

Interesting mammals in the municipality of Kyustendil

The most suitable places for the observation of mammals, especially bats, are the ones near their refuges. If you know where bats live, why not wait in front of the refuge and see them flying out. You will have a good chance to see plenty of them and also count them. They usually fly out one after another. Thus, a large colony can be flying out for more than an hour. Watching them go back at dawn is even more interesting. Do not go into bat refuges. This is forbidden by law. If you do not know any refuge, a walk around the street lamps in a warm summer evening will also give you the opportunity to see bats hunting insects attracted by the light.

Great horseshoe bat *Rhinolophus ferrumequinum*

Similarly to all members of the family of the Horseshoe bat, the Great horseshoe covers itself with its wings when in perched position and, especially, when inactive. This way, it can easily be distinguished from other cave-like vesper bats. In the municipality of Kyustendil, it is found in underground refuges: caves, abandoned mining galleries and, rarely during the summer, in the ground areas of buildings or in ceilings.

Common bent-wing bat *Miniopterus schreibersii*

A species strictly specialized in inhabiting caves; with narrow and long wings. One can observe bats flying out of some of the abandoned mining galleries in Osogovo as well as of the small caves in the area.

Kuhl's pipistrelle *Pipistrellus kuhlii*

A small bat. For Bulgaria, it is a rare species; there are only a few localities in southern Bulgaria and most of them are on the territory of the municipality of Kyustendil, even in the town itself. It feeds on flying insects. It hunts both over forests and between the crowns of trees in parks, between buildings, around street lamps. During the day, it inhabits narrow cracks in trees and buildings. It can easily be seen in the parks and around the fortress in Kyustendil at dusk and heard by using an ultrasonic detector.

Broad-toothed field mouse *Sylvaemus mystacinus*

It is spread along the Valley of Struma River; in Ograzhden, it has been located at about 1,000 m above sea level. The Zemen Gorge and the region of Skakavitsa Waterfall are the northernmost locality of the

species in Bulgaria. It prefers rocky places (screes, dry stony beds of rivers) overgrown with dry-loving and bushy vegetation. The species leads a nightlife. It is active throughout the year. It does not dig tunnels but builds nests in rock fissures or between rock blocks. It feeds on the green parts of herbaceous plants, on seeds and insects. As stocks, cherry stones have been observed.

Lesser mole-rat *Nannospalax leucodon*

An extremely interesting underground rodent included in the international Red List. Because of its underground lifestyle, its eyes are rudimentary. It prefers meadows, pastures, and lit sparse forests. It is easy to observe the results of its activity: large underground tunnels, much larger than those of the mole. When settling in gardens, it is undesired because it feeds on the roots of different vegetable crops. That is where it can be easiest seen.

Eurasian otter *Lutra*

The otter is another world-threatened species that found refuge in the valley of Struma and its tributaries in the municipality of Kyustendil. It inhabits freshwater pools overgrown with dense vegetation or hard-to-reach rocky coasts. It is active at night and even during the day in places that are hard to reach by people. It feeds mainly on fish but on its menu there are also water voles, birds, crabs, frogs. In the region of the municipality of Kyustendil, it is relatively numerous at places due to the clean, rich in fish rivers, with preserved natural outlines of the coasts. To observe it, you need to be quiet and, gently at dusk, pay attention to small shrouded coves in the rocks of the Zemen Gorge or around pools along the other rivers. The estuaries of the rivers flowing into Struma are also very suitable as are the reed beds of wetlands with little anxiety. You should look at places where it can go out on the coast or at sheltered places in the reed or coastal osier-beds or other shrubs. Very often, you will see traces of its activity: footsteps in the sand or remnants of crabs, with diligently eaten inwards, on the stones and coastal rocks. The species is included in the Red Data Book of Bulgaria, the Berne Convention, the CITES on the Prohibition of Trade in Endangered Species, Directive 92/43/ EEC (Annexes II, IV), and the Biological Diversity Act.

Marbled polecat *Vormela peregusna*

Few are the people who have had the chance to observe live marble polecats in nature. Its stealthy life and decreasing numbers are the cause of it. Western Bulgaria, with its densely located, relatively low mountainous massifs, is one of the places where the species can still be found, and there are preserved suitable habitats for it. Some of the last reliable observations of the species were in the municipality of

Kyustendil and the area of Choklyovo swamp, the latter a protected Natura 2000 zone. Even though a couple of individuals were killed by cars within a week, they were evidence of the numerous population in the area. Its size, smaller than those of the black and steppe polecat, allows it to enter the holes of its victims (different species of colonial rodents: European ground squirrels and hamsters) without digging the holes. Dobruzha and Western Bulgaria are territories of great importance for the conservation of the European population of the marbled polecat. The species is included in the Red Data Book of Bulgaria and the Berne Convention and is strictly protected by the Biodiversity Act. The open spaces around the villages in the mountainous parts of the municipality of Kyustendil as well as the area of Skakavitsa Waterfall are extremely suitable for the observation of the species. At the beginning of summer, at dusk, look at places with low herbaceous vegetation and plenty of rodent holes. If you are lucky, you can even see females training their youngsters to hunt or moving to a new refuge. If you are not patient, photo-traps would make it easier for you to capture interesting moments of the life of these rare mammals and their relations.

Brown bear *Ursus arctos*

The bear is the largest representative of the order Predators in Europe and is among the largest mammals on the Old continent. For this reason, it occupies an important place in the folk culture but, unfortunately, due to the killing and expulsion by man in Bulgaria, nowadays is spread only in the big mountains. The Western border mountains are one of the most important places for the migration and preservation of the bear in our country. The presence of suitable habitats, where there are sparsely populated areas with old forests, are the places where you can try to watch a bear: Osogovo and the border areas are suitable although there are reports of migratory bears even in the region of the Zemen gorge. The bear is a stealthy animal and avoids people. However, you can easily find traces of its presence. The prints from its huge paws that cannot be mistaken in shape, the presence of dug up anthills and turned over large stones in meadows by bears looking for insects, and the peeled or scraped bark of trees at above 1.5 m are sure signs that the area is inhabited by bears. Bears are peaceful and avoid contact with humans but, if they or their youngsters are in danger, they may be dangerous. If you see a bear, do not come near and let it pass by.

Eurasian lynx

The municipality of Kyustendil is the first place where the lynx permanently returned to Bulgaria after disappearing for more than 70 years. You have to be very lucky to see a lynx. Due to its extremely stealthy lifestyle, this is very difficult. That is why scientists apply many interesting methods: they put

photo-traps in different places, usually where animal paths cross. Sometimes, they can even use artificially synthesized pheromones that are the basis of the smell communication between the two sexes. A very interesting method, suitable for everyone, is the placement on the trunks of the trees of a sticky fabric - Velcro - used for the sticky zippers of clothes. Lynxes, like all other cats, rub against a variety of objects to mark their territory and, this way, leave hairs. You can try the above method, too. If not of a lynx, you may find hairs of another occupant of the forest.



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