

## *On the substrates used for marking by the Stone Marten (*Martes foina* Erxl.) at the lowland areas of South Bulgaria*

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**Abstract.** At the area investigated the solid materials situated up the ground slightly dominated over the marking just on the ground. The concrete materials were mainly used followed by the stones, and soil. Rare were the cases of marking on the herb vegetation. Occasional marking was observed on a dead grass snake *Natrix natrix* and nylon remains.

**Keywords:** mustelid, territory, behavior.

### **Introduction**

The Stone Marten (*Martes foina* Erxl.) is the most widespread mustelid in Europe having high ecological plasticity and inhabiting even the big cities. It is having a home range up to 80 ha which is marked by feces deposited on various well visible sites (SIDOROVICH, 1995; POPOV & SEDEFICHEV, 2003). The studies of the proportions of the substrate types used for marking by the species are scarce. Such information from Balkans and especially from Bulgaria is lacking.

The aim of this study is to present some data on the substrate used for marking by the Stone Marten at the lowland areas of South Bulgaria.

### **Material and Methods**

Substrates used for marking by the Stone Marten were signed during 25 field trips made as not repeated occasional transects during all seasons. The lowlands of South Bulgaria near the cities of Stara

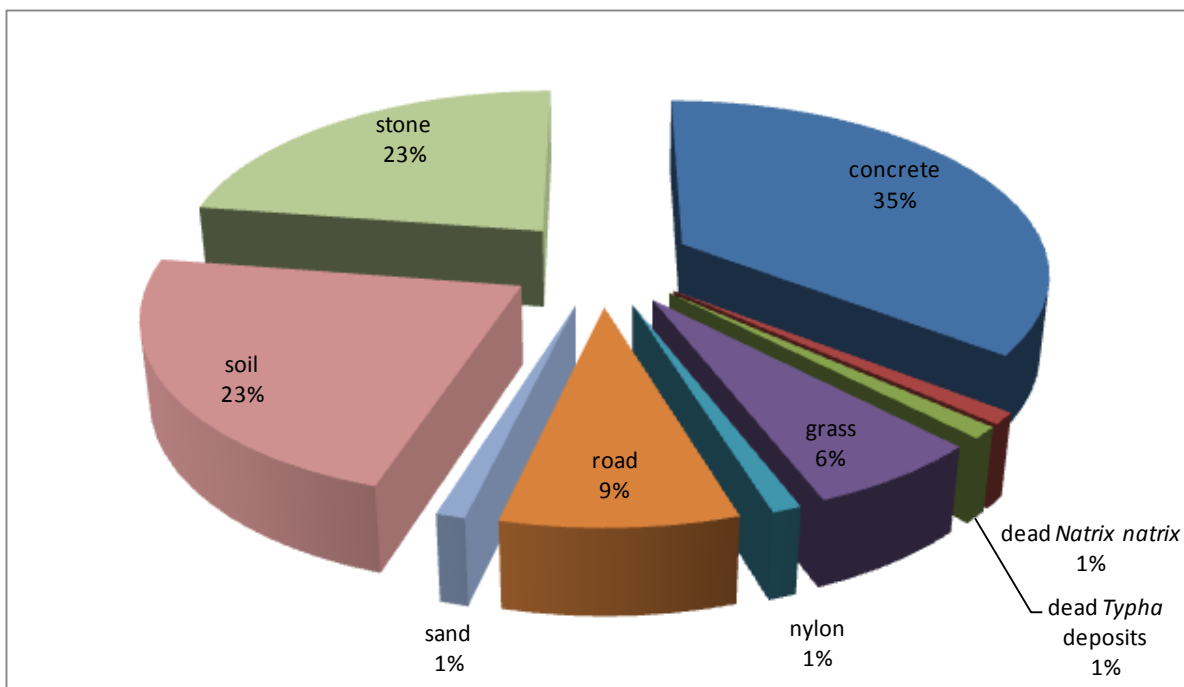
Zagora and Plovdiv (the Upper Thracian Lowland and the foothills of Sredna Gora and West Rhodopes Mts) were investigated during 2005 and 2006 (Table 1). A total of 93 such sites in anthropogenic and semi-natural (village vicinities) habitats were investigated.

### **Results**

At the area investigated the solid materials situated up the ground slightly dominated by 58% from all registered (Fig. 1). The concrete materials were mainly used with 35% from all (N = 33) followed by the stones with 23% (N = 21). Deposition of the feces on the ground was observed in 32% of the cases, mainly registered on the soil (23%, N = 21) and some on the asphalt roads (9%, N = 8). Single marking was observed on sand. Rare were the cases of marking on the herb vegetation (live grass or dry *Typha* sp. river deposits) with 7%. Occasional marking was observed on a dead grass snake *Natrix natrix* and nylon remains (both 1%).

**Table 1.** Dates, sites and numbers of the Stone Marten marking sites studied.

Date	Locality	Region	Number of sites
1.6.2005	Stara Zagora, Park Bedechka	Upper Thracia	5
10.6.2005	Starozagorski Bani	Sredna Gora Mt	11
30.8.2005	Stara Zagora, Park Bedechka	Upper Thracia	1
31.8.2005	West of Kolena vill.	Sredna Gora Mt	11
8.9.2005	Stara Zagora, Zora	Upper Thracia	3
10.9.2005	Sazliika River, Kolarovo vill.	Upper Thracia	2
11.9.2005	Trankovo vill.	Upper Thracia	6
15.9.2005	Plovdiv, vicinities, Trakia	Upper Thracia	10
16.9.2005	Plovdiv, vicinities, Fishfarms	Upper Thracia	4
19.9.2005	Plovdiv, vicinities, west	Upper Thracia	1
20.9.2005	Parvenets vill., near the river	Rhodopes	3
17.10.2005	Canal near Elenino vill.	Upper Thracia	1
22.10.2005	Stryama River, near Manole vill.	Upper Thracia	2
18.11.2005	Sazliika River, Kolarovo vill.	Upper Thracia	6
8.12.2005	Parvenets vill., near the river	Rhodopes	2
12.12.2005	Plovdiv, railway bridge	Upper Thracia	1
13.12.2005	Plovdiv, vicinities, Trakia	Upper Thracia	1
17.12.2005	West of Kolena vill.	Sredna Gora Mt	7
31.1.2006	Plovdiv, vicinities, Fishfarms	Upper Thracia	2
18.3.2006	West of Plovdiv, near round road	Upper Thracia	2
19.3.2006	Konush village	Upper Thracia	1
16.5.2006	Plovdiv, vicinities, Fishfarms	Upper Thracia	2
17.5.2006	Parvenets vill., near the river	Rhodopes	1
11.6.2006	Trankovo vill.	Upper Thracia	3
14.6.2006	West of Kolena vill.	Sredna Gora Mt	1
12.9.2006	Starozagorski Bani	Sredna Gora Mt	3
2.12.2006	Stara Zagora, ZZU area	Upper Thracia	1
<b>Total number of sites studied</b>			<b>93</b>



**Fig. 1.** The proportions of the substrates used for marking by the Stone Marten (*Martes foina* Erxl.) at the study area.

**References**

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