## **CNR IRET Conference**

## Rome, February 18th-19th 2025

# Vertical biodiversity: a study of tree crown microhabitats through tree climbing and drones



L. Latilla, P. Bertolotto, S. Carloni, F. Sicuriello, B. De Cinti **IRET-CNR**, Montelibretti Examples of vertical biodiversity: microhabitats

### Introduction

NATIONAL BIODIVERSITY

**JUTURE CENTER** 

**Consiglio Nazional** 

delle Ricerche

Tall trees host numerous microhabitats essential for forest biodiversity. However, ground-based observations provide a limited view of vertical biodiversity.

### **Objectives and Methodology**

This study examines the relationship between vertical biodiversity observed from the ground and that detected through direct canopy access via tree climbing techniques, aiming to develop predictive models.

#### **Results**

Preliminary data obtained in Cansiglio forest reveal a high concentration of cavities, deadwood, and bird nests in the upper canopy. Tree climbing provides detailed observations but is limited to a small sample of trees. To overcome this limitation, the study will test the use of drones.

#### **Conclusions**



Integrating ground observations and drone technology will enable a more comprehensive analysis of vertical biodiversity, supporting forest conservation and management.

Leonardo Latilla

