

EARLY DETECTION OF BARK BEETLE INFESTATION USING DRONES AND SCENT DETECTION DOGS

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INTRODUCTION

Early detection is essential for effective bark beetle management, yet newly infested trees are often identified only after visible symptoms appear. SPÜR-IPS explores a novel approach that combines drone-based remote sensing and scent detection dogs to improve early detection of bark beetle infestations in mountain forests.

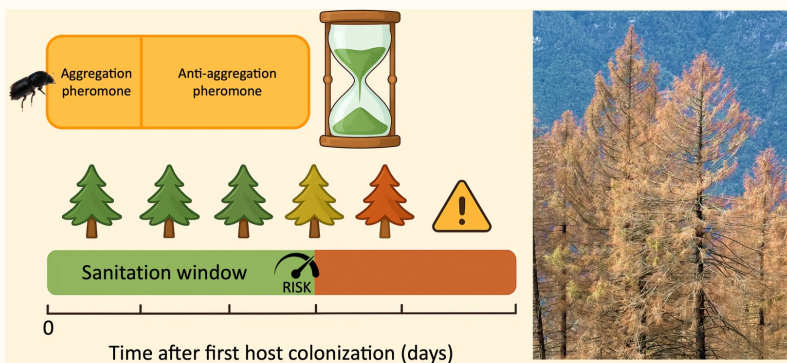


Photo: A. Hugentobler

WHY DETECTION DOGS?

Trained to recognize bark beetle-associated semiochemicals, they may detect infestations before trees show visible symptoms.

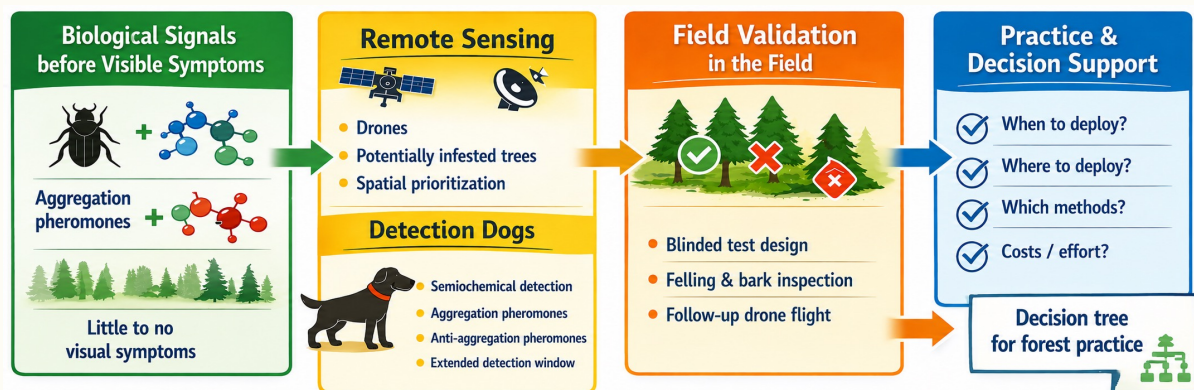
OBJECTIVES

- Develop an early warning approach for bark beetle infestations.
- Combine drone-based remote sensing with scent detection dogs.
- Evaluate the operational feasibility of this approach in mountain forests.

STUDY SITES



PROJECT CONCEPT: Extending the bark beetle detection window for forest management



EXPECTED OUTCOMES

- Earlier detection of infestations
- Improved field validation of remote sensing models
- Operational workflow for forestry practice

TAKE-HOME MESSAGE

Early detection starts before trees turn red. Combining drones and scent detection dogs may enable earlier detection of bark beetle infestations.