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Short Note

New long-distance recapture of a noctule (*Nyctalus noctula*) from eastern Europe

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Abstract

Long distance recaptures of banded bats from Eastern European countries (Belarus, Ukraine, European part of Russia) have been lacking for decades. The last transboundary recapture was recorded in the late 1960s. We herewith report a new long-distance recapture of a noctule *Nyctalus noctula*. The fresh carcass of a ringed adult female noctule was found in South-East Hungary on 22 May 2014. The bat was mist-netted and ringed on 31 May 2011 on the territory of Chernobyl Exclusion Zone, in North Ukraine. The direct distance between the two locations is 800 km.

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The interest in long-distance bat movement has increased significantly in the last years in Europe. It became clear that large numbers of bats are killed by wind-power facilities, mostly during autumn migration (Rydell et al., 2010). The bats killed by wind facilities in Germany possibly originate from territories hundreds of kilometers away, in Russia or Belarus (Voigt et al., 2012; Lehnert et al., 2014). These results force us to return to the study of bat migration with the new meaning of conservation. Recaptures of banded bats from Eastern European countries (Belarus, Ukraine, European part of Russia) have been lacking for decades. The last transboundary recapture was recorded in the late 1960s (Panyutin, 1980). There were only few transboundary recaptures of bats ringed in Ukraine recorded in the data from the territory of former USSR (Hutterer et al., 2005).

In this note we present information about a new recapture of a ringed noctule (*Nyctalus noctula*) from Eastern Europe (Fig. 1).

The fresh carcass of a ringed adult female noctule was found in a shed of a private home owner in South-East Hungary (47°3'44.9" N, 21°5'31.2" E) on 22 May 2014. The ring number was "Kiev Ukraine DT01528". The bat was mist-netted and ringed on 31 May 2011 in the territory of Chernobyl Exclusion Zone (51°12'17.92" N, 30°1'11.57" E) on the bend of the Uzh river (North Ukraine). The specimen was identified as not more than one year old. The direct distance between the two locations is 800 km.

Bat ringing was started in Chernobyl Exclusion Zone in 2007 as a part of overall bat summer assemblage research. In the 2007-2013 period 2842 bats of 14 species were ringed (Gashchak et al., 2013) including 1321 noctules.

In the Chernobyl Zone vast woodlands, various water-bodies, marshes, and moderate climate with frosty winter represent a typical breeding area for many migrating forest-dwelling bats (Strelkov, 1997a,b). The nearest known winter aggregation of noctules is located in the city of Kiev (80 km to the South) and was formed no more than 15 years ago (Tyshchenko and Godlevska, 2008). This recapture confirms the proposed main direction (northeast-southwest) of the migration of noctules in Europe (Petit and Mayer, 2000; Hutterer et al., 2005). The locality of the Hungarian recapture is on the southern border of the breeding territory of the species (Görföl et al., 2009) and also falls within the wintering range. In northeast Hungary (ca. 120 km north of the site of the present recapture) characteristic changes were observed in the sex ratio of noctules, females were absent during the nursing period, but were present in spring and autumn in significant numbers, which supports the presence of a considerable sex-biased migration in the area (Estók, 2007). It is not clear why the bat stayed in this hibernation area for so long (up to the end of May). Migrations of bats from high radioactive regions to "clear" remote areas should not be considered sources of pollution in nonradioactive areas. Besides the relatively low starting level of contamination in their bodies, bats depurate over a rather short period due to natural excretion of radionuclides (Gashchak et al., 2010). ☞

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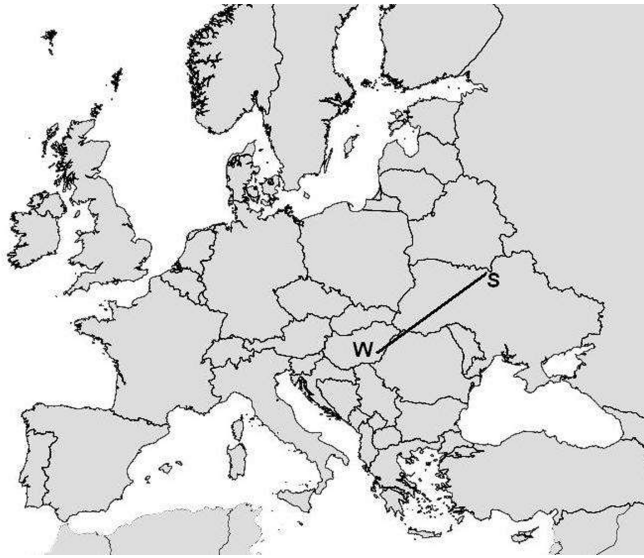


Figure 1 – Documented long-distance recapture of a Noctule from Ukraine to Hungary (S: summer ringed location, W: spring (wintering) recapture location).

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