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# On the Arthropods in the Stone Marten's (Martes foina) diet in Central Bulgaria

STANISLAVA PEEVA[1], ATANAS MIKOV[2], DILIAN GEORGIEV[2]

*[1]Department of Animal production - Non-ruminants and other animals, Faculty of Agriculture, Trakia University, 6000 Stara Zagora, Bulgaria, email: st.peeva@abv.bg*
*[2]Department of Ecology and Environmental Conservation, University of Plovdiv, Tzar Assen Str. 24, BG-4000 Plovdiv, Bulgaria*

**Abstract**. Fourteen newly found Arthropods taxa in the Stone Marten's diet in Central Bulgaria were reported. Five of them were defined to species level. The study was carried out on the base of collected fecal samples.

**Key words**: Stone Marten, diet, insects

## Introduction

The Stone Marten (*Martes foina* Erxleben, 1777) is a medium-sized mustelid species widely distributed in Europe. Its food habits have been studied in detail mainly in Western and Central Europe and reported that it behaves as an opportunistic feeder (Rödel & Subbe 2006), which principally feeds on small mammals, birds, insects and fruits (Bertolino & Dore 1995; Martinoli & Preatoni 1995; Lanszki 2003; Posluzny et al. 2007). Most of them defined insects as additional food with high frequency of occurrence in Stone Marten's diet according to latitude and local climate.

In Bulgaria the studies of Stone Marten's food habits reported high frequency of occurrence of insects as well, but defined them to order, not to species level (Vasileva *et al.* 2005; Petrov 2006; Georgiev 2013; Hisano *et al.* 2014; Petrov *et al.* 2016). Only Hisano *et al.* (2016) determined several insect specimens to species level.

## Material and Methods

Fecal samples from Stone Marten were collected during spring-summer and autumn–winter period of 2014 and spring-summer period of 2017 in the region of Sredna Gora Mountains (Central Bulgaria). The samples were processed following the methods of Jedrzejewska and Jedrzejewski (1998). The food items were then sorted under reflected light with stereomicroscope and Arthropods were determined using morphological criteria (Zhang et al. 2005) in the Department of Ecology and Environmental Conservation, Faculty of Biology, University of Plovdiv "Paisii Hilendarski". A total of 18 of collected samples contained Arthropods.

## Results and Discussion

From 13 newly found insects in a diet of Stone Marten in Central Bulgaria four were determined to species level; two were defined to genus level; five - to family level; one - to superfamily and one – to suborder. Eight of newly found species belonged to Coleoptera and three species, to Orthoptera. Dermaptera and Hemiptera were presented with one species each (Tab. 1, Fig. 1). Chitin remains from *Scolopendra cingulata* (Chilopoda) were also found in addition to the knowledge of the Stone Marten's diet.

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**Table 1.** Insects found in the Stone Marten's fecal samples in Central Bulgaria.

| species | genus | family | superfamily | suborder | order |
|---|---|---|---|---|---|
| Unidentified species | *Scarabaeus* | Scarabaeidae | Scarabaeoidea | Polyphaga | Coleoptera |
| *Cetonia aurata* | *Cetonia* | | | | |
| *Melolontha melolontha* | *Melolontha* | Melolonthidae | | | |
| Unidentified species | - | Staphylinidae | Staphylinoidea | | |
| Unidentified species | - | Cerambycidae | Chrysomeloidea | | |
| Unidentified species | - | Carabidae | Caraboidea | Adephaga | |
| *Calosoma inquisitor* | *Calosoma* | | | | |
| Unidentified species | *Halyzia* | Coccinellidae | Cucujoidea | Cucujiformia | |
| Unidentified species | - | - | Acridoidea | Acrididea | Orthoptera |
| Unidentified species | - | - | | Caelifera | |
| Unidentified species | - | Tettigoniidae | Tettigonioidea | Tettigoniidea | |
| *Forficula auricularia* | *Forficula* | Forficulidae | | | Dermaptera |
| Unidentified species | - | Pentatomidae | Pentatomoidea | Pentatomomorpha | Hemiptera |

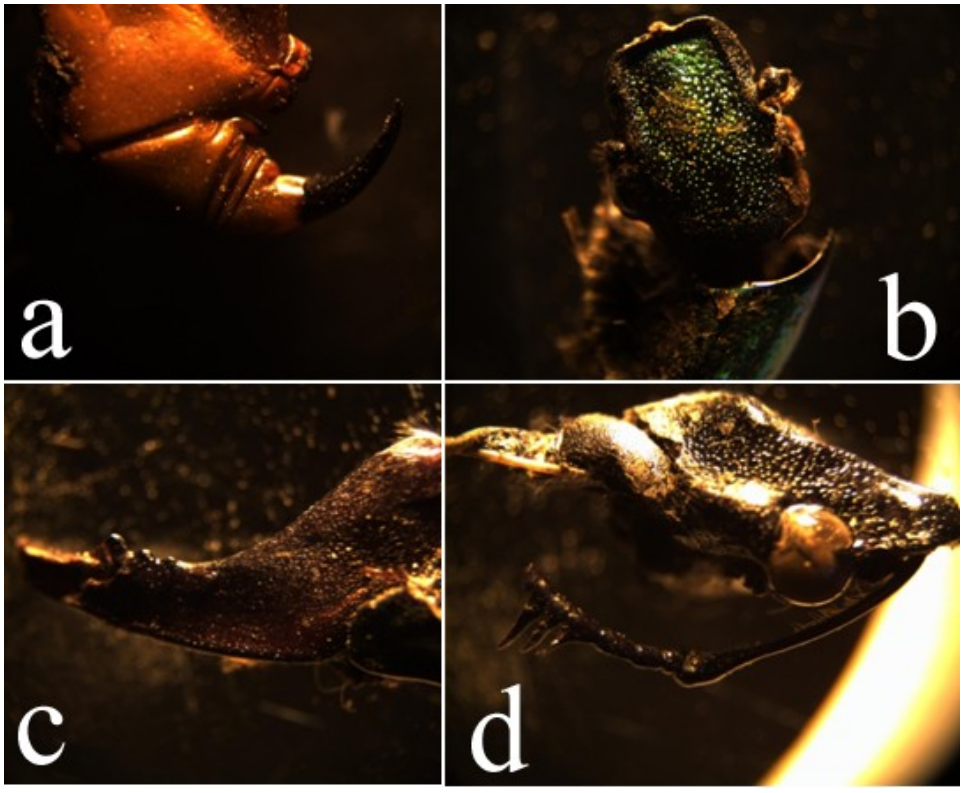


**Fig.1.** Chitin remains in excrements of Stone Marten (*Martes foina*) in the region of Sredna Gora Mountains: a - *Scolopendra cingulata*, b - *Cetonia aurata*, c; d - Coleoptera sp.

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