

# Pheromone trap monitoring in Spain

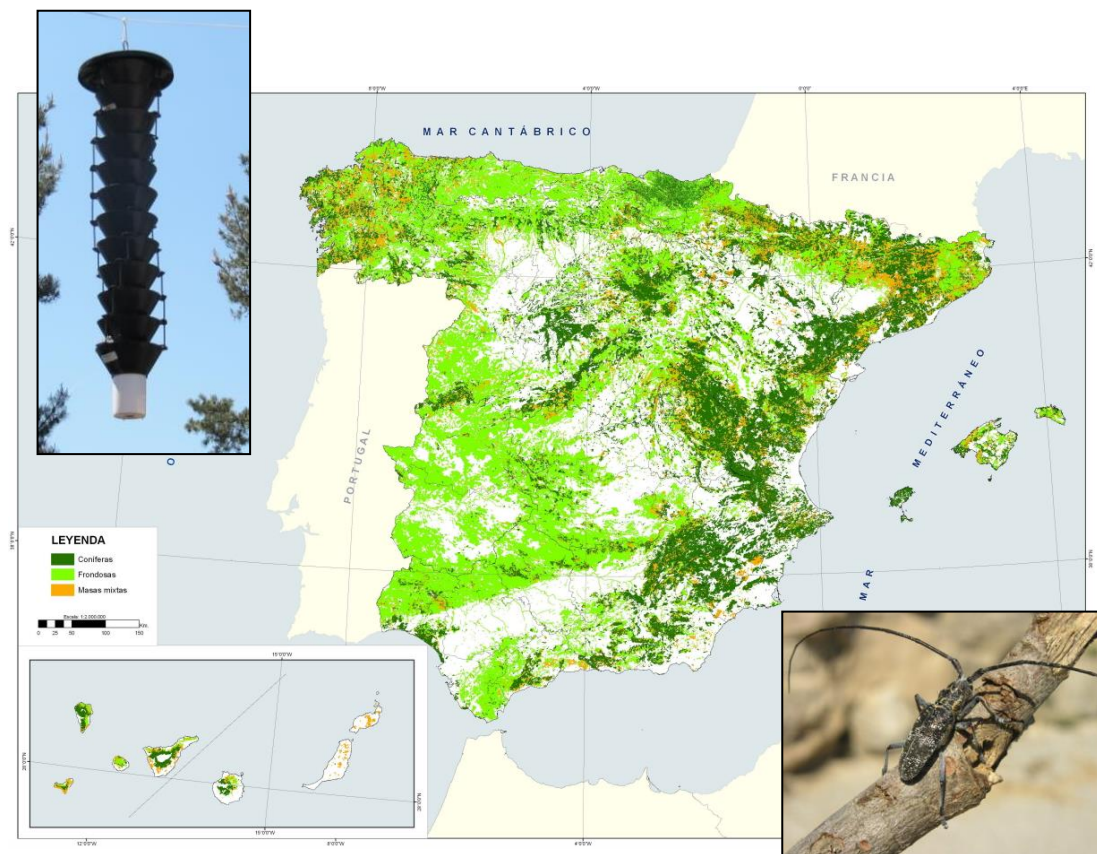
Particular case of the region of Castilla y León

## PLURIFOR PROJET

Pine Wood Nematode Workshop,

Oeiras (Portugal)

26/01/2018



Trapping **specifications at national level are included in Annex 15 of the National Contingency Plan.**

The **purpose** of trapping in Spain is:

- **To track populations**
- **Control the vector insect**
- **Detection of PWN.**

The trapping whose objective is the analysis of PWN must meet the following requirements:

- The use of traps with **sliding application is recommended.**
- **Avoid wet catches.**
- The reviews must have a periodicity, at least, **weekly.**

For the massive trapping of the insect or population tracking, insecticide traps, wet catches, sliding applications in different parts of the trap, etc. can be used..



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## Placement

- The traps **can be hung** to:
  1. Tree branches.
  2. Between two trees
  3. Supported by structures that serve as support.
- The distance between the trap and the trunk of the tree or support trees will be at least the length of the trap.
- They will be placed at a **height of the ground near 50 cm** hanging from a tree or using a support.
- The accessibility to the trap will be prioritized to facilitate the successive revisions, and trying to interfere as little as possible with other traps already installed.
- Its installation in **open and predominant places** of the land **favors the captures**.
- It is recommended that all traps will be **georeferenced**.



The location of the traps will be decided, according to the presence of sensitive trees, taking into account that, **it will be avoided to put traps in areas where involuntary dispersion of the vector from potentially infected zones to healthy areas can be caused.**

Three possible situations / locations:

1. **Demarcated areas:** in general, in the environment of the infected zone, a mesh of traps will be established with the following intensity:
  - a) In forests with normal or dense trees: In the perimeter of intensive surveillance that has been defined **1 trap / ha minimum.**
  - b) In areas with low density, sparse or isolated trees: In the perimeter of intensive surveillance that has been defined, the traps will be installed, depending on the tree mass, with a minimum density of **1 trap / 50 ha.**

When the placement is in a staggered pattern, a distance between the traps that meets the established trap density will be established.

2. **Sawmills and wood industries in demarcated areas: 3 traps** (the best arrangement will be as close as possible to an equilateral triangle) **within the perimeter of the sawmill.**

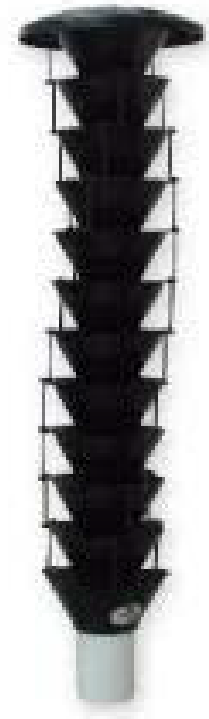
**Types of cheating that may be used:**

- **Multi-trick trap (= Lindgren Funnel 12 uts.)**
- **Trap type vain (Crosstrap)**, the latter especially suitable for live captures without modifications.

