

Discovery of the second nursery roost of the barbastelle bat *Barbastella barbastellus* (Schreber, 1774) in Slovenia

Odkritje drugega kottišča širokouhega netopirja *Barbastella barbastellus* (Schreber, 1774) v Sloveniji

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The (western) barbastelle bat *Barbastella barbastellus* (Schreber, 1774) is a Western Palaearctic bat species, commonly associated with forested or otherwise vegetated habitats. Its main summer roosts are trees openings, such as wood crevices and loose bark (Russo et al. 2004, Dietz & Kiefer 2014). Additionally, *B. barbastellus* can also be found utilising bat-boxes and buildings, where it shelters behind external woody structures (Dietz & Kiefer 2014). During the winter, the species hibernates in trees, caves and other underground or rocky structures. It can be commonly found at entrance parts of caves, since it is highly tolerant to colder temperatures (Dietz & Kiefer 2014). *B. barbastellus* is under increased pressure and therefore classified as vulnerable on the European Red List of Threatened Species (Hutson et al. 2007).

In Slovenia, the species is considered a widespread inhabitant of forested areas. Although it can often be encountered when surveying forest waters or cave entrances during swarming or hibernation (Petrinjak 2007, 2009, Gojznikar & Zidar 2020; own observations), *B. barbastellus* nurseries remain virtually unknown. So far, only one legitimate finding of a nursery roost for the species was recorded. Kryštufek (1997) reported on a maternity group, comprising 15 individuals, from Pogorelec forest cottage on the plateau of Kočevski Rog in the south-eastern part of the country. Since then, no other nursery roost has been found and, additionally, the abovementioned group has not been reobserved (Petrinjak 2009). Other sporadic findings of *B. barbastellus* roosts do exist, although they occur as single individuals and usually only temporary (Petrinjak 2007).

During our roost survey carried out on 9. 8. 2021 in the Church of St. Janez Krstnik at Gornja Lokvica near Metlika in Bela krajina, the family of the church key keeper alerted us to the presence of bats at their home. We visited their house (Gornja Lokvica 5a; lat. 45.6696, long. 15.2826, 255 m. a. s. l.) and noted medium-sized bat guano accumulated on the floor below wooden cladding, which extended from the roof onto the façade, about 0.5 metres in length. Upon closer inspection, we noticed that there was a noticeable gap between the cladding and the wall, which was inhabited by bats. These turned out to be *B. barbastellus*. Most individuals (at least 11) were grouped behind the cladding on the north-western side of the house (Fig. 1), while a



Figure 1. Group of *Barbastella barbastellus* found under wooden cladding on the north-western side of the house (photo: Jan Gojznikar).

Slika 1. Skupina *Barbastella barbastellus*, najdena pod lesenim opažem na severozahodni strani hiše (foto: Jan Gojznikar).

single individual was hiding beneath the cladding above the balcony on the north-eastern side of the house. The owners highlighted that bats appeared to be present throughout the year, regularly switching their positions on various sides of the house.

We caught two females using a hand net: a juvenile and an adult (Fig. 2). The caught females were measured using a calliper and weighted with a spring scale, with reproductive status and age being assessed using Haarsma's (2008) manual. The measurements are given in Tab. 1.



Figure 2. The captured *Barbastella barbastellus* females (photo: Jan Gojznikar).

Slika 2. Ujeti samici *Barbastella barbastellus* (foto: Jan Gojznikar).

The positioning of the roost in the middle of a rural settlement might seem interesting, since *B. barbastellus* mainly forages in forests. However, it can also use riparian and other vegetation belts (Zeale et al. 2012, Dietz & Kiefer 2014). Indeed, the local landscape contained various hedgerows, orchards, and other smaller tree patches in the immediate vicinity. Additionally, the first smaller forest patch was 200–250 metres away, with two

larger forested areas located approximately 600 metres to the west and 700 metres to the east, offering a potentially suitable foraging habitat nearby. According to Zeale et al. (2012; see also Dietz & Kiefer 2014), *B. barbastellus* females can travel several kilometres to their foraging areas.

To our knowledge, this is only the second time a nursery roost of *B. barbastellus* was found in Slovenia and the first after more than 20 years. What makes our find additionally interesting is, however, that the species used a residential building with permanent human residence. The owners also told us that bats seem to be present throughout the summer (albeit under claddings on different sides of the house) and had occupied the building for several years. *B. barbastellus* is otherwise known to be prone to switching roost sites (e. g. Russo et al. 2005). Our finding also highlights the importance of good conservational consultancy. The residents of the house were not overimpressed with bat presence but took some interest in the fact that they host this endangered bat species. Nonetheless, this newly discovered nursery of *B. barbastellus* is under threat from possible future renovations.

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Table 1. Measurements of the two *Barbastella barbastellus* females, caught at Gornja Lokvica 5a on 9. 8. 2021. Abbreviation: AB – forearm length.

Tabela 1. Meritve dveh samic *Barbastella barbastellus*, ujetih v Gornji Lokvici 5a dne 9. 8. 2021. Okrajšava: AB – dolžina podlakti.

Sex	Age	AB (mm)	Mass (g)	Reproductive status
female	adult	40.1	9.0	parous
female	juvenile	38.3	9.0	/

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