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Diet of *Martes foina* in Bohemia, Czech Republic (Carnivora: Mustelidae)

Potrava kuny skalní (*Martes foina*) v Čechách (Carnivora: Mustelidae)

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Abstract. The stone marten (*Martes foina*) population has increased dramatically in the Czech Republic in the last few decades, especially in urban areas. Unfortunately, very little is known about feeding ecology and diet of the species in the country, particularly in Bohemia. Therefore, the aim of our study was to describe the stone marten diet from four Bohemian localities. We used scatological analysis and identified 107 animal and plant taxa. Various materials of anthropogenic origin also occurred frequently in the diet. Our results suggest that in Bohemia, the stone marten is an opportunistic feeder which can use a wide spectrum of food sources.

Key words. **S**tone marten, food spectrum, Carnivora, ecology.

INTRODUCTION

During the last few decades, the population of the stone marten, *Martes foina* (Erxleben, 1777), in the Czech Republic has increased dramatically, especially in urban areas (Šálek et al. 2005). The success of the stone marten in urbanised areas could be influenced by the exceptional plasticity of its feeding habits. Unfortunately, very little is known about feeding ecology and diet of the stone marten in the Czech Republic, particularly in Bohemia (see Table 1).

The first piece of information about diet of the stone marten from Bohemia was reported by Balbinus (1679). He recorded an observation from ca. 1644 of five stone martens walking on the roof of the Jesuit College Clementinum in the very centre of Prague and carrying one egg each (Balbinus 1679: 146; Fig. 1). Much later, Svatoš (1973) examined six stomach contents from martens captured in four villages in the Nymburk district, central Bohemia. Animal remains found in the stomachs included eggs, an unidentified murid, the brown rat (*Rattus norvegicus*), domestic pigeon (*Columba livia* f. *domestica*), house sparrow (*Passer domesticus*) and pieces of gut of the domestic pig. Identified plant remains were corn (*Zea mays*), pieces of an apple (*Malus* sp.) and straw (Svatoš 1973).

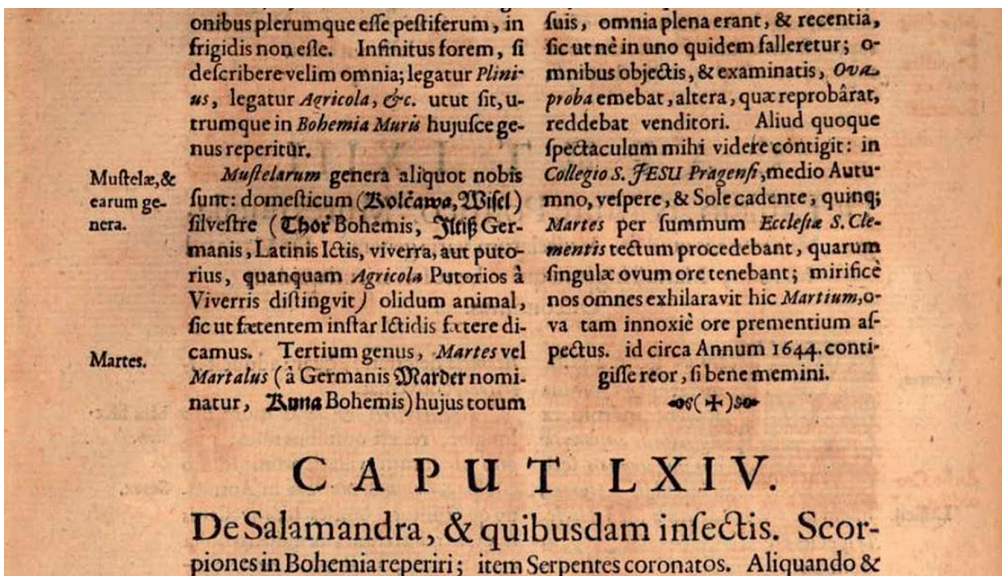
All the other studies aimed at the stone marten diet from the Czech Republic are based on the material from Moravia (Svatoš & Dyk 1967, Holišová & Obrtel 1982, Šebela 1982, Ryšavá-Nováková & Koubek 2009). Svatoš & Dyk (1967) analysed a single stomach from central Moravia which contained an apple, egg, pieces of wood and needles. Similarly, in 10 stomachs obtained from martens hunted in pheasanteries in southern Moravia and in four stomachs from the outskirts of Brno, Šebela (1982) found remains of lagomorphs (both hare and rabbit), chicken and its eggs (*Gallus domestica*), the willow tit (*Phoecile montanus*), common pheasant

