



Snow-Tracking and Scent-Stations for Intensification of Lynx Monitoring in the Palatinate Forest

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Introduction

Background

Since 1980 signs of lynx presence were occasionally recorded in the Palatinate Forest. The current monitoring of lynxes in this low mountain range consists mainly of collecting and verifying accidental signs and observations. Current status of lynx in the Palatinate Forest is characterized by an unknown low number of individuals. The status may change in near future due to considerations about release of additional lynxes.

The Palatinate Forest

This densely forested region covers an area of nearly 180.000 ha and is located in the South West of Germany bordering the northern part of the French Vosges. The suitability of the region as habitat for lynx is proofed.

Methods:

Literature about scent-station and snow-tracking surveys are reviewed on their suitability for the Palatinate Forest. Evaluation of monitoring techniques is accomplished with regard to necessary effort and appropriateness to four monitoring levels: presence-absence, minimum population count, frequency index and population estimate.

Snow-Tracking

Conditions are regarded appropriate for snow-tracking when snowfall is followed by at least two days without appreciable precipitation. The analysis found out that the snow conditions are unsuitable for a systematic monitoring of lynxes in the Palatinate Forest.

Scent-Stations

Scent-stations are characterized by the use of an attractant to lure target species to certain places where signs of species presence are gained. Scent-stations can be combined with different techniques of species detection:

- track-plates
- hair-catchers
- camera-traps (also used without lure)

We decided to use hair-catcher because besides monitoring of population size or trends this technique offers applications using DNA-analysis, for example analysis of relatedness and genetic diversity of population.



Enclosure Tests

Lures

Combined with hair-catcher, lure has to attract target species to approach as well as cause rubbing behavior. In three enclosures different lures (see poster of Lampe et al.) were presented to eight adult lynxes. Individual rubbing time was measured as mean indicator of applicability of lure.

Hair-Catcher Design

Hair-Catchers are supposed to reliably remove hair. The eradicated hair should stay securely attached to the catcher. Additionally the construction should require low material costs and be easy to handle. We used carpet tiles with attached pieces of twisted wire fixed on wooden poles to meet these requirements.

Results

Fresh beaver castoreum seemed to perform best in causing rubbing behavior. We found indications that a combination with vaseline increases the durability of lure.

Field Tests

Harz National Park

In a pilot study the attractivity of scent-stations with hair-catchers to free ranging lynxes will be tested the Harz National Park. This area was chosen because lynxes occur at comparable high densities due to release of 22 lynxes since 2000.

The primary interest is whether Eurasian lynxes can be detected by scent-stations combined with hair-catchers in the field. If so what are the rates of visitation and which monitoring level can be achieved with this technique?

Palatinate Forest

In case of successful application scent-stations with hair-catchers will be tested in the Palatinate Forest and may be part of the regular lynx monitoring in this area in the future.