

12.

Occurrence of wildcat (*Felis silvestris*) in the Danube Delta (Romania)

POLEDNÍK Lukáš¹, KRANZ Andreas²

¹ ALKA WILDLIFE o.p.s., Liděřovice 62, Dačice 380 01, Czech Republic

² ALKA WILDLIFE o.p.s., Am Waldgrund 25, Graz 8044, Austria

Address of author responsible for correspondence: **POLEDNÍK Lukáš** – ALKA WILDLIFE o.p.s., Liděřovice 62, Dačice 380 01, Czech Republic; email: lukas.polednik@alkawildlife.eu

ABSTRACT. During the period between 2nd and 10th of March 2011 the wildcat survey was carried out in two areas of the Danube Delta Biosphere Reserve. The first surveyed area was located in surroundings of the field station Dovnica, including the canal Dunarea Veche and Dovnica. Second area was situated nearby the field station of Julia, including canals Sontea, Fortuna and Lake Rotund. Camera-traps (Scout Guard) were used for the surveying. All camera-traps were set for the whole day and night, highest sensitivity and when triggered they recorded 30 seconds long videos. In order to raise attractiveness of the place with camera-traps the bait was placed in front of each camera-trap. Totally 19 camera-traps were used in both areas and 130 camera-traps nights were recorded. From 67 videos taken, four recorded the individual of wildcat. Three places were located in the surrounding of Dovnica, one place was situated nearby the Julia Rosu. Apart of videos recorded, the tracks of wildcat were found in the area of Julia.

Key words: Wildcat, *Felis silvestris*, pisica sălbatică, Danube Delta, Romania, camera-traps

INTRODUCTION / BACKGROUND

European wildcat (*Felis silvestris*) is a species with originally very extensive distribution area extending throughout Eurasia and Africa. In Romania it is occurring throughout the country. Distribution area overlaps with the forested areas of eastern and southern Carpathians, excluding high altitude areas, and also in forests along the River Danube [10]. Data on occurrence of the species are rather old, non-systematic and scarce, mostly based on hunting statistic and random observations and not confirmed recently. However several local studies were published ([2]; [3]; [6]; [8]; [9]). There is no information available about the genetic purity of populations. Wildcat is listed in Red Data Book of Romania and considered as vulnerable with population size of about 10,000 individuals [1].

Despite the fact that Romania has acceded Bern convention and also Fauna and Flora Habitat Directive of European Union and thus it should provide full protection, the species is still hunted and legal quota for the year 2012 is 402 individuals [12].

Data on the occurrence of wildcat in the terrain of the Danube Delta Biosphere Reserve and its surroundings are even fewer than on the national level. First published records of wildcat from the Danube Delta are from Caraorman, Letea and Babadag forest [11], however they are more than 40 years old. More recent data on the occurrence of the species were published from area nearby Somova and north of Jurilovka [1] as well as from Babadag forest [5] and from the hills south of Tulcea [7]. No recent data on the species occurrence are available from inner delta.

MATERIAL AND METHODS

The survey for wildcat was carried out between 2nd and 10th of March 2011. The survey was conducted in two different areas of the inner part of the Danube Delta Biosphere Reserve (Fig. 1). The first surveyed area was located in surroundings of the field station Dovnica, including the canal Dunarea Veche and Dovnica. Second area was situated nearby the field station of Julia, including canals Sontea, Fortuna and Lake Rotund.

Camera-traps (Scout Guard SG 550V) triggered by temperature changes within the infrared sensor of camera-trap were used for detection of species occurrence. All camera-traps were set for the whole day and night, with highest sensitivity of the sensor. When triggered they recorded 30 seconds long videos. In order to raise attractiveness of the place with camera-traps the bait was placed in front of each camera-trap. During the course of the project various bait were used. Extract of *Valeriana officinalis* roots in ethanol was placed on tree logs or

trees and the soil in surrounding of camera-traps. Apart of this some commercial lures were used (HAWBAKER'S Wildcat lure No 1 and No 2 and HAWBAKER'S Raccoon lure; both produced in USA).

Totally 19 camera-traps were used in two areas. Camera-trap were set in suitable habitat (usually surrounded by trees) and distributed in lines along the canals, first line covering the distance of 5,5 km, second one the distance of 7,2 km. Individual at videos recorded were identified as a wildcat based on characteristic patters of colour at the pelt namely at tail, head and back [4].