Table 1. List of studies aimed at the diet of the stone marten (*Martes foina*) based on material from the Czech Republic
Tab. 1. Seznam studií zabývajících se potravou kuny skalní (*Martes foina*) na území České republiky

study / studie	sample / vzorek	locality / lokalita
Svatoš & Dyk (1967)	1 stomach content	Náměšť na Hané, Moravia
Svatoš (1973)	7 stomach contents	Nymburk district, Bohemia*
Holišová & Obrtel (1982)	31 pieces of excrements	Brno, Moravia
Šebela (1982)	14 stomach contents	southern Moravia
Ryšavá-Nováková & Koubek (2009)	120 stomach contents	southern Moravia

*six stomach contents from Nymburk district and repeated results from previous study of Svatoš & Dyk (1967)

(*Phasianus colchicus*), a thrush (*Turdus* sp.) and one other unidentified passerine, and only three plant items (strawberries *Fragaria* sp., *Prunus* sp. and apple *Malus* sp.). Later, Ryšavá-Nováková & Koubek (2009) analysed 120 stomach contents of stone martens from southern Moravia. They identified 26 different taxa, but unfortunately only mammals were identified to the species level. Holišová & Obrtel (1982) chose a different approach, i.e., a scatological analysis. They analysed scat collected in the autumn and winter periods in the suburbs of Brno


onibus plerumque eſſe peſtiferum, in frigidis non eſſe. Infinitus forem, ſi deſcribere velim omnia; legatur *Plinius*, legatur *Agricola*, &c. utut ſit, utrumque in *Bohemia Muris* hujuſce genus reperitur.

Muſtelæ, & earum genera.

Muſtelarum genera aliquot nobis ſunt: domeſticum (Kolčawa, Wiſel) ſilveſtre (Thor Bohemis, Iltiß Germanis, Latinis Ictis, viverra, aut putorius, quanquam *Agricola* Putorios à Viverris diſtingvit) olidum animal, ſic ut fœtentem inſtar Ictidis fœtere dicamus.

Martes.

Tertium genus, *Martes* vel *Martalus* (à Germanis Marder nominatur, Kuna Bohemis) hujus totum ſuis, omnia plena erant, & recentia, ſic ut nè in uno quidem falleretur; omnibus objectis, & examinatis, *Ovæ proba* emebat, altera, quæ reprobârat, reddebat venditori. Aliud quoque ſpectaculum mihi videre contigit: in *Collegio S. JESU Pragenſi*, medio Autumno, veſpere, & Sole cadente, quinq; *Martes* per ſummum *Eccleſiæ S. Clementis* tectum procedebant, quarum ſingulæ ovum ore tenebant; mirificè nos omnes exhilaravit hic *Martium*, ova tam innoxiè ore prementium aſpectus. id circa Annum 1644. contigiſſe reor, ſi bene memini.

CAPUT LXIV.

De Salamandra, & quibusdam inſectis. Scorpiones in Bohemia reperiri; item Serpentes coronatos. Aliquando &

Fig. 1. Part of the text (p. 146) describing observation of five free-living martens in Prague, *Caput LXII – Miscellanea historica Regni Bohemiae* by Bohuslaus Balbinus (1679).
Obr. 1. Výřez textu (str. 146) popisujícího pozorování pěti kun v Praze, *Caput LXII – Miscellanea historica Regni Bohemiae* od Bohuslava Balbína (1679).

and identified 33 different taxa. Principle studies focused on the food of the stone marten in the rest of Europe were reviewed by Zhou et al. (2011).

