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Bazinul Fizeșului
Delta Transilvaniei

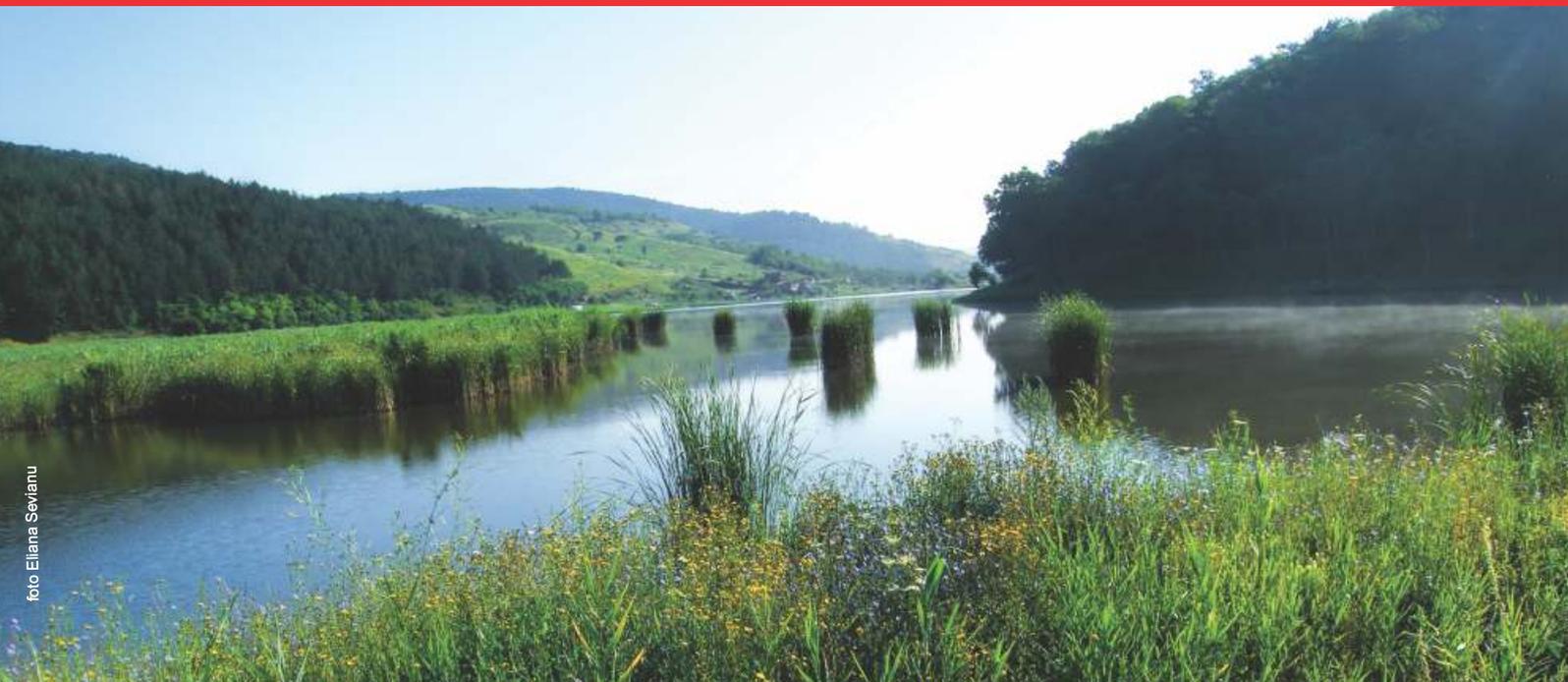


foto Liliana Sevianu

Nature guide for Fizeș Basin - the Transylvanian Delta

Habitats, species of animals and plants

2016

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Fizeș Basin

The Delta of Transylvania

Fizeș Basin, dubbed the Delta of Transylvania, captures visitors' curiosity through the complexity of the landscape and by being one of the most diverse areas in the country. It presents wetlands, lakes, ponds, large reed areas, woodlands, salty steppe grasslands and steppe meadows. The landscape is hilly; the extended low ridges alternate with broad valleys which account for the largest number of ponds in the Transylvanian Plain - 16 to be precise. Among these there is the deepest natural lake in Transylvania, which is also the only one with floating reed islets: Pike Lake.

