Historia naturalis bulgarica 45 (3): 53–56
ISSN 2603-3186 (online) | ISSN 0205-3640 (print) · nmnhs.com/historia-naturalis-bulgarica
https://doi.org/10.48027/hnb.45.033
Publication date [online]: 13 March 2023

Research article

New evidence for the recent presence of the lynx, *Lynx lynx* (Linnaeus), in Western Stara Planina Mountains, Bulgaria

Nikolai Spassov[1], Assen Ignatov[2], Tsvetan Mihaylov[3]

(1) National Museum of Natural History, Bulgarian Academy of Sciences, 1 Tsar Osvoboditel Blvd, 1000 Sofia, Bulgaria, nspassov@nmnhs.com; https://orcid.org/0000-0002-2891-7457
(2) National Museum of Natural History, Bulgarian Academy of Sciences, 1 Tsar Osvoboditel Blvd, 1000 Sofia, Bulgaria, ignatov@nmnhs.com; https://orcid.org/0000-0003-0922-8098
(3) Stakevtsi Hunting Farm, Chuprene State Forestry, Bulgaria, cvmihaylov@gmail.com

Abstract: The data presented here argue for the regular recent presence of the lynx in the north-western mountainous border region of Bulgaria.

Keywords: Bulgaria, *Lynx lynx*

The Eurasian lynx, *Lynx lynx* (Linnaeus), was assumed to be extinct in Bulgaria at the beginning of the 40s of the 20th century (Spiridonov & Spassov, 1985). After this period and until now, there are some reports of its appearance in different parts of the country (Spassov, 2007; Natura Bulgaria, 2013). Most of them are questionable to one extent or another, some simply false. Some of them seem credible, but difficult to prove. It was observed in 2000 – in the region to the south of Stakevtsi Village (E. Dzhuninski, pers. comm.) and in 2004 – in the same region – Stakevtsi Hunting Farm by Ts. Mihaylov. Its presence was documented (Fig. 1) and proved in the same region in 2005 (Spassov et al., 2006), where a lynx was killed illegally a year later. These are the first reliable data on the reappearance of the lynx in Bulgaria. In 2008 it was detected by a camera trap (Zlatanova et al., 2009) on Osogovo Mountain also on the western border of the country, and then photographed twice more in the same place until 2011, when one animal was killed by poaching (Zlatanova, pers. comm.). At the same time, the track of a couple established in the breeding season was identified at the highland, open part of the mountain (V. Ivanov, pers. comm.). Sounds apparently made by a lynx (compared with recordings of a lynx's voice) during the breeding season (in March) were heard in 2022 on the southern slopes of the Western Stara Planina, in the Godech Region (Vasil Ivanov, pers. comm.). Obviously, these lynxes are part of the population formed in the last ca. 25 years in Eastern Serbia by animals that settled on their own from the Carpathian Mountains (Spassov et al., 1999; Grubač, 2000). It could be considered that the species is entering more suitable mountainous biotopes of the country, but definitive evidence has not been found so far. A photo from the Western Rhodopes shows a probable presence of the species there. This can be taken as a sign of dispersal, but it is said to have been encountered as early as the 1960s (Spassov et al., 2015). There is, although difficult to prove, data about poached lynx entering, as it seems, from the western mountain border into the interior of Bulgaria. Poaching seems to be thwarting the establishment of a permanent population in the country as yet. The lynx is included in the Red Data Book of Bulgaria (second edition) as critically endangered (Spiridonov & Spassov, 2015).

The data presented here speak of the regular presence of the lynx in recent years in the western mountainous border region of the country. In 2017, a lynx was observed by Tsvetko Tsvetkov, a director of Chuprene State Forestry. The meeting took place in the evening and the animal approached almost ten metres

Received: 23 January 2023; accepted: 10 March 2023 · Editor: Vladislav Vergilov

Fig. 1. A lynx track in Stakevtsi Hunting Farm, Western Stara Planina (March 2005, photo: V. Pochekanski).

Fig. 2. Lynx next to a game feeder in the Stakevtsi game section of Chuprene State Forestry (photo by camera trap, Tsvetan Michailov, 8.07.2020).