The aim of this study is to extend our knowledge about the food spectrum of the stone marten. We focused on a detailed description of the diet of the stone marten in Bohemia.

MATERIAL AND METHODS

In this study we used a non-invasive method of scatological analysis. The stone marten scat can be distinguished from that of other carnivores according to its size and shape, with the exception of the pine marten, *Martes martes* (Goszczyński 1976). We collected the material only at urbanised sites to avoid confusion between the two marten species because the pine marten does not occupy urbanised areas in the Czech Republic (Anděra & Gaisler 2012).

Collection sites

The stone marten scat was collected between September 2012 and October 2014 at four localities in Bohemia. Two of them are in Prague, one in the Prague downtown and the other in the suburbs of Prague, Horní Počernice. Other two sites were in small villages, Volduchy (Rokycany dist.) and Zaječov (Beroun dist.). In the intention to cover a wide spectrum of habitats of the stone marten in Bohemia, the scat was collected in four localities of a different urbanisation level. The first number in the locality description is the KFME grid mapping square code (Buchar 1982).

5952b: Viničná 5, Prague 2, 230 m a. s. l.
The locality is situated in the Prague downtown. The marten scat was collected in the attic of the building built in 1900 (Fig. 2). It belongs to the Faculty of Science, Charles University and its attic is out of use. Although the building is found only ca. 500 m from streets loaded by heavy traffic, it is surrounded by several large gardens. The most important one is the Botanical Garden inhabited by numerous bird species, several small mammal species (e.g., *Crocidura suaveolens*, *Erinaceus europaeus*, *E. roumanicus*, *Sciurus vulgaris*, *Apodemus sylvaticus*, *Mus musculus*, and *Rattus norvegicus*). There are also numerous plant species including various vegetables and fruit trees.

Fig. 2. Locality Viničná 5, Prague; left – interior of the attic, right – front view of the building (photo by L. Nováková).
Obr. 2. Lokalita Viničná 5, Praha; vlevo – půda objektu, vpravo – budova zvenku (foto L. Nováková).

Fig. 3. Locality Cirkusová 1740, Prague; left – interior of the attic, right – front view of the building. (photo by L. Nováková).
Obr. 3. Lokalita Cirkusová 1740, Praha; vlevo – půda objektu, vpravo – budova zvenku (foto L. Nováková).

5853d: Cirkusová 1740, Prague 10, 250 m a. s. l.
The locality is situated at the margin of the Prague municipal area. The marten scat was collected in the attic of the building built in 1961 (Fig. 3). Till 1990, the building served as a stable for circus animals, from that time there is a small joinery workshop and the rest is used as a depository of various discarded

Fig. 4. Locality Volduchy, left – barn house, right – garden (photo by K. Melounová).
Obr. 4. Lokalita Volduchy, vlevo – stodola, vpravo – zahrada (foto K. Melounová).

equipment or it is partly empty. The attic is only rarely visited by people. The building is in the middle of a large yard where various abandoned store-buildings as well as a modern building of the depository of the National Museum are found. The yard is surrounded from three sides by a mixture of small family houses, gardens, plots covered by ruderal vegetation and various store-houses. The fourth side neighbours a corn field and further on is open to agricultural landscape. The locality is inhabited by numerous bird species. In addition to the species occurring at the Viničná locality there are also chickens and pheasants. Also the mammal fauna of the site contains more species than that in the very centre of Prague, additional species include e.g., *Sorex araneus*, *Talpa europaea*, *Microtus arvalis*, *Cricetus cricetus* and *Lepus europaeus*.

6247b: Volduchy, Rokycany district, ca. 400 m a. s. l.
Volduchy is a medium-sized village (ca. 1,150 inhabitants). It is surrounded by agricultural landscape. The marten scat was collected around a family house in the garden, court and in small stables housing a horse and two goats (Fig. 4). The house is surrounded from three sides by a group of similar family houses, the fourth side neighbours a field. The village exhibits intensive agricultural activity. We have no information about the bird and mammal fauna of the locality.