In the Fizeș Basin there is a large, compact reed bed, stretching over 250 ha, the second one in size in Romania, after the Danube Delta: Sic Reedbeds, and also the largest mixed colony of Gray herons and Night herons in Transylvania (Ciușului Forest - over 250 nests), on the slope overlooking Țaga Mare Lake.

The value of biodiversity in Fizeș Basin is acknowledged through the presence of two Natura 2000 European Network sites and four national nature reserves.

Natura 2000 ROSPA0104 Bazinul Fizeșului (Fizeș Basin) site was designated for the conservation of 36 species of birds.

The Natura 2000 ROSCI0099 Lacul Știucilor-Sic-Puini-Bonțida site was designated for the conservation of nine natural habitats, three plant species and two species of amphibians.

The nature reserves Sic Reedbeds, Legii Valley, Pike Lake and Ciușului Forest were designated for the conservation of wetland birds.



foto Eliana Sevilanu



foto Eliana Sevilanu

Circus aeruginosus Marsh Harrier



foto Dragoș Vana



foto Dragoș Vana

The Marsh Harrier is a medium sized diurnal raptor, with a massive body and long wings and tail. The wings are wider than those of other hawk species. The wingspan can reach 140 cm. Males are brown, with a rusty colored abdomen, silvery-gray wings and tail, and a hint of white at the base of the tail. The female and juveniles are dark brown, with yellowish-white or yellow - rusty colored areas.

The Marsh Harrier can often be spotted flying low over the reedbeds, with steady wing beats alternating with moments of hovering flight, when its wings, shaped like a "V", go obliquely upwards. The nest, made of twigs, reed and grasses, are built in the reed areas, but for feeding purposes, the birds visit meadows and farmland. The marsh harrier is a low flight hunter, flying 2-5 m above the ground or reedbeds and catching its prey in the plunge. It feeds on birds, amphibians, reptiles and rodents. Mating is a very spectacular ritual; the male flies in circles at great heights and then plunges to the ground, rolling in the air, sometimes along with the female. Nesting begins in April, and the chicks start flying in June. In September, it migrates solitary or in small groups to the wintering grounds in Africa.

It is a species that nests in several locations in the Fizeș Basin: Pike Lake, Borzaș, Sântejude, Țaga Mare, Sucutard I and II, Roșieni, St. Florian, Cățina and Legii lakes and the Sic Reedbeds. 12 to 14 pairs of Marsh Harriers are nesting in the Natura 2000 ROSPA0104 site.

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Shrikes are medium sized carnivorous birds, slightly larger than a sparrow, with raptor beaks. The male has a brown back, a grey crown and nape, a black and white tail and the ventral side is whitish. The female and the juveniles are brown, with a lighter brown hue on the ventral side and semilunar stripes across the back and chest. Both sexes have a black stripe (mask) over the eyes.

The Red-backed Shrike is often spotted in open areas of grassland with isolated hawthorn, wild rose and blackthorn bushes where it builds its nest, lined with grass and moss. The female lays a single clutch per year, and the chicks are already flying in June-July. Bush branches or electricity wires are the preferred perching spots from which they can plunge and catch their prey. It feeds mainly on large insects, but it also catches rodents or lizards. Part of the prey is impaled on thorns and preserved to be eaten later.

The Red-backed Shrike is a migratory species, being a summer visitor in our country.

The species can be seen on the hill that guards Pike Lake in the west, where its most suited habitat lies, in the Sântejude valley, in the hedges within the vicinity of the lakes Țaga Mare and Geaca I and Legii valley, but also in other areas presenting the characteristic habitat. The breeding population in the Natura 2000 ROSPA0104 site is 90 to 120 pairs.

Lanius collurio

Red-backed Shrike



foto Eliana Sevianu



foto Peter Lengyel

I II III IV V VI VII VIII IX X XI XII



Chlidonias hybrida
Whiskered Tern



foto Dragoș Vana



foto Dragoș Vana

The Whiskered tern is about the size of a swift, with a slim allure and long, narrow wings. The plumage is ash-gray, the cheeks are white and its crown is black. The beak is red colored, in contrast to other species of terns, which usually have a black beak. The adults look similar, but the female is slightly smaller than the male.

The Whiskered tern can be spotted in wetlands rich in vegetation, where it feeds on fish, insects and their larvae, snails and larval amphibians. It has a restless and acrobatic flight above water and swamps, usually at low height, with sudden slides and immobile hovering while waving its wings.

