

On the activity of two medium-sized canids: the Golden Jackal (*Canis aureus*) and the Red Fox (*Vulpes vulpes*) in the Natural Park “Sinite Kamani” (Bulgaria) revealed by camera traps

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Abstract. Daylight activity in both species was often registered during the cold seasons. Foxes were registered to be active between 7-9h and 12-14h, while the jackals – during the whole day. Activity of both predators was rising during the night. The number of photographs increased from around 17h and activity was high until morning around 9-10h.

Key words: *Canidae*, photographs, activity.

Introduction

The activity of the carnivore mammals is mainly nocturnal when they manage to catch their prey more successfully than during the daylight. The other reason for such behavior is the anthropogenic pressure forcing these mammals to avoid contact with humans. The activity of the predatory mammals depends also on species and individual characteristics, climate, relief, prey abundance and availability, and other (Servin *et al.*, 1991; Jaeger *et al.*, 2007; Ilemine & Gürkan, 2010; Racheba *et al.*, 2012; Kachamakova & Zlatanova, 2014).

In this paper we represent a short note on the daily activity of two canids, studied with camera traps in the Sinite Kamani Nature Park, Bulgaria.

Material and Methods

The analysis was made on the base of 2785 pictures of animals taken by 10 digital camera traps (Ltl-5210A) during one year, from October 2013 till October 2014. The cameras were situated throughout the park in 10 different areas (Fig. 1) and checked monthly. Pictures were taken every 30 seconds.

From all carnivores the most abundant registrations were those of the Red Fox (n=1014), and the Golden Jackal (n=283). The rest of the photos represented other mammalian species occurring in the park as *Martes foina*, *Capreolus capreolus*, *Cervus*

elaphus, *Sus scrofa*, *Felis silvestris*, *Canis lupus*, *Erinaceus roumanicus*, *Sciurus vulgaris*, and many unidentified mice (*Muridae* and *Cricetidae*).

To attract the animals in front of the cameras, dog or cat food granules (occasionally fish and other stuff) were spread.

Study Area

The Sinite Kamani Natural Park is 11380.8 hectares situated on the south slope of the east chain of Stara Planina Mountain (Fig. 1). The main habitats are broad leaf forests of *Quercus* spp. at low altitudes and *Fagus sylvatica* at above 1000 m a.s.l. On its southern part the terrain consists of rocky areas occupied by grass or shrub vegetation.