6249a: Zaječov, Beroun district, ca. 470 m a. s. l.
The marten scat was collected in the attics and corridors of a huge Augustinian monastery rebuilt in the late 17th century (Fig. 5). The monastery is situated in the centre of a medium-sized village (ca. 1,450 inhabitants) and in its close vicinity there are abandoned gardens, meadows, two small ponds and several uninhabited buildings. A forest is found ca. 500 m from the monastery. Although the village of Zaječov is a bit bigger than Volduchy, the level of urbanisation and the overall human activity are lower there. A part of the houses are not inhabited or only seasonally used. We have no information about the bird and mammal fauna of the locality, however, it should be mentioned that in the attic of the monastery there is a roost of a maternity colony of the greater mouse-eared bat (*Myotis myotis*), containing ca. 130 adult females.

Sample processing

Each collection site was visited once per month with the exception of Zaječov, which was visited once per two months. During every visit, all stone marten scat was collected. The scat collected during one visit of the locality was considered as one sample in further analysis. In total, we collected 76 samples.

Fig. 5. Locality Zaječov, left – inner view of the corridor in the Monastery, right – outer view of the building. Photo by L. Nováková.
Obr. 5. Lokalita Zaječov, vlevo – chodba kláštera Svatá Dobrotivá, vpravo – budova zvenku. Foto L. Nováková.

First, every sample was dried and weighed. After that, the samples were soaked in water and washed through two sieves (mesh diameter 0.2 mm and 0.5 mm). The obtained food remains were separated. Before identification, every item was dried and weighed. Food items less than 0.001 g in weight were only scored as present.

If possible, each food organismal item was identified to the species level. For identification of mammals we used the key by Anděra & Horáček (2005). In addition, we created a comparative collection of whole skeletons of small terrestrial mammals. In birds, we did not identify the parts of bones and feather remains to the species level, because in the absence of whole bones it is almost impossible. A comparative collection of bird eggs is available in the collections of the Department of Zoology, Charles University. Fish were identified based on their pharyngeal teeth. The invertebrates found in the marten diet were identified by experts from the Department of Zoology, Charles University. We checked the presence of earthworm (Lumbricidae) chaetae in the scat according to the method by Kruuk & Parish (1981). Plants were identified solely according to their seeds, using the atlas by Cappers et al. (2012). In cooperation with experts from the Department of Botany, Charles University, we also created a comparative collection of common plant seeds.

Expression of the results

The obtained results were expressed as the relative frequency of occurrence (F%), where:
F% = $(n_i / n)*100$
n_i is the number of samples containing the particular food item, n is the number of all samples;
and weight proportion (W%), where:
W % = $(m_i / m)*100$
m_i is the weight of the particular food item given in grams, m is the weight of all food items in grams.

RESULTS

We analyzed 1,994 grams of dried stone marten scat and after washing we obtained 1,050 grams of food remains. About 36.5% of the weight of the remains could not be identified and other 1.6% were small stones. We identified at least 107 different taxa – 11 mammal, five bird and two fish species, 42 invertebrate taxa and 47 plant taxa.

Mammals

Mammals were found in 46 samples (F=60.5%) and made up 6.9% of the weight of all remains (W). We identified at least 11 species of mammals. The most common mammals were the common vole (*Microtus arvalis*, F=23.68%), the water vole (*Arvicola terrestris*, F=11.84%), the hedgehog (*Erinaceus* sp., F=5.2%), the bank vole (*Clethrionomys glareolus*, F=3.94%), the red squirell (*Sciurus vulgaris*, F=3.94%), the wood mouse (*Apodemus sylvaticus*, F=2.63%) and lagomorphs (F=2.63%). The harvest mouse (*Micromys minutus*), house mouse (*Mus musculus*), weasel (*Mustela nivalis*) and noctule bat (*Nyctalus noctula*) were identified only in one case each. In one sample we found other bat remains, but due to the high level of digestion they could not be identified to the species level.

