

# Monitoring and Implementation of Emerald Ash Borer (*Agrilus planipennis*) Surveys in Forest Area of Croatia

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## INTRODUCTION

In Croatia, native ash species *Fraxinus angustifolia* Vahl. and *Fraxinus excelsior* L. are ecologically and economically important components of lowland forests and *Fraxinus ornus* L. of sub-Mediterranean ecosystems. Non-native species, including *Fraxinus americana* L. and *Fraxinus pennsylvanica* Marshall, were widely planted for reforestation. The establishment of *Agrilus planipennis* in parts of Europe increases the risk of its introduction, posing a potential threat to forest ecosystems in Croatia.

## METHODOLOGY

- Croatian Forest Research Institute (CFRI) is competent authority for the pest surveys in forest area.
- Since 2016 the surveillance programme of *Agrilus planipennis* has been coordinated by the Croatian Ministry of Agriculture, Forestry and Fisheries (MPŠR RH) and implemented by CFRI.
- Surveys are focused on early detection, monitoring, prevention, and threat assessment.
- In 2023, MPŠR RH adopted Contingency Plan in order to ensure rapid and effective actions crucial to preventing the spread or eradication.

## Detection Methods

### Visual inspection

- Symptoms, insect signs and canopy dieback.
- Plant parts that may contain the larval stage.



Picture 1. Multifunnel trap placed on *Fraxinus angustifolia* Vahl.

### Trapping

- Period: from May to August.
- Host tree: *Fraxinus* sp.
- Trap type: dark green multifunnel traps.
- Attractant: 3Z-hexanol lure.
- Collection cups filled with propylene glycol.

### Sampling and Handling

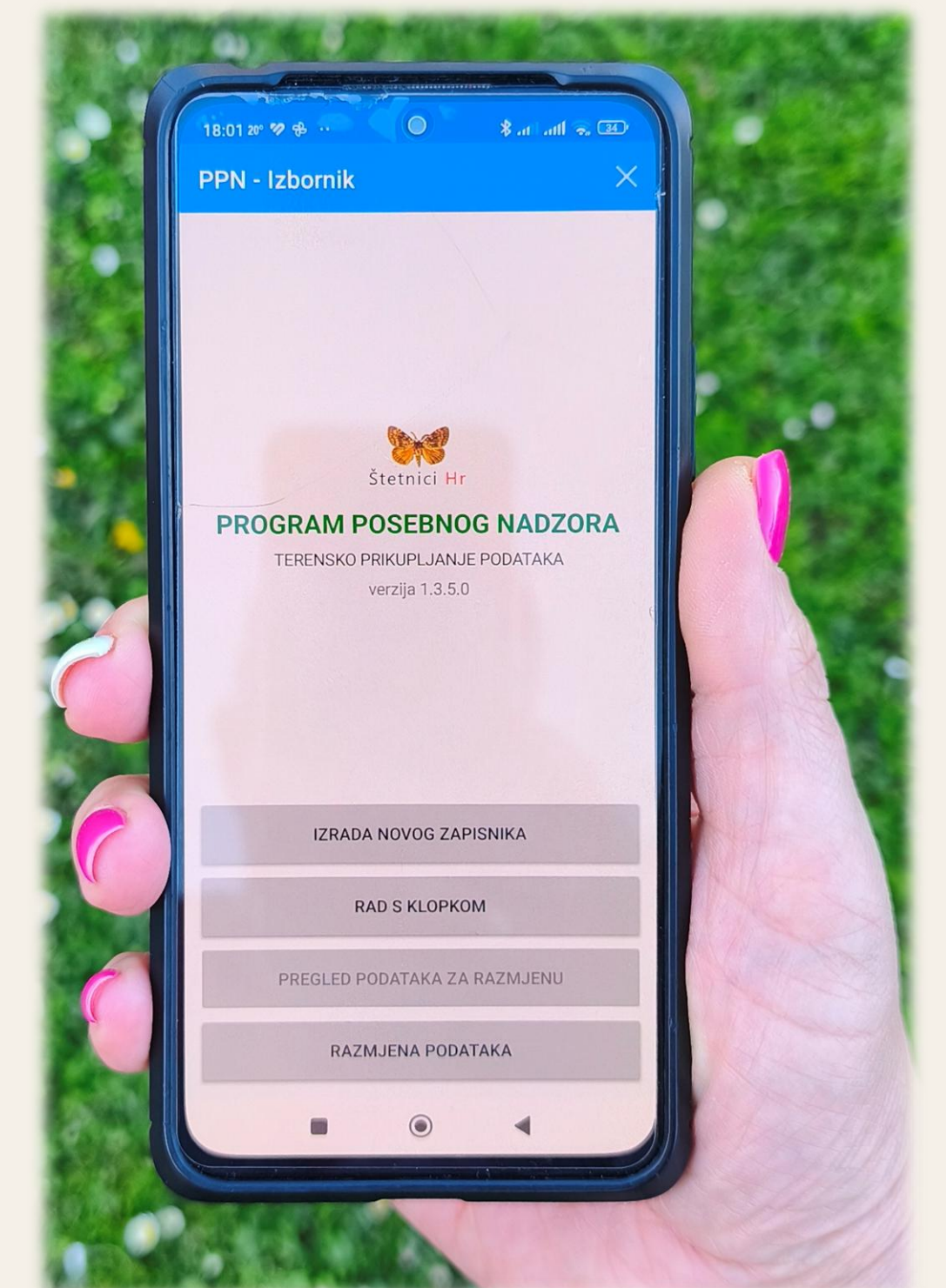
- Traps are inspected every 3 – 4 weeks.
- Samples are stored into sample containers with 70% ethanol, sealed and transported in a cool box.
- Samples are labelled with a unique QR code and delivered to CFRI Laboratory for Entomological Analysis.

