

Action C5

Extension of the Prevention and early warning system to other Natural Parks

Deliverable:

Trapping designs for French replication sites

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1. Introduction

In France, *Xylosandrus crassiusculus* has first been detected in 2014 at Mount Boron in the area of Nice whilst *X. compactus* was further detected in 2015 simultaneously at both the nearby town of Antibes and far to the West at Saint Tropez. The first species showed continuous outbreaks at Mount Boron and expanded to the north and to the west during the recent years, reaching Saint Raphael in the West. The second species began to invade the area of Nice but its populations remained rather limited in size until now. Moreover, it did not seem to expand largely around the western spot of Saint Tropez and Bormes les Mimosas. Both species are still absent from the replication site, the National Park of the islands of Port-Cros, and nearby traps settled on the closest seashore (Hyères) did not capture any of these beetles in 2019.

2. Protocol for early warning of *Xylosandrus* spread towards Port Cros Park

Early warning is proposed to consist in generalizing a network of attractive traps from the closest site of presence of each species of *Xylosandrus* (Chateau Léoube for *X. compactus* and Saint Raphael for *X. crassiusculus*) until the seashore nearby to Port Cros Park in order to be capable of detecting as early as possible natural spread of each species. A total of 14 sites have been selected (Figure 1). However, since human-mediated transportation to the islands is highly possible, traps are also planned to be settled on the islands of Porquerolles and Port-Cros.

Based on deliverable D1's results, the trappings are proposed to consist at each site of a multifunnel black trap baited with a combination of α -copaene, quercivorol, α -pinene and ethanol aimed at being more specific for *Xylosandrus* spp. than the former lures. Taking into account the flight periods of adult insects observed in 2019, the trappings are scheduled to be carried out from late March to late October.

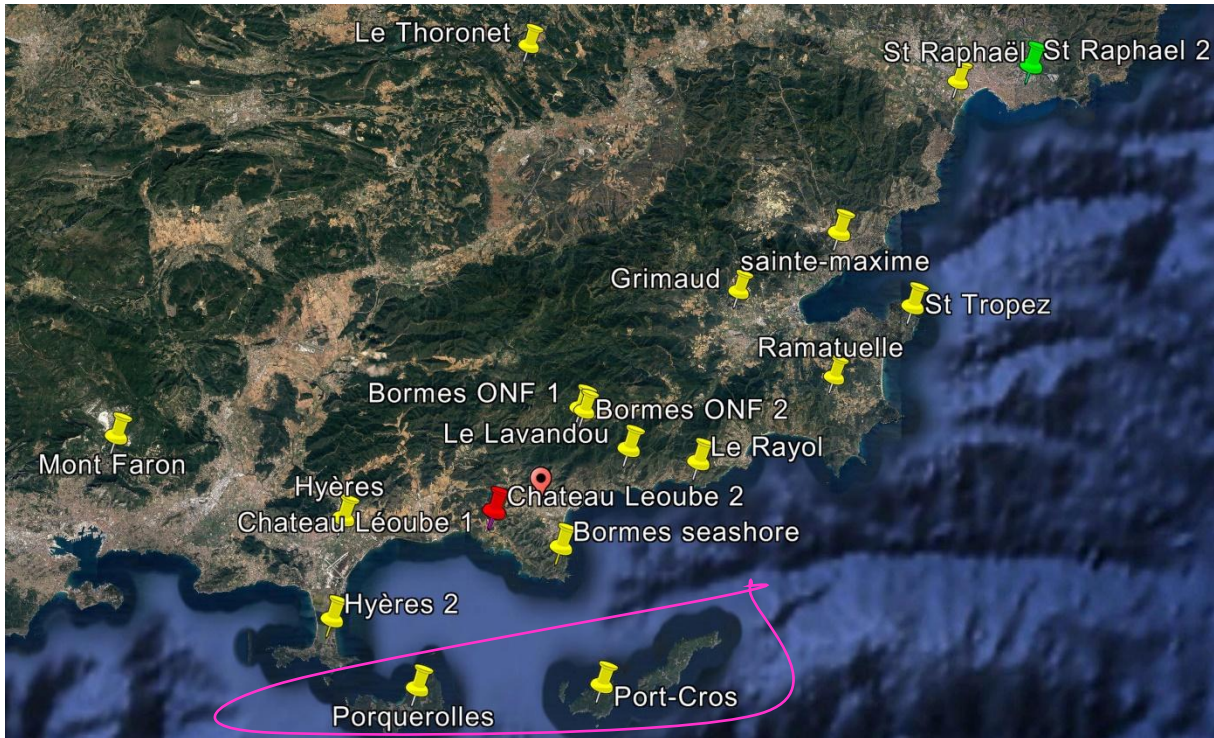


Figure 1: Map of the suggested 2020 trapping network for early warning of expansion of *Xylosandrus* spp. and possible incursion to the National Park of Port Cros (delimited by the purple line). Closest record of *X. compactus* to Port Cros figured in red; closest record of *X. crassiusculus* figured in green.

Simultaneously, it is proposed to park rangers to look for any symptoms of tree and shrub damage on the islands of the National Park, especially surveying the species considered as sensitive to *Xylosandrus* spp. such Carob trees.

In case of captures of *Xylosandrus* on the continent in traps located elsewhere than in the areas where the beetles have already been recorded, all sensitive plant species are to be checked for damage symptoms within a radius of 100m. Discussion will occur with officers of the Forest Health Departement about pruning or removal of the infested plants.

In case of captures of *Xylosandrus* on the Park islands, Park administration is suggested to check all sensitive plant species for damage symptoms within a radius of 100m of the trap with the help of INRAE. If the damage is limited, pruning can be recommended, but if it is generalized immediate removal of the entire plant is necessary to eradicate the beetles from the park. In addition, "Push and Pull" treatment will be proposed to be carried out from March 2021 on in the infested area.

3. Program adaptations due to the sanitary crisis

The settlement of all traps on the continent is postponed to mid-June, and thus the trapping could occur, at best, from mid-June to October, thus missing the first generation of beetles and probably the peak of emergence (usually mid- may to early-june for *X. crassiusculus*; late may- late june for *X. compactus*)

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The administration of Port Cros national park did not give any recent news, and it is likely that the traps could not be settled on the islands because the scientific committee has first to give approval.