Birds and eggs

Birds and eggs regularly appeared in the marten diet. Frequencies of occurrence in the samples were 82.9% in birds (W= 9.0%) and 25% in eggs (W=0.13%), respectively. We did not identify birds to the species level due to the high degree of digestion of bones and feathers. We found

remains of some unspecified passerines. Egg shells belonged to two species of birds – the chicken (*Gallus gallus* f. *domestica*) and in one case to the mallard (*Anas platyrhynchos*). In addition, we observed cadavers of the wood pigeon (*Columba palumbus*) and the woodpecker (*Dendrocopos* sp.) at the collection site in the Viničná attic. According to the traces found on the cadavers, both birds were most probably preyed by the stone marten.

Other vertebrates

We did not find any amphibians or reptiles. Two species of fish were recorded in the marten diet, the common carp (*Cyprinus carpio*) and the Prussian carp (*Carassius gibelio*), in one case each (F=1.3%). Weight proportion of fish remains was negligible.

Invertebrates

Invertebrates were found in 50 samples (F=65.8%) and their weight proportion (W) was 0.14%. We successfully identified 42 taxa of invertebrates. The marten diet included three species of snails *Cepaea hortensis*, *Vallonia pulchella* and one other unspecified species. All other taxa belong to Arthropoda.

We found a variety of insects (Hexapoda) in the remains. The hornet *Vespa* sp. was recorded most frequently (F=19.7%). Other identified members of Hymenoptera were *Apis* sp., Formicidae sp. and one Apocrita species. The second most often identified taxa were Lepidoptera spp. (F=10.5%).

More than a half of the identified invertebrate taxa were beetles Coleoptera (26 spp.). Six of them belong to Carabidae (*Amara* sp., *Anchonemus dorsalis*, *Carabus intricatus*, *Harpalus* sp., *Pseudophonus rufipes* and one unidentified species), three Coccinelidae (*Coccinella septempunctata*, *Harmonia* sp. and one unidentified species), two Curculionidae (*Othiorhynchus* sp. and one unidentified species), one Dermestidae (*Attagenus* sp.), one Ditiscidae (unidentified species), two Elateridae (*Agrypnus murinus* and one unidentified species), two Chrysomelidae (*Agelastica alni*, *Lema* sp.), one Nitidulidae (*Glischrochilus quadripunctatus*), two Ptinidae (*Niptus hololeucus* and one unidenified species not mentioned above), three Scarabeidae (*Amphimallon solstitiale*, *Valgus hemipterus* and one unidentified species not mentioned above), two Tenebrionidae (*Tenebrio opacus*, *Tenebrio* sp.) and one other unidentified Coleoptera species not mentioned above.

In the marten diet, two Diptera species (*Lucilia* sp. and one other unidentified species) and one Heteroptera species were also present. There was at least one other Hexapoda species which we were not able to identify. Other unidentified invertebrates include Acari sp., Araneida sp., Ophiliones sp. and one other unidentified Arthropoda species. We did not find any remains (chaetae) of Lumbricids.

Plants

We found plant remains in 75 out of 76 samples (F=98.7%) with the total weight proportion of 44.9%. We were able to identify 47 taxa based on their seeds. Species with the highest frequency of occurrence were the cherry *Prunus* sp. (F=40.8%), apple *Malus* sp. (F=25%), yew *Taxus baccata* (F=23.7%), plum *Prunus domestica* (F=19.7%), pear *Pyrus communis* (F=15.8%), rose hip *Rosa canina* (F=14.5%) and the elderberry *Sambucus nigra* (F=14.5%). From other fleshy fruits we found the white mullberry (*Morus alba*), the raspberry (*Rubus idaeus*), blackberry (*Rubus*

fruticosus agg.), mahaleb cherry (*Prunus mahaleb*), wild strawberry (*Fragaria vesca*), dogwood (*Cornus mas*) and wine (*Vitis vinifera*). Surprisingly, we found several cereal species such as the barley (*Hordeum vulgare*), millet (*Panicum miliaceum*), wheat (*Triticum aestivum*), sorghum (*Sorghum bicolor*) and one other unidentified cereal (Poaceae sp.). Other grains identified in the diet were the common flax (*Linum usitatissimum*), sunflower (*Helianthus annuus*) and the cockspur (*Echinochloa crus-galli*). Other species found were the rapeseed (*Brassica napus*), caraway (*Carum carvi*), black nightshade (*Solanum nigrum*), red poppy (*Papaver rhoeas*), peanut (*Arachnis hypogea*) and vetch or the meadow pea (*Vicia* sp./*Lathyrus pratensis*).