It is recommended that the traps are coated with anti-adherent and that collection containers with drains will be used to evacuate all the rainwater.

**Attractants to use:**

- **Aggregation pheromone** (2-undecyloxy 1-ethanol)
- **Cairomonal substances** (Ipsenol and 2-methyl-3buten-1-ol,  $\alpha$ -pinene)



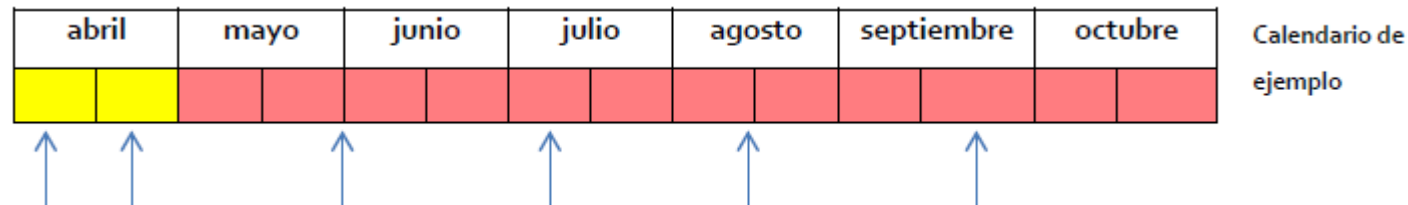
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## Trapping calendar and review

**Date of placement:**

The trapping network **will be maintained during the flight period of *Monochamus***, At least from the earliest start of catches (May) until the end of them (October); these tentative dates being adaptable to local circumstances, provided they are justified.

Adding attractant every **6 weeks** (according to the manufacturer's specifications)



- **Review death traps:**

- The traps will be grouped into itineraries that will be visited **as frequently as possible** in order to avoid loss of captured specimens.
- The National Contingency Plan proposes to establish weekly review itineraries (**maximum every 15 days**).

- **Review of traps for the search of PWN in the laboratory:**

- The revision of the traps with this objective is **done more frequently (for example weekly)**.

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## Particularities of trapping in Castilla y León

1. **Location in areas of special interest**
2. **Traps located in accessible areas** (roads or firewalls)
3. **Variable trapping density**
4. **Always placed between two masts** (of 2.50 m) hanging on a rope to improve:
  - a) Approach (flight)
  - b) Diffusion (less interference)
5. Types of traps: (**always with non-stick** (teflon)) :
  - a) Crosstrap
  - b) Multi funnel (Always 12 funnels).
  - c) Collector of at least 2 liters with bottom net.
6. Always **weekly review**.
7. Analyzes **all** the *Monochamus* that are captured.
8. Use the **pheromonal-cairomonal compound called Galloprotect 2D**
9. Always **dry traps** and **whitout insecticides**
10. **Releases the natural enemies** of the scolytids.
11. Calendar: **April 1 to November 15**

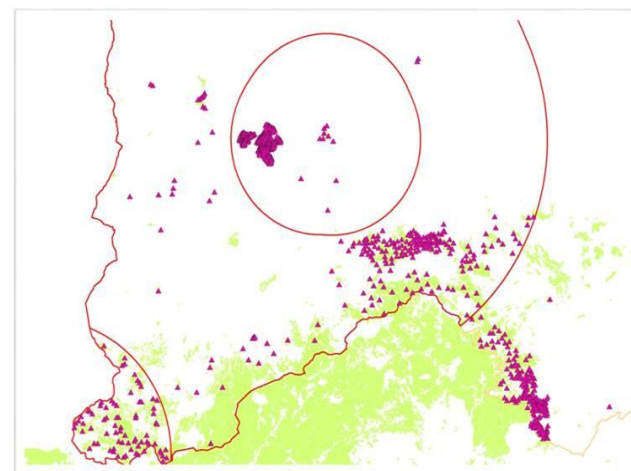
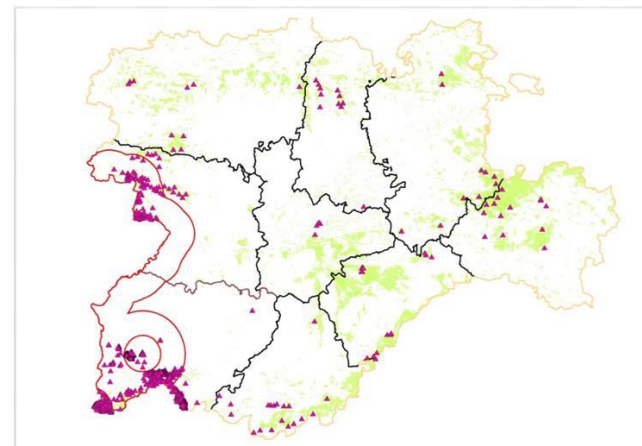


*Thanasimus formicarius*



*Temnochila caerulea*

RELEVANT ZONES	NUMBER OF TRAMPS	Mg CAPTURED	NUMBER OF ANALYZED SAMPLES
D.A. SANCTI-SPÍRITUS	240	1.636	1.001
D.A. VALVERDE DEL FRESNO	75	5.664	1.145
HIGH RISK SALAMANCA	217	14.945	3.017
REST SALAMANCA	170	30.551	3.366
HIGH RISK ZAMORA	80	16.623	1.545
<b>TOTAL CASTILLA Y LEÓN</b>	<b>871</b>	<b>72.730</b>	<b>11.083</b>







**Acknowledgement:**

