Testing of camera trap installation for arboreal mammals – pine marten as an example

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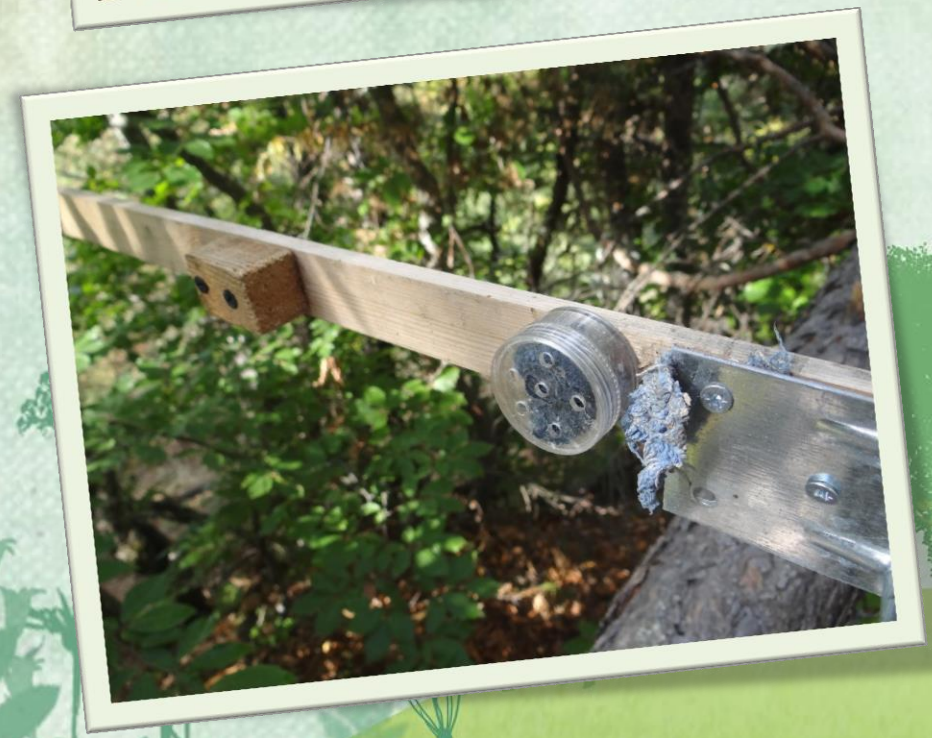
Introduction

- The camera trap technology was first designed to record animals on the ground surface.
- A lot of species that can be registered might have also arboreal or semi-arboreal way of life.
- All the studies in Bulgaria so far were also based on surveys on the ground surface.
- In our study, a camera trap installation for arboreal mammals was designed, aiming identification of martens on the species and individual level, the pine marten in particular.
- The stone marten was also considered in the study, although is not a typical arboreal species

To the best of our knowledge, **this is the first such attempt** in Bulgaria. Individual recognition in these two species is possible, as pine marten and stone marten have a specific shape and location of the breast spot in each individual.



Materials and Methods

- **Study period**: The project is ongoing since May and the results are expected at the end of 2020.
- **Location**: Vitosha and Western Rhodopi mountains, 10 locations per mountain.
- **Installation**:
  - Camera traps (Ltl Acorn 5210A, Bolymedia, Scout Guard - Boly Media SG2060-K, Moultrie A-Series MCG-13201 and Moultrie M40I models), mounted on suitable trees.
  - A parallel board and a platform mounted against the traps, on which the animal can stand and be photographed in such a way as to provide for their identification.
  - Each of the upper boards has a measuring line on the side, facing the camera trap, and on the back – a plastic box with a bait attached.
- **Bait:** two types were tested – the first is a mixture of blood and stale meat soaked towel, and the second – Premium Lockmittel Marder by Hagopur.

Results

- The height of the scientific installation is between 38 and 222 cm, and the distance between the camera traps and the boards varies from 55 to 150 cm.
- There is a big difference in the two values for the distance between the camera traps and the recognition installation, as 5 different models of camera traps were used.
- The distance between the two boards varied from 40 to 50 cm and is in accordance with the body length of the target species.
- The flash on the Acorn model was covered with 3 layers of aluminum foil to prevent over-exposure of the photos, as the flash on this model is very strong at close range.

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