Herbs found in the diet included one unidentified Amaranthaceae species, the hawkbit (*Leontodon autumnalis/hispidum*), two species of the goosefoots (*Chaenopodium album* and *C. murale*), *Bupleurum rotundifolium*, the common chickweed (*Stellaria media*), the mallow (*Malva* sp.), *Galium* sp. and the common knotgrass (*Polygonum aviculare*).

We identified quite a lot of seeds of tree species. Frequently, we found a high number of seeds of the silver birch (*Betula pendula*). The other tree seeds included the common hornbeam (*Carpinus betulus*), the ash (*Fraxinus excelsior*), maple (*Acer platanoides*), the white elm (*Ulmus laevis*), the largeleaf linden (*Tilia platyphyllos*), the paulownia (*Paulownia* sp.), catalpa (*Catalpa* sp.), one unidentified Rosaceae sp. and the golden chain or locust (*Laburnum* sp./*Robinia* sp.). We also found many unidentified buds of trees, many other vegetative parts of plants and peels which were not identified to the species level.

Material of anthropogenic origin

Materials of anthropogenic origin were found with quite high frequency of occurrence 35.5%, but in a small amount (W=1.1%). We recorded a wide spectrum of materials such as pieces of paper, plastics, polystyrene, aluminium foil, glass wool, textile strings or wax from candles. We also found some peculiarities, for example pieces of a leather shoe, condoms, packaging from some groceries (butter, salami and ham), pieces of package from packaged meat, a bubble gum, a piece of rubber, a sticker from an apple (with lettering "České jablko" meaning "Czech/Bohemian apple") or a metal buckle usually found on some kind of sausages. During material collecting we saw many pieces of chewed cables, but we did not find any in marten scat.

DISCUSSION

Previous studies from the Czech Republic have documented a wide spectrum in the stone marten diet (Ryšavá-Nováková & Koubek 2009, Holišová & Obrtel 1982). Our study extends the list of identified items considerably. We identified 107 different animal and plant taxa as well as numerous materials of anthropogenic origin in marten scat. Therefore our results suggest that in Bohemia, the stone marten is an opportunistic feeder which can use a variety of food sources.

In our material, the dominant part of food remnants were plants. This result can be explained by not so effective digestibility of such type of food by carnivores, so plant food components can be overestimated. We did not use any coefficient of digestibility because there is no such coefficient primarily defined for martens. The most common coefficients used for evaluation of the marten food were originally defined by Lockie (1959). However, his results came from experiments with foxes, but later on these coefficients were used for martens (e.g., Lockie 1961, Holišová & Obrtel 1982). In spite of the fact that many authors used them, we did not find them sufficient for martens. As the opposite, we suppose that eggs and invertebrates could be underestimated in our results. Egg shells and chitinous remnants of invertebrates preserved in

the scat are very light and represent only a small part of the weight of original food items. In this case the frequency of occurrence is a better indicator of importance.

Significant representation of seeds usually found in the wholegrain bread (i.e. the common flax, sunflower, caraway or red poppy) and certain type of material of anthropogenic origin (food packages, etc.) suggests that martens feed on leftovers from bins. Due to not insignificant amount of other materials such as paper it seems that the stone marten feeds on this material intentionally. We do not have any other explanation for this.

