

CONTRIBUTION TO THE KNOWLEDGE OF CURRENT MIGRATION OF *MINIOPTERUS SCHREIBERSII* (KUHLE, 1817) IN NW OF PANONIAN BASIN

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INTRODUCTION

Miniopterus schreibersii is distributed throughout the southern part of Europe and migrates seasonally between hibernacula, equinoctial and maternity roosts. It is typically a cave dwelling species, however, in some areas in the north it is also found in attics.

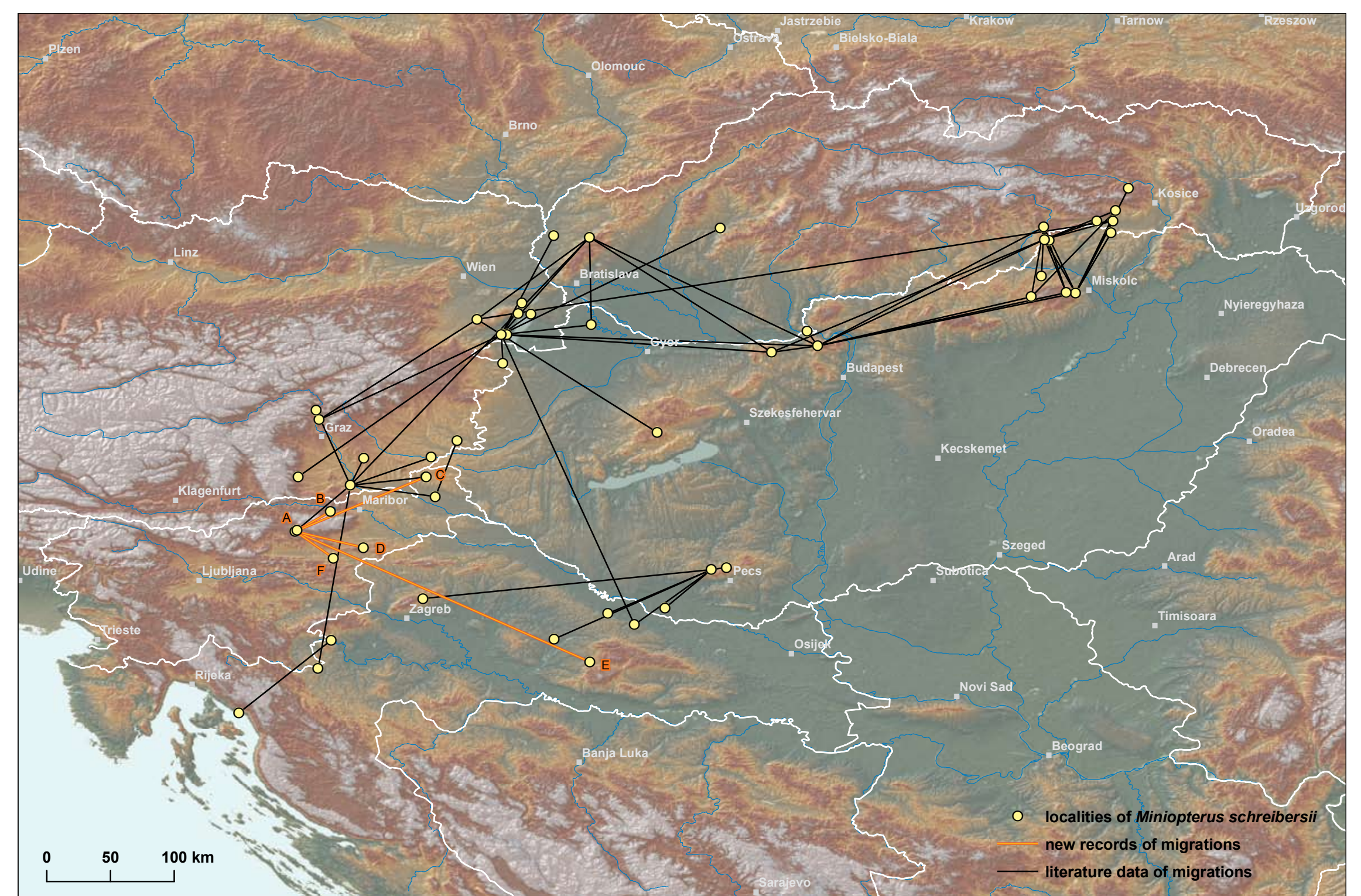
In the 50th and 60th of 20th century, migration between several summer and winter roosts were recorded between Austria, Slovakia and Hungary, and also to some Slovene and Croatian localities. Sadly, populations of *Mi. schreibersii* have diminished and species is now regarded as regionally extinct in parts of Austria (Spitzenberger 2005), NW Hungary (Gombkötő & Boldogh 2007) and in western Slovakia several important roosts have been destroyed (Lehotská & Lehotský 1995).

Unfortunately, the past population dynamic in Slovenia is not known as intensive bat research began only ten years ago. However, some *Miniopterus schreibersii* roosts are still occupied and in the last five years some previously unknown roosts have been located. Some of the roosts are even included in Natura 2000 areas but others are not.

AIMS AND METHODS

We assumed that *Miniopterus schreibersii* migrate between Slovenian roosts and the conservation of all these roosts would play a crucial role in maintaining the favorable conservation status of the so called "NE Slovenia" *Mi. schreibersii* population. Under the framework of the INTERREG IIIA project, Conservation of Amphibians and Bats in the Alps-Adriatic Region, a small-scale bat-banding project on *Mi. schreibersii* in the north-eastern part of Slovenia was conducted to prove migration between roosts.

