон о лову и о заштити птица, што га је саставио кнежевички-наследник, те се тим законом од фебруара до септембра најстрожије брани сваки лов и свако хватање, за тим вађење гнијезда и продавање птичијих јаја. Народ се томе закону свуда покорана и ни по што га неће прекршити. Тако н. пр. пастире, који су знали за птичија гнијезда, ни за награду, према овдашњим приликама велику, нијеси могао повратити, да ти покажу такво гнијездо. Осим тога забрањено је народу за сву годину пуцање близу арбанаске међе, јер би по оним непрестаним немирима на међи, по даномичним готово свађама, и по крвавој освети, која на жалост још увијек своје жртве тражи, сваки метак из пушке значно позив на оружје.

У осталом Црногорци већином добро гађају у лијету, те осим Вридлове пушке ријетко кад уза се имају другу, па пошто се лов сматра „презреном“ забавом, то људи птици се инта разумију у орнитологију, птици се за њу занимају.

History of nature protection

The first activities on nature protection in Montenegro date back to the end of the 19th century, when a part of the forests in the area of Biogradska gora was donated to Prince Nikola Petrović in 1878 and thus the "Knjažev zabran" was created, later known as "Branik Kralja Nikole". Six years later, in 1884, the Order on the Protection of Useful Game and the Order on Game and Hunting were issued. These acts regulate the hunting season and its closure for certain types of game, with the provision that "harmful" game could be hunted throughout the year. It was also forbidden to destroy nests, eggs and young of all kinds of useful game. Ludwig von Führer, well-known bird researcher of Montenegro, who wrote a significant paper "One year of ornithological research in Montenegro" (1894), complained that Montenegrin shepherds and peasants did not want to show him the nests of rare and other birds at the time of closed season, even for the high monetary reward offered.

After World War II in 1945, the Law on the Protection of Cultural Monuments and Natural Rarities was passed, while the first Law on Nature Protection was passed in 1961, when the first institution in the field of nature protection in Montenegro, the Republic Institute for Nature Protection, was established. The first list of protected animal species was compiled in 1968 which is expanded 1985. This list was expanded in 2006, when a Decision on the protection of certain plant and animal species was issued. From then until today, the legal framework in the field of nature protection has been increasingly improved.

The first protected areas after World War II were declared in 1952 and these are the three national parks: Biogradska Gora, Lovcen and Durmitor. The year 1965 is especially noteworthy, when 7 new protected areas were declared, and then 1968, when 48 new protected areas were declared, mostly in the category of natural monuments. A large number of beaches on the Montenegrin coast were included in these areas. Certain important plant and animal species were protected by same 1968 Act as nature structures. The trend of declaring protected areas has continued ever since and has resulted in the establishment of 75 protected areas - 73 terrestrial and two marine.

Six years after the proclamation of the first national park in the world (Yellowstone, 1872 in the USA), the territory of Biogradska gora (Biogradska river and Jezerštica river catchment area) was protected, when Montenegrin tribes (Moračko and Rovačko) had their share of forests on area of Biogradska gora donated to the lord of Montenegro - Prince Nikola. Today, this part of the forest is located within the **Biogradska gora National Park** and is one of the few rainforests in Europe.



Information on protected areas is available at the link:
<http://prirodainfo.me/>

Страна 278 — Број 30. СЛУЖБЕНИ ЛИСТ СРП 28. децембар 1968.

195. На основу члана 26 Закона о измјенама и допунама Закона о републичким органима управе („Службени лист СРП”, бр. 6/68), Извршно веће Скупштине Социјалистичке Републике Црне Горе доноси

ОДЛУКУ

О РАСПОРЕДУ РАДНОГ ВРЕМЕНА У РЕПУБЛИЧКИМ ОРГАНИМА УПРАВЕ И ОРГАНИМА КОЈИ ВРШЕ ПОСЛОВЕ ОД ИНТЕРЕСА ЗА РЕПУБЛИКУ

1. Овом одлуком уводи се у републичким органима управе и органима који врше послове од интереса за Републику (у даљем тексту: органи) петдогодишњи радни вријеме у оквиру 42 часове радне недеље.

Радни дани су: понедељак, уторак, сриједа, четвртак и петак.

2. Радно вријеме почиње и завршава се: — у периоду од 15. септембра до 15. маја од 7 до 15 часова, с тим што се четвртак ради и до 17 часова; — у периоду од 15. маја до 15. септембра од 6 до 14 часова, с тим што се четвртак ради и до 16 часова.

3. У току дневног рада радници имају право на одмор од 30 минута. Норме коришћења овог одмора утврђује се општим актом органа, с тим што се одмор не може користити на почетку радног дана на завршетку радног времена.

4. Распоред радног времена у организационим јединицама и службама органа у којима се рад мора обављати непрекидно или у сменама, утврђује орган у складу са овом одлуком.

5. Одређење овог одлуке односи се и на стручне службе Скупштине и Извршног већа.

6. Ова одлука ступа на снагу осам дана од дана објављивања у „Службеном листу Социјалистичке Републике Црне Горе“.

Број 1878
20. децембар 1968. године
Титоград

ИЗВРШНО ВЕЋЕ СКУПШТИНЕ
СОЦИЈАЛИСТИЧКЕ РЕПУБЛИКЕ ЦРНЕ ГОРЕ

Председник,
Владо Жарковић, с. р.

