

## Monitoring of Bat Population in Bulgaria 2010 (Glozene, Morovitsa)

Bulgaria has a very high diversity of bats, 33 species of 35 that are present in mainland Europe. The species composition of bats and their distribution are relatively well researched. However the biology and ecology of these animals has been studied in a lesser degree.

Monitoring of cave-dwelling bats in Bulgaria is an old tradition which was recently empowered by a generation of young researchers. In 2006 it became a part of the National Biodiversity Monitoring System, which is operated by the Executive Environment Agency. The field surveys are led by one of the most recognized Bulgarian bat researcher, biologist Boyan Petrov from the National Museum of Natural History at the Bulgarian Academy of Science. Participants in the research carried in 2010 were students and professionals from the Bat Research and Conservation Centre (BRCC), Green Balkans NGO and Tabachka Bat Research Station.

Between 3 and 4 July 2010, biologist Ilya Acosta professional of Yoluka Foundation was invited to participate and collaborate in this monitoring. This stage was realized in Glozene region (Lyastovitsata and Morovitsa caves) and the Boatin Reserve in the Central Balkan National Park. The methodology for the cave-dwelling species involves visual census of bats, acoustic identification using bat detectors and catches with mist-nets for determination of species, sex, ratio, age and reproductive status of the individuals roosting in larger colonies.

The summer monitoring in 2010 was carried in 56 caves and mine galleries. 19 species of bats were recorded, amongst which *Rhinolophus ferrumequinum*, *Rhinolophus euryale*, *Myotis myotis*, *Myotis blythii*, *Myotis emarginatus*, *Myotis capaccinii* and *Miniopterus schreibersii* were the most numerous. 18 caves were proved to shelter more than 2000 individuals, 3 caves were inhabited by more than 10 000 bats each. These high numbers proved that Bulgaria is amongst the most important countries for the breeding and conservation of many rare and threatened bat species on European scale.

Until recently, the Bulgarian studies on bats have been mainly focused on species that inhabit underground habitats, rather than those that roost in hollow trees. To fulfill the knowledge on the forest-dwelling bats, in 2001 BRCC has installed 180 bat boxes in different points across the country. All boxes are checked and cleaned at least twice a year. Six species of bats

were found to settle regularly in the boxes. Data analysis of the roosting success in relation to the forest type and age is expected to reveal how effective this approach for the conservation of bats in Bulgarian forests is.



Underground bat roosts with more than 2000 individuals found during the summer monitoring of 2010 in Bulgaria.

For these two working days we registered a mixed colony of 380 Greater Mouse-Eared (*Myotis myotis*) and Lesser Mouse-Eared Bats (*Myotis blythii*) in Lyastovitsata cave. Further we found another colony composed by about 1000 Common Bentwing-Bat (*Miniopterus schreibersii*), few Greater Mouse-Eared Bat (*M. myotis*) and some Blasius's Horseshoe Bats (*Rhinolophus blasii*) in Morovitsa cave. No bats were found in 20 boxes at Boatin Reserve, however single male *Myotis blythii* was found in one of the 10 boxes at Trastenaya Hut in Western Stara Planina Mt.

Few days after this field trip, Ilya carried a presentation on “Bats diversity in Colombia” in the lecture’s hall of the National Museum of Natural History.

For More Information and references, please visit the following sites:

<http://www.nmnh.com/bat-research-and-conservation-centre-en.html>

<http://www.eurobats.org/>