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The recovery of *Nyctalus lasiopterus* (SCHREBER, 1780) (Chiroptera: Vespertilionidae) in Turkey

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Abstract. The vespertilionid bat *Nyctalus lasiopterus* (SCHREBER, 1780) was recovered in the Eastern Karadeniz. This is second record from Turkey, an unusual roosting site for the species formed by an oil drilling platform at sea, is discussed together with other biological aspects.

Key words: Chiroptera, Vespertilionidae, *Nyctalus lasiopterus*, Turkey.

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I. INTRODUCTION

The vespertilionid genus *Nyctalus* is represented by three species in Turkey (BENDA & HORÁČEK 1998): *Nyctalus leisleri* (KUHL, 1818), *N. noctula* (SCHREBER, 1774) and *Nyctalus lasiopterus* (SCHREBER, 1780). Of these, the Greater Noctule *Nyctalus lasiopterus* ranges from extreme N Africa (Morocco and Libya) and W Europe to Iran, Uzbekistan, and the Urals (to 53° E to 42° S longitude and 57° N latitude) (KOOPMAN 1994). Until now this species had only one record from the area around Uludağ Mountain near the Mustafakemalpaşa District from Bursa Province in 1950s (KAHMANN & ÇAĞLAR 1960; KAHMANN 1962).

The paper aims to present additional records of *N. lasiopterus* from Turkey and to provide some data on the ecology of the species at the southern margin of its distribution.

II. MATERIAL, METHODS AND RESULTS

All three *Nyctalus* species in Turkey are differentiated by their size and it is possible to identify them by using only their forearm lengths. Of these species, *Nyctalus leisleri* with forearm length 37-49 mm, rarely occurs in the Eastern Karadeniz Region (STEINER & GAISLER 1994; BENDA &

HORÁČEK 1998; KARATAŞ unpubl.). This bat also differs from *N. lasiopterus* in its narrower ears. *N. leisleri* is similar to the smaller sized *N. noctula* (forearm length 48-58 mm).

Furthermore, *N. lasiopterus* is a rather large bat with a forearm length of 64.5 mm, and a condylobasal length of 22.5 mm. The ears with sparse hairs are similar to those of *N. noctula*, but they are wider. The tragi are mushroom-shaped as in other noctules. The wings are long (wingspan c. 450 mm) and narrow, with rusty hairs on the underside along the body. The plagiopatagium is attached to the metatarsus, close to the ankle. The outer halves of the uropatagium are supported by the calcars. The epiblema is broad. The fur is dense, relatively long and monotone in colour. The dorsal fur is usually darker than that of *N. noctula* from the European part of Turkey, rufous brown above and the underpart is lighter brown. The muzzle and ears are blackish brown whilst the wing membranes are dark brown.

Between 1990 and 2005, we netted and investigated more than 2000 bat specimens in Turkey. Following their analyses, 37 bat species were identified. Of these, only a single specimen proved to be *N. lasiopterus.* This bat represents the second record from the country. On the 7th August 2005, a dead adult male was found on an Exploration Platform which is located on the Black Sea 43 km off the coast of Eastern Karadeniz, between Artvin and Rize provinces (41°42'17'' N, 41°04'40'' E) (Fig. 1).

Measurements of the male specimen of *N. lasiopterus* found on the rig are as follows: total length (L) 158 mm, tail L 66, hindfoot L 13.5, ear L 19, tibia L 30.5, forearm L (with carpus) 64.5, forearm L (without carpus) 63.5, thumb L 8.0, tragus L 6.0, tragus width (W) 6.5, mandibular L 17.95, mandibular toothrow L 9.48, maxillary toothrow L 8.84, zygomatic W 15.25, mastoid W