Small mammals were regularly found in the diet. Surprisingly, we did not find the brown rat (*Rattus norvegicus*) in the evaluated material. However, in a pilot study in the locality Viničná, where brown rats are very common in the neighbourhood (Frynta et al. 1994), we found the brown rat as a regular part of stone marten food (unpublished data). It is of interest that in spite of the every year presence of a maternity colony of the greater mouse-eared bat in the attic of the Augustinian monastery at Zaječov, bat remnants were not found in the diet of the local stone marten. Despite the large material covering all parts of a year we did not find any reptiles or amphibians (cf. Ryšavá-Nováková & Koubek 2009).

To be summarized, our results revealed that the diet of the stone marten in Bohemia is composed of various vertebrates but also is based on a high number of plant and invertebrate taxa which appear in various types of habitats. These data suggest that the stone marten (*Martes foina*) is an opportunistic omnivore. It can use a wide spectrum of food. In addition to numerous animal and plant taxa it feeds also on various leftovers of anthropogenic origin.

SOUHRN

V posledních desetiletích byl na území České republiky zaznamenán dramatický nárůst populačních hustot kuny skalní (*Martes foina*), především v synantropním prostředí. Ačkoliv se tak kuna skalní stala nepřehlédnutelným obyvatelem lidských sídlišť, o jejích potravních nárocích toho zatím mnoho nevíme. Z pěti studií věnovaných potravě kuny skalní v ČR se tři zaměřují na poměrně malé území jižní Moravy. Další dvě obsahují údaje o obsahu žaludku sedmi kun ze středních Čech a jedné ze střední Moravy. V naší studii jsme se proto zaměřili na detailní analýzu potravy kuny skalní v Čechách pomocí analýzy jejího trusu. Vybrali jsme čtyři lokality s pravidelným výskytem kuny skalní, dvě v Praze (centrum a okraj města) a dvě v menších obcích západních (Volduchy, okr. Rokycany) a středních Čech (Zaječov, okr. Beroun). Lokality byly vybrány tak, aby co nejlépe pokryly škálu synantropních protředí, ve kterých se kuna běžně vyskytuje. Na třech lokalitách byl trus sbírán pravidelně v měsíčních intervalech, v Zaječově jednou za dva měsíce. Veškerý trus získaný během jedné návštěvy lokality představoval jeden vzorek. Celkem bylo získáno 76 vzorků o celkové hmotnosti sušiny 1.994 g. Trus byl rozmočen a rozebrán, nalezené zbytky organismů v potravě byly, pokud to bylo možné, určeny až do druhové úrovně. Výsledky byly vyjádřeny jako relativní frekvence výskytu, váhové zastoupení složky a také jako seznam nalezených taxonů. Celkem bylo identifikováno nejméně 107 různých rostlinných a živočišných taxonů. Bylo zjištěno nejméně 11 druhů savců, kteří tvořili 6,9 % hmotnosti nalezených zbytků, se souhrnnou frekvencí výskytu 60,5 %. Ptáci byli nalezeni v 82,9 % vzorků (9 % hmotnosti zbytků), ptačí vejce ve 25 % vzorků (0,13 % hmotnosti). Celkově bylo kvůli obtížné identifikaci ptáků z natrávených zbytků rozpoznáno pouze pět taxonů, z toho čtyři byly určeny do druhu. Z ostatních obratlovců byly určeny dva druhy ryb zastoupené zanedbatelným množstvím zbytků v trusu, pokaždé jen s jedním výskytem. Zástupci bezobratlých živočichů byli zjištěni v 65,8 % vzorků s 0,14 % váhovým zastoupením. Z 42 identifikovaných taxonů patřilo 26 broukům (Coleoptera). Rostlinné části byly nalezeny v 75 ze 76 vzorků (98.7 %) a tvořily 44,9 % váhy nalezených zbytků. Podle semen se podařilo určit 47 taxonů s velkým zastoupením různých dužnatých plodů, ale také obilovin a bylin. V potravě byl také často rozpoznán materiál antropogenního původu jako např. papír, kusy igelitu, polystyren, ale také zbytky obalů od potravin. Výše uvedené výsledky naznačují, že kuna skalní v Čechách vykazuje velkou potravní plasticitu a je schopná využívat široké spektrum potravních zdrojů.

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