The species is monogamous and territorial and can form large colonies. The nest, made of plant debris, is placed on supernatant vegetation (floating vegetation). The female lays three bluish green eggs during the second half of May or early June. Only the female broods for approximately 19 to 20 days, and the offspring become independent after about 3-4 weeks.

The species can be spotted regularly only during spring and autumn passage, in all wetlands within the Natura 2000 ROSPA0104 site. During these periods the birds can be spotted at Pike Lake, Sîntejude Valley, Fizeș Valley, on lakes Țaga Mare, Geaca II, Geaca I, Tău Popii and Cătina. The passage population size is usually between 30-40 individuals per season.



The Night Heron is a medium-sized heron with a stocky body, medium length legs, a short neck and a robust beak. The plumage is black on the back, crown and forehead; the wings are grey and the ventral side is white. The black back and the grey wings are easily spotted during flight. It has some ornamental long, white feathers at the nape, which grow only in the second year of life. The chick differs greatly from the adult by presenting triangular yellow streaks on its otherwise brown body.

It feeds on small fish, amphibians, reptiles, bird chicks or even small mammals and aquatic and terrestrial insects, which they catch in wetlands - usually their favourite feeding grounds. It is a nocturnal species; it usually can be spotted early in the morning or at dusk.

The Night heron nests in colonies. The nests are located in woodlands located near wetlands. The nest is solid and made of branches, located on the highest branches of trees. It lays 4-5 eggs from May to June. The incubation period lasts 21-22 days; brooding eggs and tacking care of the chicks is being provided by both sexes. After about 20-25 days, the chicks leave the nest and sit on neighboring branches, and they become independent at the age of about 6 weeks. It is a migratory species and a summer visitor in Romania.

In the Natura 2000 ROSPA0104 site, about 50 pairs are nesting in the mixed colony of Ciuășului Forest, together with the Grey Heron (*Ardea cinerea*); this is the largest mixed colony of herons in Transylvania.

Nycticorax nycticorax

Night Heron



foto Dragoș Vana



foto Dragoș Vana

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Merops apiaster

Bee - eater



foto Dragoș Vana



foto Dragoș Vana

The Bee-eater is the size of a thrush, with a long tail and a long, thin, slightly downward curved beak. It is the most colorful species of bird in our country. The head and neck are rusty brown, the back and chin are yellow, and it has a black stripe over the eyes, a blue chest, a green tail and yellow, brown and green wings. The male and female are similar in size and color, but the female is slightly paler.

Bee-eaters fly by flapping their wings a few times, quickly, and then they hover with their wings spread, most often in flocks of various sizes; it is rare to spot a single bird. They often stand on electricity wires or branches, spotting their prey and catching their prey in flight. This prey consists of insects, especially bees and hornets. They are returning to the perching spot with the prey in their beak, and before swallowing it, they smack it several times on the branch they stand on in order to remove the venomous stinger.

It nests in small colonies or even in isolated pairs in galleries that it digs in the vertical walls of ravines and steep banks. The species can be spotted in open areas, meadows and thickets, where it has the proper conditions for nesting. It is a summer visitor in our country.

Bee-eaters nests near and around the Natura 2000 ROSPA0104 site. Colonies can be spotted near Sic Reedbeds, Hușuierului valley and near Puini village.

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The Eurasian bittern is a bird with a massive, stocky body, slightly larger than a chicken. It has wide wings and a long slim neck which it usually keeps shoved between the shoulders. Both sexes have striped, ochre feathers, spotted with brown and black, and the beak and feet are blueish-green.

Each male has a harem consisting of 2 to 7 females. The nest is built only by the females, in large reed beds, where they lay 5-6 eggs with an incubation period of about 25 days. Female incubates the clutch of eggs and feeds the young chicks, which leave the nest when about two weeks old. The chicks hide in the surrounding vegetation, but return to the nest for the night. They become independent after about 60 days.

The Eurasian bittern spends most of the time in the reeds, and if in danger, it remains motionless, with its neck and its beak stretched upward, so that it becomes very difficult to see it through the strands of reed. It can be spotted in flight very early in the morning. It feeds on various species of fish.

A characteristic of this species is the very deep, boom-like mating call of the male, which can be heard during spring, especially at sunset and sunrise. The sound can be heard from 4 km away on a calm night.

This species nests at Pike Lake and the ponds: Borzaș, Sântejude, Țaga Mare, Geaca II, Roșieni, St. Florian, Cățina, Legii and the Sic Reedbeds.