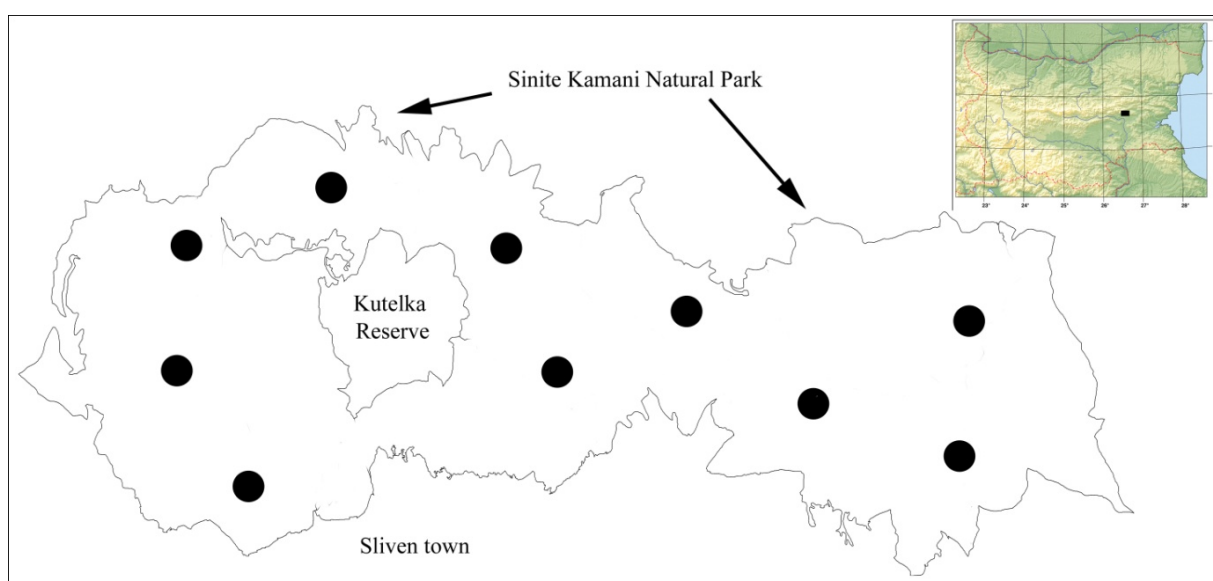


Fig. 1. Location of Sinite Kamani Natural Park and schematic position of the camera traps through the park (black circles).

Results

Daylight activity in both species was often registered during the cold seasons (autumn-winter) (Fig 2, 3, 4). Foxes were registered to be active between 7-9h and 12-14h, while the jackals – during the whole day. Photos of foxes were rare during daytime in the warm seasons, and those of jackals were lacking.

Activity of both predators was rising during the night (more photos were taken by the camera traps). The number of photographs taken was rising from around 17h and were high in number until morning, till around 9-10h. After this period the number of photos was low or lacking. Occasional peak concerning the fox was observed due to one single animal feeding in front of the camera between 11-13h (Fig. 2).

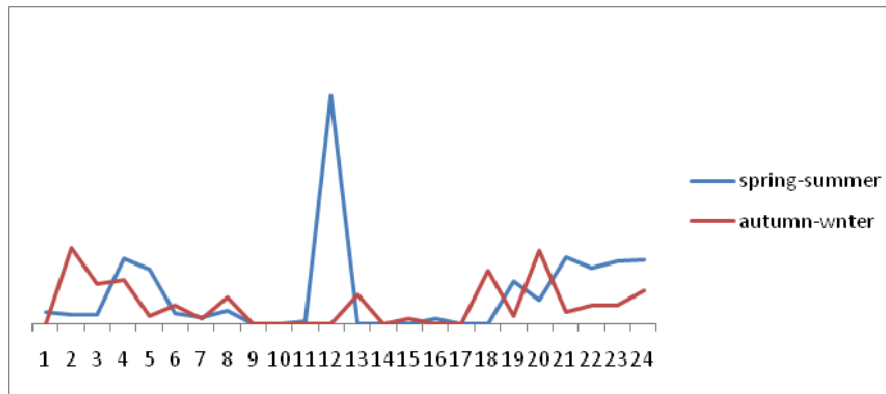


Fig. 2. Number of all pictures of Red Fox (*Vulpes vulpes*) taken during 24h (expressed for one hour time interval) during seasons.

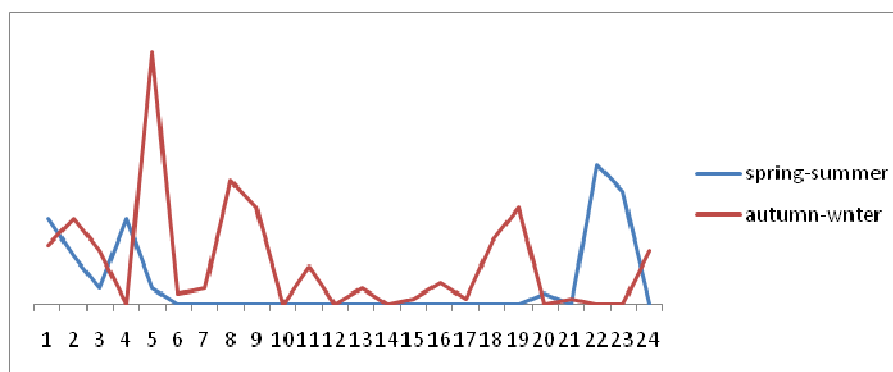


Fig. 3. Number of all pictures of Golden Jackal (*Canis aureus*) taken during 24h (expressed for one hour time interval) during seasons.



Fig. 4. Daytime activity (feeding on dog food) of the Red Fox and the Golden Jackal registered by camera traps at the Sinite Kamani Natural Park.

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