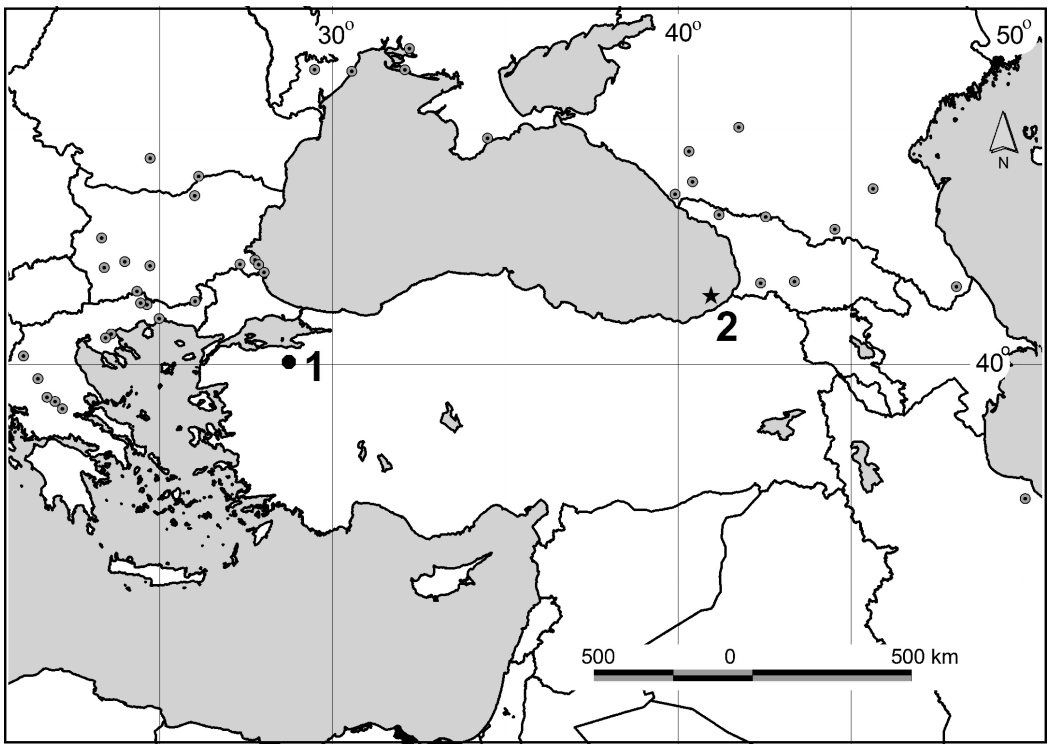

Fig. 1. Records of *Nyctalus lasiopterus* from Turkey: 1 (●), Mustafakemalpaşa; 2 (★), off the SE coast of the Black Sea (new record); (◉), Localities listed from surrounding areas (after OGNEV 1928; KAHMANN & ÇAĞLAR 1960; KAHMANN 1962; ETEMAD 1970; TSYTSULINA 1998; HANÁK et al. 2001; BENDA et al. 2003; BUKHNIKASHVILI 2004; IBÁÑEZ et al. 2004).

14.33, braincase W 11.45, rostral W 9.00, interorbital W 5.84, height of braincase 11.1 mm, and weight 34 gram. Testicle sizes are 10 × 6 mm. All these characters clearly identify our specimen as *N. lasiopterus*. This specimen is now deposited in the mammalian collection of Niğde University, Zoology Department (accession number ZDNU 2005/80).

The rig came from the Gulf of Mexico and passed various places on its way to the drilling location. So the question is, when was the bat first seen around the rig? The rig was also located in Ereğli (Zonguldak Province) for some time. The rig's crew, that we interviewed, are sure that the bats were not present until the rig arrived at its present location. A small number of bats were seen at the end of July and the beginning of August at which time they stayed for 2-3 days and then left. Similarly, the same happened again towards the end of August and the beginning of September during which time they came back and then left after a few days. To be certain the men checked their work records and the exact date of the second sighting was August 23rd (J. SIMPSON & Y. GÜMÜŞLÜOĞLU, in litt.).

III. COMMENTS

Bats of this species usually inhabit tree hollows in mixed forests, mainly deciduous forests (SCHOBER & GRIMMBERGER 1987; IBÁÑEZ et al. 2004). An exploration platform is unusual as a habitat of *N. lasiopterus*. The commoner bats of the genus *Nyctalus* are highly migratory species. Since they can migrate quite far, more than 2000 km (BURESCH & BERON 1962; BENDA & HORÁČEK 1998), it is very possible that the *N. lasiopterus* came from the Caucasus region. They may migrate over the Black Sea between the Caucasus and Russia and Anatolia.

The finding of bats on rigs at sea is not apparently as rare as it may seem. In the North Sea where there are a great number of rigs and working platforms with a great number of people as potential observers, BOSHAMER (1993) recorded *Eptesicus nilssonii* (KEYSERLING & BLASIUS, 1839) on a rig in the Dutch North Sea. Similarly, HUTSON (1996) mentions several incidents: *Plecotus auritus* (L., 1758) on a platform 150 miles off Scotland, *Pipistrellus nathusii* (KEYSERLING & BLASIUS, 1839) on a platform in autumn, and *P. pipistrellus* (SCHREBER, 1774) landing on a boat 40 miles off the Devon coast, UK. In addition to these reports we captured another bat species, *Pipistrellus kuhlii* (NATTERER, 1817) with white edged plagiopatagium and uropatagium, on the same platform in December 2005.

It is noteworthy that the bats may need fresh water to survive. If there are bats around the drill ship for a long period they need a fresh water supply since they will not drink the sea water. We speculate that the decks are regularly washed with fresh water and the bats may drink this water on the deck. They may also drink rainwater from the deck.

No one from the crew saw them feeding at sea, although at the time of the sightings there was a huge amount of insects (dragonflies and moths) on the ship, that were attracted to the lights at night. Nevertheless, recently IBÁÑEZ *et al*. (2001) reported the surprising fact that the faecal pellets of *N. lasiopterus* in Spain during spring and autumn, besides insect remains, contain a considerable amount of bird feathers, suggesting that the bats hunt migratory birds. Considering the dates of the observations on the Black Sea (end of July to September), one can speculate that a similar diet existed amongst this Turkish *N. lasiopterus* population.

N. lasiopterus is protected in Turkey in line with the Bern Convention (ANONYMOUS 2004). The IUCN listed it as Near Threatened (NT). However, in Turkey the species is one of the rarest bats and it should be considered as Vulnerable. This bat is endangered by the practise of cutting down of hollow trees and the general destruction of its preferred habitats.

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