In the Natura 2000 ROSPA0104 site there are about 14 territories belonging to 14 males with their harems of females.

Botaurus stellaris Eurasian Bittern



foto Alexandru Stermin



foto Alexandru Stermin

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Anthus campestris Tawny Pipit



foto T. Oaches



foto Cosmin Ioan Moga

The Tawny Pipit is a bird with a slender constitution, long tail and slim beak, slightly larger than a sparrow, but smaller than a wagtail, otherwise resembling the latter regarding the allure and its swinging tail. The coloring is pale brown, similar in both sexes, slightly striped, with a white well-defined eyebrow. The tawny pipit is a largely terrestrial, lively bird, always on the move. The males begin to sing in April, rising in flight to about 30 m in height with slowly beating wings, describing circles and flying wavily. It is a territorial species that forms pairs during the breeding season, after which becomes solitary. It ceases singing in early July.

The nest is built by females in arid, rocky or sandy areas with shorter vegetation, directly on the ground, in clumps of grass or bushes. The female lays 4-5 eggs in the second half of May which she broods for about two weeks, but both parents participate in feeding the chicks. The chicks start flying after about two weeks and become independent after one month. The species feeds exclusively on insects, which they hunt near the nest, chasing them. It is a migratory bird and a summer visitor in Romania.

The Tawny pipit was identified in the Natura 2000 ROSPA0104 site near the Pike Lake in its specific habitat, at Sântejude Valley, in the vicinity of Ciușului Forest and Legii Valley. The number of nesting population within the site is of 40-50 pairs.

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The Transylvanian Blue is a unique subspecies of butterfly present only in Transylvania. The upper wings are royal blue. The male presents well-defined iridescent metallic striations, which are less defined or inexistent on females. On the hindwings, on both sides, there is a row of orange spots. The underside is greyish-blue with black spots.

The butterfly can be spotted in grassland steppes, on steep sunny slopes, but only where Nodding Sage (*Salvia nutans*) grows. This type of sage is a perennial herb, 40-90 cm high, usually with leaves only at the base of the stalk, a tilting inflorescence with violet colored flowers.

Adult butterflies are on wing for a short period of time, usually about three weeks at the end of April and the beginning of May. Eggs are deposited on the sage plant, where the very well camouflaged larva also develops. Hibernation takes place in the pupal stage. The next spring, adult butterflies hatch from pupae resuming the life cycle.

The Transylvanian Blue butterfly is present in only a few places in the Transylvanian Plain, and is in danger of extinction due to the destruction of their habitat, particularly due to overgrazing. The populations are more vulnerable as adults fly only for short distances, up to 500 m, so if the host sage plant disappears in a certain area, butterflies do not have the ability to fly in search of another favorable habitat.

Pseudophilotes bavius hungarica

Transylvanian Blue



Foto Csaba Vizsauer



Foto Andrei Crișan

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Triturus cristatus

Great Crested Newt



foto Eliana Sevianu



foto Eliana Sevianu

The Great Crested Newt is the largest species of newt in our country, 10-13 cm length. The body shape resembles a lizard, but it is an amphibian and not a reptile. Dorsally and on the flanks the skin is olive-gray with large dark spots. Ventrally, the orange or bright yellow colour, with large black blotches, creates a unique pattern in each individual. During the breeding season, the males develop a jagged dorsal crest, separated by the smoother-edged caudal crest through a deep dent. It also has a silvery stripe that runs along the tail. Females do not have a dorsal crest, but a groove along the spine and an orange band on the underside of the tail.

Being a terrestrial species, it commonly leads a secluded life hiding under logs or rocks, not more than 1 kilometer from aquatic environments, where it breeds. Some specimens remain in the water all throughout their active life. It lives in large, stagnant, usually permanent (but sometimes also temporary) waters with lush vegetation: lakes, ponds, pools or canals, preferably devoid of fish. Breeding is preceded by a courtship display performed by the male. The female lays 60-200 eggs in spring. The eggs are laid on submerged aquatic plants, each carefully wrapped in a leaf. The aquatic larvae develop limbs and external gills, and reach 6.5 cm in length. Metamorphosis occurs after about 4 months, in August. Adults leave the aquatic environment at the end of June and live on land. They hibernate between October and March, under logs and stones or roots of trees. The Great Crested Newt feeds on various invertebrates, worms, mollusks, insects and larvae of other amphibians.