200. На основу чл. 1, 2, 7, 8, 9, 11, 27, 33, 35 и 37 Закона о заштити природе („Службени лист СРП”, бр. 17/61), а на предлог стручне комисије Републичког завода за заштиту природе доноси

РЕШЕЊЕ

О ЗАШТИТИ ОБЈЕКТА ПРИРОДЕ

1. ЖИВОТИНСКЕ ВРСТЕ

а) рибе:
мекша мекосуса (*Salmo trutta monticola*);

б) водоземци:
Алпски тритон (*Triturus alpestris montenegrinus*);

ц) птице:
1. Соколови (*Falconidae*)
Сиви соко (*Falco tinnunculus*)
Паленики соко (*Falco biarmicus*)

II. БИЉНЕ ВРСТЕ

Вор кривуша (*Pinus mugo*) у националном парку Дурмитор, на Бјеласци и Ђубицима.
Тиса (*Taxus baccata*) на територији СРП.
Волжанина (*Picea abies*) на територији СРП.
Муншка (*Pinus heldreichii*) на Орјену, Лошању и Руднику.
Медвеђа лијеска (*Corylus colurna*) на Орјену.
Српска рамондија (*Ramondia serbica*) околина Вара.
(*Dioscorea balcanica*) околина Нишана.
Храст лужњак (*Quercus robur*) у подручју Штоја и Скадарског језера.

Набројене биљне врсте не смије се убирати из својих станишта, оштећивати или уништавати.

28. децембар 1968. СЛУЖБЕНИ ЛИСТ СРП Број 30 — Страна 278.

III. РЕЗЕРВАТИ ПРИРОДНОГ ПРЕДЛА

а) плаже:

Велика плажа код Улцина, Улцинска плажа, Вадинас, Стари Улцињ (оток и плажа) Велики јасени, Тополина, Сутормора, Чан, Пабина, Бувадица, Дучица, Петровац, Дубини јасени, плаже Светог Стефана, и Милошара, Вечини, Славенска, Могри и Јаја код Будве и Приско код Тивта.

IV. СПОМЕННИЦИ ПРИРОДЕ

а) Палеонтолошка:

Руде (*Crocodylus*)
Бијела руда (*Crocodylus ciconia*)
Црна руда (*Crocodylus nigra*)
Рудина (*Pterodactylus*)
Црни јелен (*Pterodactylus falcinellus*)
Кашкар (*Pterodactylus*)

Чапља кашкар (*Pterodactylus leucocrota*)
Чапља (*Ardeidae*)
Црна чапља (*Ardea purpurea*)
Жута чапља (*Ardeola galloides*)
Чапљина бијела (*Egretta garzetta*)
Чапља бијела (*Egretta alba*)

8. Сви несити (*Pelecanus*) — (Род *Pelecanus*)
9. Попри (*Orididae*)
Попри мала (*Orid tarda*)
Попри мала (*Orid tarda*)
10. Жаркови (*Gruidae*)
Сиви жарка (*Gru grus*)

а) сисари:
Срн (*Capreolus capreolus*) на Орјену.
Дивокота (*Ursus arctos*) на Орјену.

Забрањено је вршити прогањања, узмишљавања, заплете и убијене свих горе наведених животињских врста као и њихових развојних облика, лежњих и гмјезда.

Вор кривуша (*Pinus mugo*) у националном парку Дурмитор, на Бјеласци и Ђубицима.
Тиса (*Taxus baccata*) на територији СРП.
Волжанина (*Picea abies*) на територији СРП.
Муншка (*Pinus heldreichii*) на Орјену, Лошању и Руднику.
Медвеђа лијеска (*Corylus colurna*) на Орјену.
Српска рамондија (*Ramondia serbica*) околина Вара.
(*Dioscorea balcanica*) околина Нишана.
Храст лужњак (*Quercus robur*) у подручју Штоја и Скадарског језера.

Број 01-080
12. децембар 1968. године
Титоград

Директор,
Михаило Вуковић, дип. инж. шум. с. р.

РЕГИСТРАЦИЈЕ

ОКРУЖНИ ПРИРОДНИ СУД ТИТОГРАД

Решеним Округаше приредити суд у Титограду бр. 18/68 од 3. децембра 1968. године, уписао је у регистар установа код овог суда на регистарском листу број 18, страна 187, редни број уписа 1, свеска 1, установа са следећим подацима:

назив установе је: Дес установа природне заштите

Општина установа је у Титограду.

Установу је основао Народни једини Народне скупштине СРП решеним бр. 66-3 од 14. марта 1968. године.

Конституционалне Уставом је извршено 4. XII 1968. године.

Директор установе је: Драго Стојић.

Установу савладала комисија директор установе Драго Стојић у границама општинске територије Скупштине Уставом и законима прописима.

Из Округаше природног суда у Титограду

СКУПШТИНА ОПШТИНЕ ВАР

Решеним Скупштинског одбора установа бр. 18/68 од 14. децембра 1968. године, брисана је из регистра општинских установа радња код овог општинског установа радња — бр. 18/68 од 14. децембра 1968. године.

Из Скупштине општине ВАР

СКУПШТИНА ОПШТИНЕ МОКРОВАЦ

Решеним Скупштинског одбора установа бр. 18/68 од 14. децембра 1968. године, брисана је из регистра општинских установа радња код овог општинског установа радња — бр. 18/68 од 14. децембра 1968. године.

Из Скупштине општине МОКРОВАЦ

СКУПШТИНА ОПШТИНЕ ПАНЧЕВАЦ

Решеним Скупштинског одбора установа бр. 18/68 од 14. децембра 1968. године, уписао је у регистар општинских установа радња код овог општинског установа радња — бр. 18/68 од 14. децембра 1968. године.

Из Скупштине општине ПАНЧЕВАЦ

MONTENEGRO / CRNA GORA

Let's protect the beauty of natural life together



Resources

<https://www.discover-the-world.com/study-trips/blog/an-insiders-guide-to-montenegros-national-parks/> <https://www.moonhoneytravel.com/europe/montenegro/hiking/>
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and provided data**

It has been the bibliography for the major part of the document.