## Field Data Collection

- Using internal mobile application (PPN) – recorded data: location, GPS coordinates, date, inspected area, the number of inspected trees, observation field, traps, samples, etc.
- Trap and sample data are entered by scanning the QR codes.
- PPN is connected with platform Štetnici.hr (<https://stetnici.sumins.hr/>).



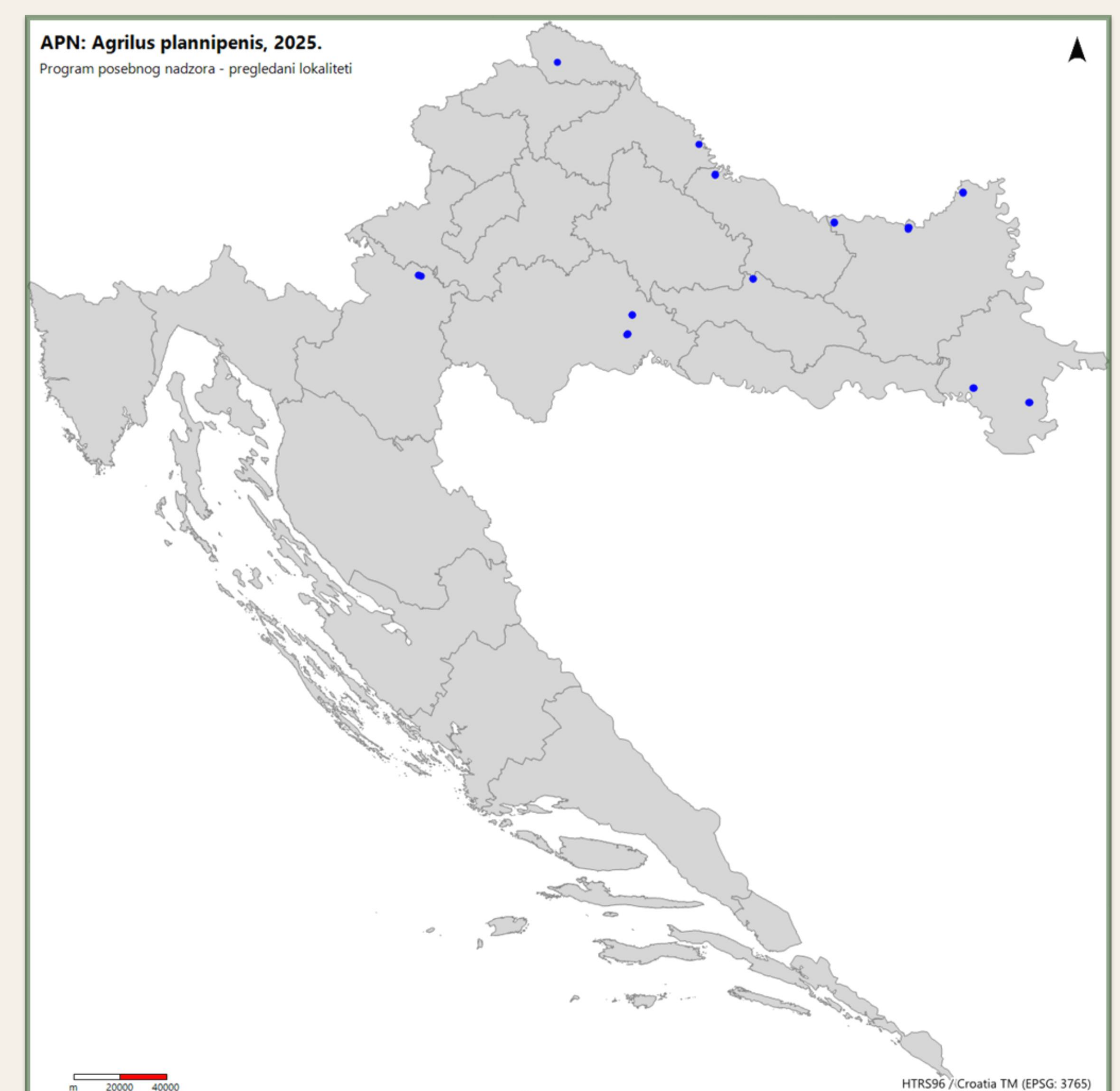
Picture 2. Labelled sample



Picture 3. PPN mobile application

## RESULTS (2025)

- Monitoring locations: **12** (2 visual inspections; 10 with traps)
- Visual inspections conducted: **32**
- Total trees inspected: **2990**
- Multifunnel traps: **10**
- Samples collected: **36**



Picture 4. Survey locations (platform Štetnici.hr)

## CONCLUSIONS

- *Agrilus planipennis* has not been detected in Croatia.
- **Early detection** is the primary surveillance objective.
- The combined use of visual inspection and trapping methods increases **detection reliability**.
- The integration of digital data collection tools enhances **data quality**, traceability and reporting efficiency.
- Maintaining and further developing **surveillance capacity** is essential for preventing its establishment and spread.