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The European tree frog is a small frog, with body length of up to 5 cm. Males are slightly smaller, with slender bodies and long legs. The dorsal skin is smooth and green, but may become yellowish-grey or even brown, depending on the temperature, humidity, colour of the substrate or even the frog's mood. Females have white throats, while males have golden throats with vocal sacs. Their ventral area is whitish and the dorsal and ventral colours are separated by a black stripe, running from the eye - down to the groins. The fingertips are broadened and form disks with which it climbs, making it the only species of arboreal frog in our country.

The European tree frog lives in wetlands, reed beds or woodlands, where it can climb on vegetation. It is active at night when it descends on the ground and feeds on invertebrates, including insects they catch in flight, leaping high in the air after their prey. During breeding season, in spring, it can be spotted in clean stagnant water: lakes, ponds, marshes or large pools, where the males arrive first. During the night, one can hear a very loud chorus croak designed to attract females. Eggs are deposited in small heaps and the larvae hatch after about two weeks. The metamorphosis lasts for about 3 months. After the breeding season ends, adults retire ashore. During winter, they hibernate underground, beneath rocks and tree roots, or even in tree hollows.

The species can be spotted in Ciușului Forest, Sic Reedbeds, but also in other suitable areas of the Natura 2000 ROSCI0099 site.

Hyla arborea

European tree frog



foto Eliana Sevianu



foto Eliana Sevianu

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Glis glis

Fat Dormouse



foto Eliana Sevianu



foto Eliana Sevianu

The Fat Dormouse is the largest of the four dormouse species present in our country. It is a rodent that slightly resembles a squirrel with a very long and bushy tail. Its body length reaches 15-18 cm, without the tail, and weighs about 150 g. Their color is greyish brown, with the ventral side whitish-yellow.

The Fat Dormouse is an arboreal species that easily climb trees. It rarely descends on the ground, and even then, it stays inside the forested areas, avoiding coming out in open areas. Dormice are active at night, when they move through the canopy in search of food: fruits, seeds, acorns, beechnuts, sometimes flowers and occasionally invertebrates. They spend the day sleeping in nests made of leaves, inside tree hollows. Breeding takes place once a year, during the summer. Males and females do not form pairs. The female is looking after the offspring, but there have been cases where two females shared the same nest and took care of the pups together.

In autumn the Fat dormouse feeds intensively and almost doubles its weight. It hibernates from October to May in underground nests built between tree roots, and relies only on fat reserves in order to survive until spring.

The Fat Dormouse has been often spotted in Ciușului Forest, Sântejude forest and other woodlands within the Fizeș Basin, but it is otherwise difficult to spot due to its nocturnal and arboreal secluded lifestyle.



The Red Viper's Burgloss is a biennial herbaceous plant species, 20-60 cm tall, but can reach even 1 m in height. The rigid, unbranched stalk, or branched only at the base, is covered with short soft hairs among which there are longer white and stiff hairs. Underneath the hairs there is still visible a network of purple stains that gives the impression of snakeskin. The leaves are lanceolate, narrow and hairy, with a prominent white vein on the dorsal side. The flowers are initially dark red, and then they become bluish. They are arranged in short cymes, densely grouped in a cylindrical inflorescence. The flowers have a 12-17 mm cylindrical corolla, with five upwardly curved reddish stamens with blue pollen. According to some authors, the species name comes from the flower's resemblance to a snake with an open mouth. After insects have carried out pollination, the flowers lose their bright color and become pale or pale purple.

The species is characteristic for dry and semi-dry steppe grasslands and is an indicator of adequately preserved grassland, being very sensitive to overgrazing, especially where sheep are concerned. The presence of large populations, on extended areas, is a sure sign of properly preserved grasslands.

In the Natura 2000 ROSCI0099 site there are several populations summing up to approximately 100 individuals living on dry steppe grasslands around Jucu de Sus, Bonțida, Vișea, Coasta and Tăușeni. The blooming period is during spring, usually in May.