RESULTS AND DISCUSSIONS

In total 130 camera-traps nights were recorded and 67 videos taken. Four videos recorded the wildcat. In the area of Dovnica the individual of wildcat was recorded three times at three different locations within a single day (Fig. 2). Given the distance of different places (about 1 km) and the interval between the first and the last record (5 hours) we cannot confirm the presence of several individuals there. Only a single record of wildcat was taken in the area of Julia, however the wildcat tracks were found at nearby location (Fig. 2).

In the first survey area the habitat, where wildcat videos were taken, is dominated by reed (*Phragmites communis*), canals are lined with old, full grown willow trees (*Salix fragilis*), but no extensive forest can be found there. Such a habitat is rather untypical for the wildcat. In second are more trees and bushes occur. Both areas are surrounded by dense network of canal of different sizes and dry land is very restricted. This suggests that wildcat has to actively swim in order to reach different areas.

Considering that within inner Delta more forested areas (better wildcat habitat) exist where wildcat was recorded in the past [11], we suppose that the wildcat can be widespread in the Biosphere Reserve. This opinion can be supported also by data obtained from local hunting grounds (Mihai E. Marinov, unpublished data), showing that in the year 2006 in only one hunting ground the presence of wildcat was not reported (Fig. 3).

Within the present study we did not collect genetic samples of wildcat therefore we cannot infer about the purity of the local wildcat population. Given relatively common presence of human settlements within the Danube Delta Biosphere Reserve and common presence of the domestic cat there we expect that hybrid between the wildcat and domestic cat could be common.

ACKNOWLEDGEMENT. We would like to thank to Danube Delta National Institute for Research and Development for the support allowing us to conduct the survey. Zsolt HEGYELY (Milvus Group), Mihai E. MARINOV (DDNIRD) and Dumitru MURARIU (Museum Nat. de Istorie Nat. "Grigore Antipa") helped a lot by providing some literature and other sources on the distribution of the wildcat in Romania.

REFERENCES

1. BOTNARIUC (N.), TATOLE (V). (eds.), 2005 - Cartea rosie a vertebratelor din România. 260 p. Muzeul Național de Istorie Naturală "Grigore Antipa", București.
2. GEACU (S.), 2007 - Observations on some mammalian species from the subcarpathians north-west of Râmnicu Sărat town (Romania). IN: *Travaux du Musium National d'Histoire Naturelle „Grigore Antipa“*, vol. 50, pp. 427 - 445.
3. GEACU (S.), LOGHIN (C.), 2003 - Relict forest mammals in the Grivița forest range (eastern Romania). IN: *Travaux du Musium National d'Histoire Naturelle „Grigore Antipa“*, vol. 45, pp. 395 - 400.
4. KRANZ (A.), 2009 - Achtung Wildkatze – nicht schießen. *Anblick*, Vol: 12, pp. 28 - 30.
5. MURARIU (D.), 1996 - Mammals of the Danube Delta (Romania). IN: *Travaux du Musium National d'Histoire Naturelle „Grigore Antipa“*, vol. 36, pp. 361 - 371.
6. MURARIU (D.), 2005 - The state of the mammals (*Mammalia*) along the Danube between Gârla Mare and Călărăși (Romania). IN: *Travaux du Musium National d'Histoire Naturelle „Grigore Antipa“*, vol. 48, pp. 405-416.
7. MURARIU (D.), 2006 - Mammal ecology and distribution from north Dobrogea (Romania). IN: *Travaux du Musium National d'Histoire Naturelle „Grigore Antipa“*, vol. 49, pp. 387-399.
8. MURARIU (D.), 2008 - Faunology, biology, ecology and protection statute of the mammals (*Mammalia*) of the Măcin mountains National park (Romania). IN: *Travaux du Musium National d'Histoire Naturelle „Grigore Antipa“*, vol. 51, pp. 273-301.
9. MURARIU (D.), ATANASOVA (I.), RAYKOV (I.), CHIȘAMERA (G.), 2009 - Results on mammal (*Mammalia*) survey from bulgarian and romanian Dobrogea. IN: *Travaux du Musium National d'Histoire Naturelle „Grigore Antipa“*, vol. 52, pp. 371-386.
10. STAHL (P.), ARTOIS (M.), 1991 - Status and conservation of the wildcat (*Felis silvestris*) in Europe and around the Mediterranean rim. Council of Europe T-PVS (91), 62 p.
11. VASILIU (G. D.), ȘOVA (C.), 1968 - Fauna Vertebrata Romaniae. (Index). Muzeul Județean Bacău. Secția Științele Naturii - Studii și Comunicări (Partea a II-a), pp. 1 - 296. Bacău
12. http://www.asrm.ro/pdf/noutati_legislative-septembrie-2011/Ord.%202278_2011%20aprobare%20derogari%20specii%20urs.%20lup.%20ras.%20pisica%20salbatica.pdf

Manuscript received: February 8th 2012

Manuscript revised: March – April 2012

Corrected version of the manuscript accepted: June 2012

Printed: September 2012



Fig. 1. Position of camera-traps in the two surveyed areas within the Danube Delta.

