First Slovenian record of a nursery colony of Natterer's bats *Myotis nattereri* (Kuhl, 1817) in a tree

PRVA SLOVENSKA NAJDBA PORODNIŠKE KOLONIJE RESASTIH NETOPIRJEV *MYOTIS NATTERERI* (KUHL, 1817) V DREVESU

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Although the Natterer's bat *Myotis nattereri* is generally distributed in Slovenia (Jazbec 2009), its roosts and hibernacula are found very rarely indeed. In Central and Northern Europe, Natterer`s bats nursery colonies were regularly formed in tree holes or cracks of various buildings, while in the Mediterranean region species usually bred in rock crevices (Dietz et al. 2009). Only three colonies of Natterer's bat are known in Slovenia, and all of them have been found in buildings, two of them in the walls and one in a bridge crevice (Jazbec 2009). Two nursery colonies were discovered in SW part of Slovenia in 2002: two females with juveniles in Rihemberk Castle and another female with a juvenile in the crevice of a stone bridge at Spodnja Branica (Jazbec 2009). In both of these smaller roosts bats were observed in the ensuing years (CKFF 2012). In 2007, the largest known nursery colony of Natterer's bats in Slovenia was found in a wall crack at Vnanje Gorice (central Slovenia) with 30 females and their young (Zagmajster 2008).

On 26th July 2012, during bat research carried out within the Biology Students Research Camp »Pivka 2012«, we discovered a nursery colony of Natterer's bats in a tree. We accidentally noticed some bat droppings on the ground next to the approximately 15 m tall small-leaved lime (*Tilia cordata*), which is situated in front of the Church of Sveti Jurij in the middle of the settlement of Ilirska Bistrica in the SW part of Slovenia (Gauss-Krueger coordinates: Y=441676, X=47038). The tree is surrounded by residential area with some orchards, tall trees, gardens and, in the east, by a stream that flows between the church and 200 m distant mixed wood, which extends towards the east into a larger forested area. In a branch of the small-leaved lime, approximately 7 metres above the ground, we found a bat roost with three different entrances: two rounded (d=5 cm) from the side and one crack (3×10 cm) from the top (Fig. 1). We managed to take two individuals out of the tree hollow by hand. We recorded their sex, age category on the basis of epiphysis ossification (Anthony 1990) and their reproductive status (Haarsma 2008). Measurements of their forearm length (AB) using calliper and body mass (m) using Pesola spring scale (60 g) were taken. Both a lactating female (AB=40.4 mm, m=7.5 g) and a juvenile male (AB=37.2 mm, m=6.0 g) were determined as Natterer's bats (Dietz & von Helversen 2004). The female had a white patch of fur on the head, above and on the side of the right eye (Fig. 2). This is considered as a case of leucism, condition of partial lack of fur pigmentation, which is frequently observed in all bat species (Haarsma 2008).

Although eight bats flew out of the roost during our attempt to take the bats out of the hole by hand to determine their sex and species, most of the bats still remain in the roost. After visual inspection of the roost we were able to see at least 10 individuals and to determine them on the basis of their appearance: long and light coloured ears with long tragus and typical S-shaped spur on tail membrane (Dietz & von Helversen 2004). Initially, there were at least 20 specimens hiding in the roost, which is consistent with records from Central Europe where colonies usually consist out of 20-50 animals, in buildings also over 120 (Dietz et al. 2009). Our observations confirm that this is a nursery colony of the Natterer's bat.

The roost in Ilirska Bistrica is the first known nursery colony of a Natterer's bat in a tree in Slovenia. Findings of bat roosts in trees are most often accidental, as systematic and thorough inspection of potential roosts in trees requires more effort and time than inspection of other types of roosts (e. g. church attics and caves). Different potential roosts in trees are also more numerous and often hardly accessible for proper inspection. Survey of tree holes can be conducted

with boreoscope or endoscope, which enables detailed inspection of usually narrow hollows, or with evening observation of potential roosts for emerging bats. Use of radio-telemetry methods can also reveal bat's day roosts in trees. The suggested methods should be used more often in the future for additional records of nursery colonies of bat species that roost in trees, since the information on them contributes to valuable ecology and distribution knowledge.

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Figure 1. Two rounded openings (d=5 cm) leading into the tree branch of a small-leaved lime *Tilia cordata,* in Ilirska Bistrica, SW Slovenia, in which the nursery colony of Natterer's bat *Myotis nattereri* was found (photo: Aja Zamolo).
Slika 1. Okrogli stranski odprtini (d=5 cm), ki vodita v vejo lipovca *Tilia cordata*, v Ilirski Bistrici, JZ Slovenija, v kateri je bila najdena porodniška kolonija resastih netopirjev *Myotis nattereri* (foto: Aja Zamolo).

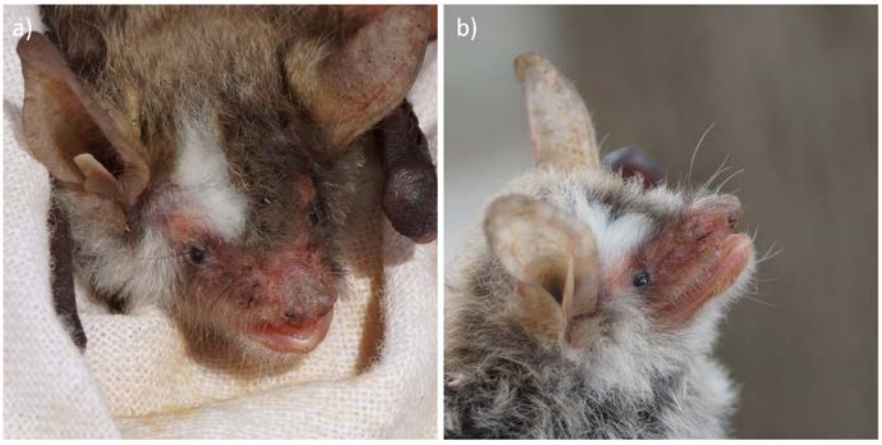

Figure 2. Portraits of leucistic Natterer's bat *Myotis nattereri* female, which was found in the tree roost in Ilirska Bistrica; a) frontal and b) lateral views (photo: Aja Zamolo).
Slika 2. Portret levcistične samice resastega netopirja *Myotis nattereri* iz zatočišča v drevesu v Ilirski Bistrici; a) pogled od spredaj in b) stranski pogled (foto: Aja Zamolo).