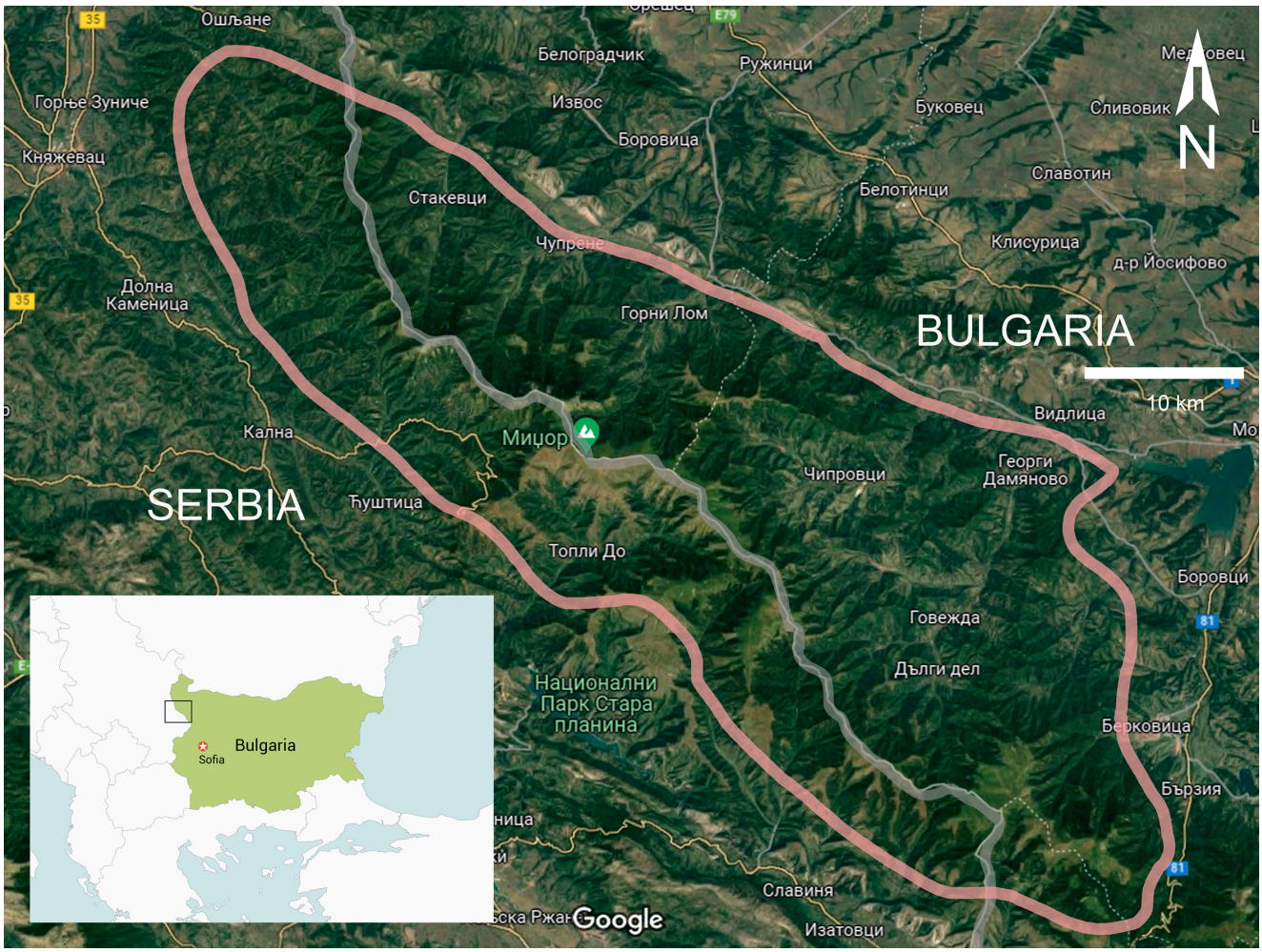

Fig. 3. The approximate lynx habitat in Northwestern Bulgaria, in the area of the Bulgarian-Serbian border between the villages of Chiprovsi in the south and Stakevtsi in the north.

Fig. 4. Habitat of the lynx in the region of Stakevtsi Hunting Farm area in NW Stara Planina (Bulgaria).

away, not suspecting the presence of the person. In 2020, a lynx was captured on a camera placed by Ts. Mihaylov (Fig. 2) next to a game feeder in the Stakevtsi Hunting Reserve of the Chuprene State Forestry. In 2020/2021 roe deer were found in the area, killed and eaten in a manner different from the manner of the wolf that is permanently present in the area (Ts. Mihaylov, pers. observations). These observations indicate the regular habitation of the common border territory between Serbia and Bulgaria (Fig. 3). The noted mountainous region is particularly suitable, judging after the game abundance and the quality of the forests (Fig. 4). The Stara Planina Nature Park in Serbia, located right next to the border has an area of about 1,400 sq. km. A proposal for the creation of a Natural Park on the adjacent Bulgarian territory, covering an area of about 1,300 sq. km was submitted to the Ministry of the Environment and Waters in 2003 and was updated at the end of 2022. It includes natural coniferous forests, high-stemmed broad-leaved forests over 40 years old and mature coppice forests, high-mountain and mid-mountain shrub and grass ecosystems and rocks, as well as less than 25% connecting areas. According to the 2003 proposal (L. Mileva, pers. comm.), the total area of beech forests is about 48,000 ha, of which representative and medium-aged high-stemmed beech forests occupy about 28,000 ha. Of these, less than half of the area falls on forests aged between 100 and 200 years. According to our observations, the main food of the lynx, the roe deer, is in sufficiently high numbers (according to data from the hunting officials of the forestry), for which the care taken in the hunting areas is important.

The individual territory of Eurasian lynx varies greatly from 130–1400 sq. km (Herfindal at al., 2005), and according to other data (Breitenmoser et al., 2005) 180–2780 sq. km for males and 98–759 sq. km for females. In good habitats, such as those in the Western Stara Planina, the territory of a male is probably about 400/500–600 sq. km, judjing by the data of the approximate number of adult individuals and the territory inhabited by the Balkan lynx in the Western Balkans (Melovski et al., 2015). The data available today lead us to think that the lynx is present from south to north at least from Chiprovtsi area to Selash Village. This territory covers the forested mountainous region, both from Bulgaria and Serbia with an approximate area of about 600 sq. km. At least one male and about two female adults may inhabit this area. The territory that will eventually be protected by the two adjacent Serbian and Bulgarian parks will cover an area of about 2,700 sq. km, most of which (ca. 1,500 sq. km) represents a suitable habitat for the species. This territory (the Chuprene State Forestry included) would provide suitable conditions for the existence of approximately 7–9 adult lynxes. This territory represents a population core for the potential dispersal of young individuals to the east in the Bulgarian mountainous territories.

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