Note. background satellite map – Google Earth © Google Inc.



Figure 2. Position of wildcat evidences

Note. background satellite map – Google Earth © Google Inc.

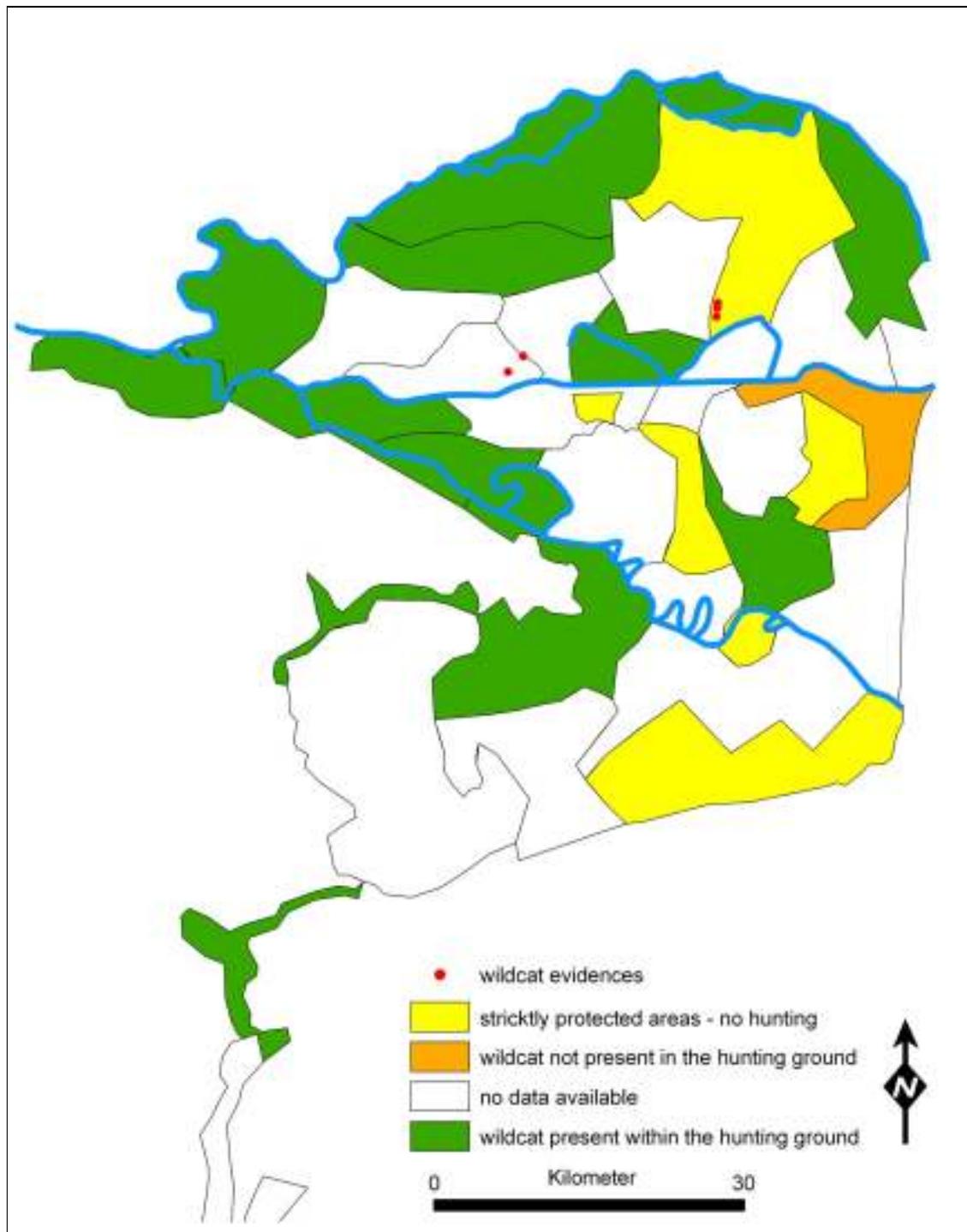


Fig. 3. Map showing the presence of the wildcat in different hunting grounds as provided by hunters.