THE ABC PROJECT (ATLAS OF BATS OF THE CARPATHIANS) – NEW VIEW

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The ABC project started 12 years ago with its main goal to get together all the available information about bats from the Carpathian parts in Poland, Czech Republic, Slovakia, Hungary, Ukraine and Romania. Starting the work under the guidance of the senior author, first observations were about the lack of data for distribution of many bat species. Some of them (e.g. *Miniopterus schreibersii, Eptesicus serotinus, Nyctalus lasiopterus*) decreased drastically in number of individuals of their populations or even disappeared from their known shelters. Other bat species (e.g. *Rhinolophus hipposideros*) changed their range, being reported in higher altitudes, but also in latitude and longitude. In addition the methodology of work was improved, adopted GPS system with precise geographic coordinates instead of UTM maps.

Of the 45 European bat species, 32 are reported from the Carpathian Mountains. This means about 70% of all European bats are in Carpathians. Considering only bats species, this area is an important eco-region, with shelters offering optimum conditions for hibernating, nursery colonies and close by foraging habitats. These conditions give to the Carpathians a particular significance especially in the occurrence and range of bats species. However, the distribution of bats in Carpathians differs from species to species. Some of them (e.g.. *Rhinolophus hipposideros, Myotis myotis, Pipistrellus pipistrellus)* have a large distribution all over Carpathians, while others (e.g. *Barbastella barbastellus, Eptesicus nilssonii, Nyctalus leisleri*) were reported from few localities or are present only accidentally. The latter case is for *Hypsugo savii* recently reported (previously only from South-East part of Romania), *Myotis alcathoe* in Hungary and southern part of Poland and *Pipistrellus kuhlii* identified since 2000, only at low altitudes (Cefa – Oradea and Iassy – Moldavia) as well as in Poland.

Today, thanks to the co-operation of chiropterologists from all the Carpathian countries it is possible to present the most accurate knowledge about the systematic, biology, ecology and distribution of bat species all over the Carpathians. Reporting important changes in some bat distribution is also possible to understand the trends of evolution of their populations and to consider them as important bioindicators of environmental changes. Destruction of habitats (shelters for hibernating and nursery colonies as well as foraging habitats), increasing degree of pollution and use of pesticides and, not least, climate changes are reflected in the bat biology, their ecology, behaviour, migration and distribution. We consider the ABC as an important tool to update the information about bats and an important practical tool for bat protection measures in the Carpathian Mountains.