In March 2006, at the end of hibernation period, 64 out of 1200 *Mi. schreibersii* were banded at the entrance of the Huda luknja pri Gornjem Doliču cave (A) with flipped aluminum bat-bands (manufacturer Porzana Limited UK) with a 2,9 mm inner diameter and codes SLO 1A 2002 - 2065. In the same and consecutive years all other roosts in NE Slovenia were surveyed once or twice a year by visual inspection or by mist netting.



Literature data after: Topál (1956), Đulić (1957), Hanák et al. (1962), Gaisler & Hanák (1969), Kepka (1960, 1981), Spitzenberger (1981), Spitzenberger & Bauer (2001).

A: Hibernaculum (photo: P. Presetnik, A. Troha).



B: Maternity roost (photo: P. Presetnik).



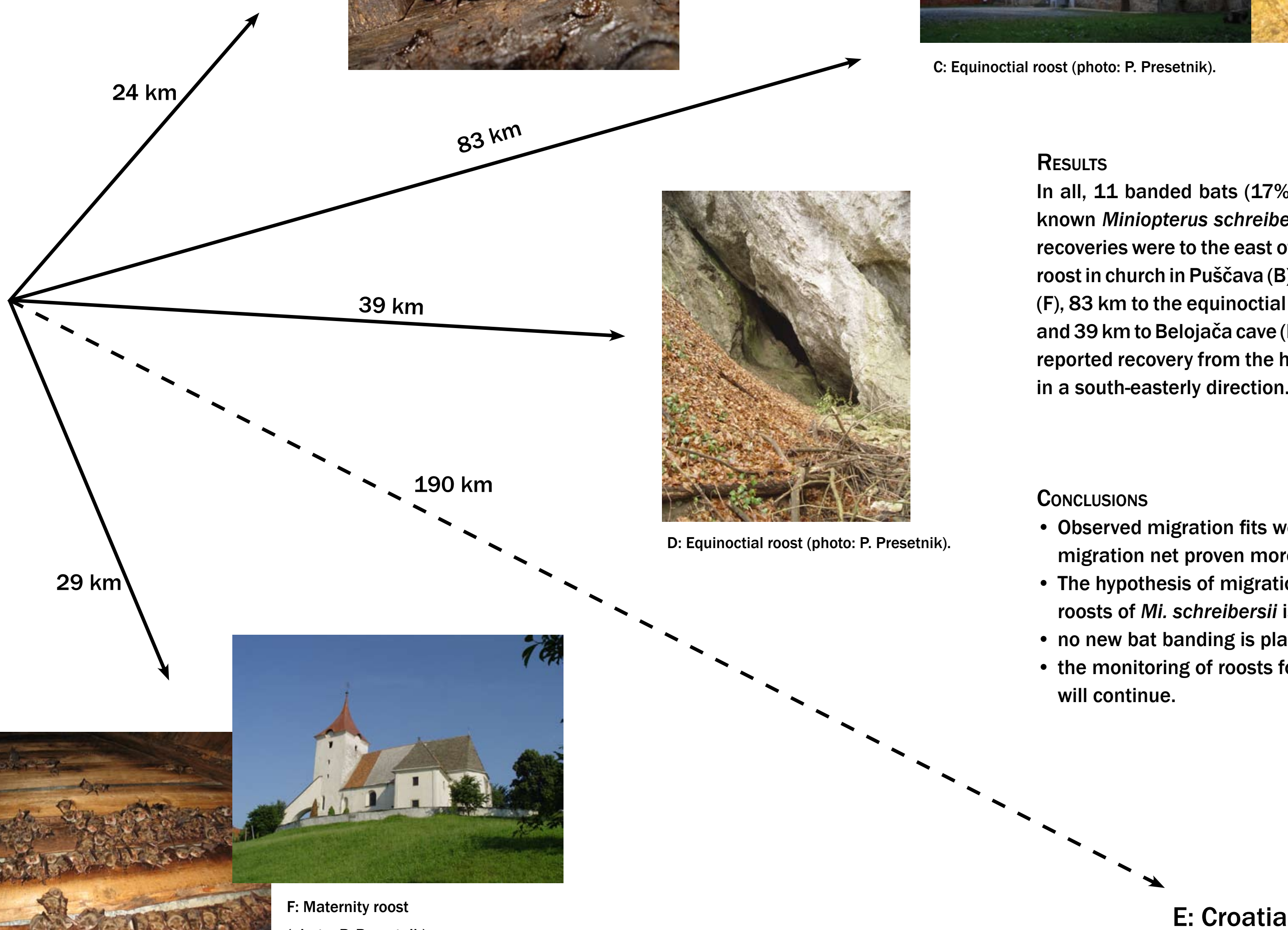
C: Equinoctial roost (photo: P. Presetnik).



D: Equinoctial roost (photo: P. Presetnik).



F: Maternity roost (photo: P. Presetnik)



RESULTS

In all, 11 banded bats (17% recovery) were found at four out of five known *Miniopterus schreibersii* localities in that part of Slovenia. All recoveries were to the east of the banding site, 24 km to the maternity roost in church in Puščava (B), and 29 km to the one in church in Završe (F), 83 km to the equinoctial roost in the castle, Grad na Goričkem (C), and 39 km to Belojača cave (D). Additionally Croatian chiropterologists reported recovery from the hibernacula in Trbušnjak cave (E), 190 km in a south-easterly direction.

CONCLUSIONS

- Observed migration fits well in the *Miniopterus schreibersii* migration net proven more than 50 years ago.
- The hypothesis of migration between Slovenian north-eastern roosts of *Mi. schreibersii* is proven, therefore,
- no new bat banding is planned, but,
- the monitoring of roosts for additional recoveries of banded bats will continue.

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