# Data regarding the bat communities (Mammalia: Chiroptera) from abandoned mine roosts with negative antropic impact

The first data regarding bats from Sibiu County were published by E.A. Bielz, in the paper named "Fauna der Wierbeltiere Siebenbürgens", published in 1856. So far there are no data regarding bat communities in Orlat and Sadu areas. On the UTM distribution maps of the rhinolophids and vespertilionids (Valenciuc, 1992-1993, 1994) there are no sites in the area of interest. Abandoned mines can, in fact, provide ideal alternate homes for bats. Two of these abandoned mines are located in Sadu, the locality is situated at 27 km South from Sibiu, and another mine is in Orlat and is situated at 17 km from Sibiu, at the feet of the Cindrel Mountains. All data was gathered between May 2004 and January 2006. There were 27 field trips; fieldwork consisted of accepted bat sampling protocols, including mist netting. Sex and parasite status of each animal was recorded. Age was determined for each individual as evidenced by epiphyseal-diaphyseal fusion of long bones in the wing (Anthony, 1988). A standard morphological measurement of individuals was made. After every individual was marked and all data recorded, they were released. In all field trips were caught a total of 172 individuals belonging to seven species: Rhinolophus ferrumequinum, Nyctalus noctula, Miniopterus schreibersii, Myotis myotis, Myotis blythii. New species for Sibiu County were seen and captured: Rhinolophus hipposideros and Plecotus austriacus (Lup L., 2004). In the Miniopterus schreibersii population structure in all three roosts the majority of individuals are juveniles, this shows that all three roosts were used as birth colonies. The worst enemies are parasites, about 50% of individuals are parasitized. In all 3 mines, the bat populations decreased drastically; zero individuals were recorded at Sadu I and Sadu II in july 2005 from a total of over 100 individuals belonging to 6 species. The main threats to these mine roosts are disturbance from mine explorers and local people who are makeing fires. In order to protect the bats we need to know where the main hibernation and summer roosts and what are the main threats.

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## Contributii la studiul chiropterelor din municipiul Sibiu si imprejurimile acestuia

#### \* Cristina Nandrea

\* Asociația pentru Protecția Liliecilor din România – Sibiu email: crivicnan@yahoo.com

Bibliografia studiată pentru elaborarea lucrării, desi vastă, a conținut foarte puține date referitoare la fauna de chiroptere fitofile și domicole din județul Sibiu, iar problema cercetării lor a devenit un obiectiv important. Prezenta lucrare a avut ca scop identificarea principalelor specii de chiroptere din municipiul Sibiu și împrejurimile acestuia și individualizarea habitatelor populate de speciile determinate. Cercetările au fost efectuate atât în timpul zile căt și noaptea. În urma investigațiilor au rezultat date originale, care au permis stabilirea unor caracteristici faunistice și biologice privind ocurența speciilor în stațiunile individualizate,

frecvența speciilor în funcție de adăpost și habitat, distribuția geografică a speciilor identificate și emergența speciilor. Datorită rezultatelor obținute, lucrarea se consideră a fi o contribuție la studiul chiropterelor din România.

### Contributions on chiropteran study from Sibiu City and it's surroundings

The studied bibliography for the paper elaboration, although large, has included very little data about chiropteran phytophilic and anthrophilic fauna from Sibiu County so their study problem has become an important objective. The present paper has as goal the identification of principle chiropteran species from Sibiu town and from the places beside this and the individualization of populated habitat for the established species. The studies were made during the day and by night. In the wake of investigation has resulted original data, which has permitted to establish some faunistic and biological characteristics regarding the species occurrence in the discovered habitat, the species frequency regarding the roosts and the habitat, geographical distribution and the species emergence of from the roosts. Regarding the obtained results, the paper is considered as contribution to the Romanian chiropteran studies.

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## Aspecte privind comunitățile de chiroptere din Dumbrava Sibiului

#### \* Emilia Scântei

\* Asociația pentru Protecția Liliecilor din România – Sibiu email: emiliascantei@yahoo.com

Lucrarea a fost realizată din dorința de a cerceta speciile de lilieci din Județul Sibiu, deoarece aici există un mozaic de habitate. A fost ales un habitat umed, deoarece abundenta era mai mare și s-a putut observa mai ușor comportamentul anumitor specii de lilieci în prezenta altor specii de lilieci. Astfel prin repetatele ieșiri pe teren în special în aceasta zonă, prin observații cu ochiul liber și cu ajutorul detectorului, au fost identificate mai multe specii. Chiar din primele ieșiri în zonă studiată, s-au constatat influente asupra modului de hrănire, asupra comportamentului în zbor și abundenței liliecilor datorate principalilor factori climatici. Numărul maxim al liliecilor fiind înregistrat vara, cu zile fără vânt. Cercetarea a fost interesantă iar rezultatele peste asteptări, fiindcă s-a evidențiat o abundență destul de mare în această zonă.

### Aspects regarding bats communities from Dumbrava Sibiului

The paper was started based on the desire to study the community of bats from Sibiu County, based on the coexistence of a multitude of different habitats. For this study, it was chosen a habitat where the level of humidity was high and had a large number of individuals, which permitted to study the relationships between different groups of bats. Further research in the field especially in the designated area using direct observation and other kinds of equipment (like bat detector) revealed different bat species. Even from the first observations in the