

BAT FAUNA (MAMMALIA, CHIROPTERA) FROM LIMESTONE MINES OF MOLOVATA NOUĂ

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The limestone mines of Molovata Nouă are located on the left bank of Nistru river (47.32 N, 29.08 E) at a distance of about 200 m from the river and at an altitude of 70 m. There are 8 entrances about the same size of 4-6 m wide and 3-3.5 m high. The corridors extend on a distance of over 700 m and are parallel, descending downwards. The ceiling and the walls have multiple cracks of 4-10 cm wide and 5-15 cm depth left after machine excavation, where the bats find shelter. This site was studied for the first time, it was not mentioned before in the literature. In the period 2020-2021 the site was visited three times: in September 2020, at the end of hibernation period in March 2021 and in June 2021. The bats were studied directly by visual observations, all observed individuals were identified.

In all the periods 11 bat species from two families were registered: *Rhinolophus hipposideros* from fam. Rhinolophidae, *Myotis myotis*, *M. blythii*, *M. daubentonii*, *M. dasycneme*, *M. nattereri*, *M. bechsteinii*, *M. mystacinus*, *Eptesicus serotinus*, *Plecotus auritus* and *P. austriacus* from fam. Vespertilionidae. The species abundance was different depending on the season. In September, when the bats are actively feeding and gather in underground sites for hibernation, 397 individuals from 9 species were recorded, dominant being *M. daubentonii* (43.94%), followed by *E. serotinus* (25.25%) and *M. mystacinus* (23.99%). Other species were observed in low amount, between 0.25% and 3.03%, while the species *M. nattereri* and *M. bechsteinii* were not registered. At the end of hibernation period the bat diversity and number were the highest – 10 species with 478 individuals, which shows the suitability of the site for many species hibernation. The dominant species was *M. daubentonii*, representing more than half of bat community, followed by *R. hipposideros* (17.15%) and *M. myotis* (15.48%), while other species had a low percent and *M. blythii* was not observed. In June, when reproduction occurs, no maternity colony was found and the bats visited the site only for daytime rest. The bat fauna was represented by 59 individuals from 6 species (*M. myotis*, *M. daubentonii*, *M. dasycneme*, *E. serotinus*, *P. auritus* and *P. austriacus*), dominant being *M. daubentonii* with more than 76%, and the rest of the species had the abundance of 1.69% to 8.47%.

All the species, except *E. serotinus*, are listed in the Red book of the Republic of Moldova. At European level all species are listed in Appendix II of Bern Convention and in Annex II of Convention on the Protection of Migratory Species. We have to mention the presence in rather large number (91 individuals) of critically endangered species *M. myotis* that was not registered in the last 50 years. The species *M. nattereri* (CR) was recorded at hibernation in low number for the first time in the last 30 years and *M. bechsteinii* (CR) was previously registered only in Cricova and Goianul Nou mines from the central part of the republic.

The Molovata Noua limestone mines represent an important site for bat diversity conservation in Moldova and the monitoring of bat fauna will continue.

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