

Records of Greater Noctule Bat (*Nyctalus lasiopterus*) from Romania – with new additions

Nyctalus lasiopterus (Schreber, 1780) is a rare bat species of the Western Palaearctic, with sporadic data on considerable part of its area, even in parts where most maps show continuous distribution (see Vlaschenko et al. 2016). Regarding Central and Western Europe, significant populations of the species are known from Hungary and Spain (Estók 2010, Ibáñez et al. 2004). In Romania, *N. lasiopterus* is the rarest bat species with very few data. In this paper we summarise all Romanian occurrences of the species, with new additions.

N. lasiopterus is one of the three bat species predating songbirds (Dondini & Vergari 2000, Ibáñez et al. 2016). According to radio-tracking studies, in some areas it has very large home ranges to be able to find appropriate roosting and feeding habitats (Popa-Lisseanu et al. 2009). Population genetic studies revealed that both nuclear and mitochondrial differentiation between colonies were relatively low, in contrast with other temperate bat species (Santos et al. 2016).

N. lasiopterus was observed in Romania on the 20th of May in 1953 for the first time (Dumitrescu et al. 1962-1963), when one specimen was found in a tree hollow (*Tilia* sp.) with several *N. noctula* individuals in the Comana forest, near the settlement Comana, Giurgiu County. The next data refers to a specimen from the settlement Stejaru, in the vicinity of Socetu, Teleorman County (Barbu & Pantea 1981). Pocora & Pocora (2012) published two new records of the species based on acoustic data, one from the forest of Tătăruși (Iași County, 30.06.2011), and one from Bârnova forest (Iași County, 06.04.2011) (Fig. 1).

In the summer of 2011, an intensive survey of the bat fauna of the Ciomad-Balványos (ROSCI0037) Natura 2000 site was conducted (Fig.1). Mainly acoustic methods were used during the survey on the 8th of June and between the 26th of July and the 5th of August. Recordings were made with Pettersson D500X detectors (settings: sampling rate: 300 kHz, HP filter: OFF, rec. length: 10 sec, call triggered start of recording) on 28 points of the site. The detectors were activated at sunset and turned off just before sunrise. Sound analysis was performed with the Adobe Audition software. Echolocation calls of *N. lasiopterus* can overlap with the calls of *N. noctula*, therefore only echolocation calls (excluding social calls) with the strongest frequency below 16 kHz were identified as *N. lasiopterus* calls (Estók & Siemers 2009).

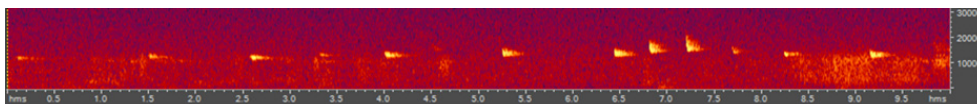


Figure 2. Sonogram of the calls of a *Nyctalus lasiopterus*, recorded in the Ciomad-Balványos Natura 2000 site

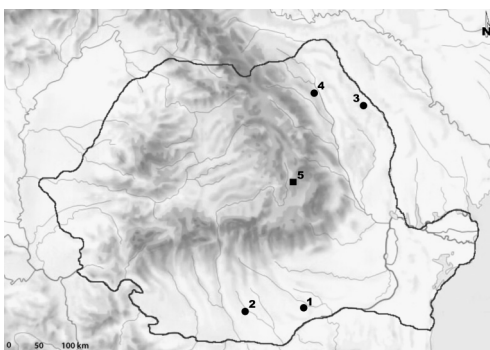


Figure 1. Records of *Nyctalus lasiopterus* from Romania. Circles: former data (1: Dumitrescu et al. 1962-1963, 2: Barbu & Pantea 1981, 3-4: Pocora & Pocora 2012). Square: own data.

Bat calls were found on 2971 recordings. We identified the calls of *N. lasiopterus* on three recordings (recorded on the 8th of June and on the 1st of August) (Fig. 2). The recordings were made before the start of the migration period of the species, which indicates that *N. lasiopterus* possibly has summer colonies in the area. The roosting behaviour of the species was studied in Hungary, radio tracked colonies used hollow trees for roosting in an old natural beech forest (Estók et al. 2007). Similar forests exist in the Ciomad-Balványos Natura 2000 site, which also supports the hypothesis that colonies of *N. lasiopterus* may inhabit these suitable forests. The presence of this very rare and another 16 bat species in the Ciomad-Balványos Natura 2000 site underlines the importance of the conservation of these forests.

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