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Echium russicum

Red Viper's Burgloss

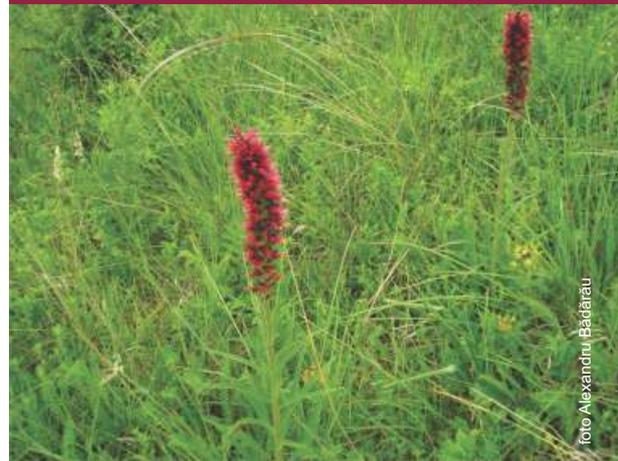


foto Alexandru Bădărețu



foto Alexandru Bădărețu

40A0* Subcontinental peri-Pannonic scrub



foto Anamaria Roman



foto Anamaria Roman

Subcontinental peri-Pannonic scrub is a type of complex habitat consisting of low deciduous shrubs, present in the semi-arid areas of sub-Mediterranean climate or microclimate of the Pannonian Basin and the surrounding areas. These shrubs often occur along the fringes of woodlands, on both calcareous and siliceous substrate, forming mosaic-like vegetation with steppe grassland and forest-steppe elements or plants of the rupicolous Pannonic grasslands.

This type of habitat includes several subtypes, very different from each other. In the Natura 2000 ROSCI0099 site - Lacul Știucilor-Sic-Puini-Bonțida we can see the priority for conservation habitat with dwarf Russian almond *Amygdalus nana* (*Prunus tenella*), along which we can spot other xerophile steppe plant species.

The dwarf Russian almond is a 1-1.5 m tall dwarf shrub with gray bark, erect branches, lanceolate leaves and small flowers clustered in a pink inflorescence. The seeds and leaves contain cyanide, a toxic substance with a bitter taste and characteristic almond odor.

Dwarf Russian almond shrubs can be spotted on ridges of very steep slopes, especially between Bonțida and Jucu villages and around Tăușeni village, occupying areas that vary between 0.5 and 4.5 ha.

The dwarf Russian almond blossoms in spring, in April or May.

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This type of habitat includes grasslands, depressions, shallow lakes, Ponto-Sarmatian and Pannonian saltmarshes, which are greatly influenced by the Pannonian climate with high temperatures and aridity during summer. The habitat includes many types of plant communities developed on saline soil, from dry salt steppes to communities of annual plants within periodically flooded salt lakes.

In the Fizeş Basin the saline soils are formed above salt deposits. The enrichment of salt in the soil is due to high evaporation of ground water during summer. In these conditions particular plant communities grow, dominated by glasswort - *Salicornia*, Siberian Statice - *Limonium gmelinii* or salt grass - *Puccinellia*, all assigned to the same type of habitat.

The common glasswort (*Salicornia europaea*) is a low height annual plant (up to 30 cm), with fleshy-branched stems. The branches are initially green - turning red after fructification. It blooms in August and the flowers look like short spikes. Siberian Statice - *Limonium gmelinii* is a branched perennial plant, 20-60 cm tall, with small blue-purple flowers, arranged in little spikes. It blooms in July-September.

This type of habitat occurs near Sic village, where the soil is salty on rather extended areas.

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1530*Pannonic salt steppes and salt marshes



foto Tudor Ursu



foto Tudor Ursu

91H0* Pannonian woods with *Quercus pubescens*



Drought-tolerant, heat loving oak forests (xero-thermophilic), dominated by downy oak (*Quercus pubescens*) occur on extremely dry, southern exposed hillsides, on shallow, calcareous soil. Due to these extreme conditions, the downy oak forests are often fragmented and low-growing, sometimes resembling shrubs. These forests are open and sunny, with an herbaceous layer rich in species, including the Gromwell (*Buglossoides purpureocaerulea*), a perennial plant that blooms in May-June, with purple flowers that turn into blue.

The downy or pubescent oak is a small tree, not exceeding 15 m in height, with an often-crooked stem and a broad, irregular crown. The bark is thick and deeply furrowed into rectangular plates. The hard, leathery leaves are smaller (10 cm) than those of other species of oaks, with the underside covered in short, fine hairs. The acorns are small and elongated, and the cups are small and hairy.

Pubescent oak leaves retain their green color until late fall or early winter.

In the Natura 2000 ROSCI0099 site there are only two pubescent oak woodlands, of 4 and 7 hectares, on the steep, southern exposed slopes near Săcălaia village. This type of habitat is of high conservation value.



Location of the nature protected areas within the Fizeș Basin



This material has been developed within the project
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