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On the fruit consumption of Eurasian Badger (Meles meles) (Mammalia: Mustelidae) during the autumn season in Sredna Gora Mountains (Bulgaria)

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Abstract. This case study was carried out at one badgers family territory by a single collection (11.11.2002, north of Stara Zagora City, near Tabashka River) of faeces from the animal latrine sites. Total of 1361 individual food items were identified in Eurasian badger (*Meles meles*) faeces from which the fruits of the Cornel-tree (*Cornus mas*) strongly dominated (n=1332, 96.5% from all items, 98.2% from all fruits).

Key words: badger, diet, fruit consumption.

Introduction

The Eurasian Badger (*Meles meles* L.) is an omnivorous mustelid which food varies from small invertebrate animals like earthworms, snails, and insects, to amphibians, mammals, and fruits (MACDONALD & BARRET, 1993). His diet consists of more vegetation matter (mainly fruits) in southern areas of its distribution, than in the north (SIDOROVICH, 1995). Various plant species played significant role in the food of badgers in different areas and seasons. For example in South-west Portugal its main food were olives, pears and figs (ROSALINO *et al*., 2005), in Switzerland cherries, plums and oats were eaten seasonally and in large volumes (ROPER & LÜPS, 1995), and chestnuts were significant in an area of the Italian Pre-Alps (MARASSI & BIANCARDI, 2002). Due to the diversity of the major food items in the diet and their wide geographical variation, some authors have considered badger to be a food generalist (ROPER & MICKEVICIUS, 1995). In Bulgaria the food of the badger was well studied and several diet categories were considered to be important to the species as fruits and invertebrates (POPOV & SEDEFCHEV, 2003). There were no any studies on its trophic spectrum at Sarnena Sredna Gora Mts.

The aim of the current study was to provide some information on the badgers' fruit consumption in this area.

Material and methods

This case study was carried out at one badgers family territory by a single collection (11.11.2002, north of Stara Zagora, near Tabashka River, N42° 29′ E25 ° 38′) of faeces from the animal latrine sites, well visible on terrain (ROPER *et al.*, 1993). They were stored in plastic bags and afterwards studied in laboratory conditions. The fruit remains were determined using a comparative collection of seeds and pits, made especially for this study.

The dominant habitats at the study area were xeric *Quercus* spp. and *Carpinus orientalis* forests, bush areas and pasture lands on limestone terrains. Small patches of agricultural areas and river sites were also present in the badgers' territory.

Diet was investigated by a calculation of individual food item frequency against all items registered, when considering one pit to be one fruit (for cornel-trees and blackhorns), and the maximal number of seeds counted per one fruit (for pears).

Results and discussion

Total 1361 individual food items were identified in Eurasian badger faces from which the fruits of the Cornel-tree (*Cornus mas*) strongly dominated (n=1332, 96.5% from all items, 98.2% from all fruits) (Table 1). All other fruits were eaten occasionally and did not play a significant role in its diet. Despite a lack of a detailed search of animal remains in the faces, some insect chitin remains were also registered (mainly beetles and grasshoppers) all with low frequency.

Our results showed that the main plant species consumed by the badger family under study at the particular autumn period were the Cornel-tree fruits.

Table 1. *Undigested food remains found in badgers (Meles meles) faeces during autumn in Sredna Gora Mts.*

Food items (fruits)	**N**	**%**
Cornus mas	1332	96,5
Pyrus communis	23	1,7
Pyrus sativa	1	0,1
Prunus spinosa	1	0,1
Total fruits	1357	98,3
Other undigested remains		
Coleoptera	10	0,7
Orthoptera	13	0,9
Insecta – larvae (undet.)	1	0,1
Total insect remains	24	1,7
Total food items	1381	100,0

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Върху консумацията на плодове от язовеца (Meles meles) (Mammalia: Mustelidae) през есенния период в Средна гора (България)

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Резюме. Проучването е проведено на базата на общо 1357 отделни идентифицирани плодове, събрани като костилки в екскременти от едно семейство язовци (*Meles meles*) в Средна гора, северно от град Стара Загора през ноември, 2002 година. Изследвани са само видовете плодове в хранителния спектър на вида. Изчислен е процента на срещаемост на отделните плодове на даден вид растение спрямо всички установени в пробите. Установено е силно доминиране на плодовете на дряна (*Cornus mas*) с 98.2% от всички установени плодове.

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