



LIFE PISA

Layman's Report

INNOVATIVE ECO FRIENDLY TRAPS FOR THE CONTROL OF PINE LEPIDOPTERA IN URBAN AND RECREATIONAL PLACES.

LIFE13 ENV/ES/000504



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1. The problem and background information

The **Pine Processionary** (*Thaumetopoea pityocampa*) and **Pine Lappet** (*Dendrolimus pini*) are moths of the families Thaumetopoeidae and Lasiocampidae, and are abundant species found in pine woods in north, central and southern Europe, and a major economic pest causing human and pet health problems (allergies, skin illness, etc). The species are notable for the behaviour of its caterpillar larvae, which overwinter in tent-like nests high in pine trees, and which process through the woods in nose-to-tail columns, protected by their severely irritating hairs.

Current methods to control this infestation have some limitations to control medium-large amounts of them and/or they are expensive. This project aims to demonstrate and improve monitoring and control using new methods combined with traditional systems applied in urban or recreational areas in 4 countries (Spain, Italy, UK and Greece), where large-scale aerial or targeted insecticide application is not possible; and to improve current traps systems to increase significantly their effectiveness, reduce cost and to be adapted to each selected demonstrative urban pine areas.



Thaumetopoea pityocampa
nest

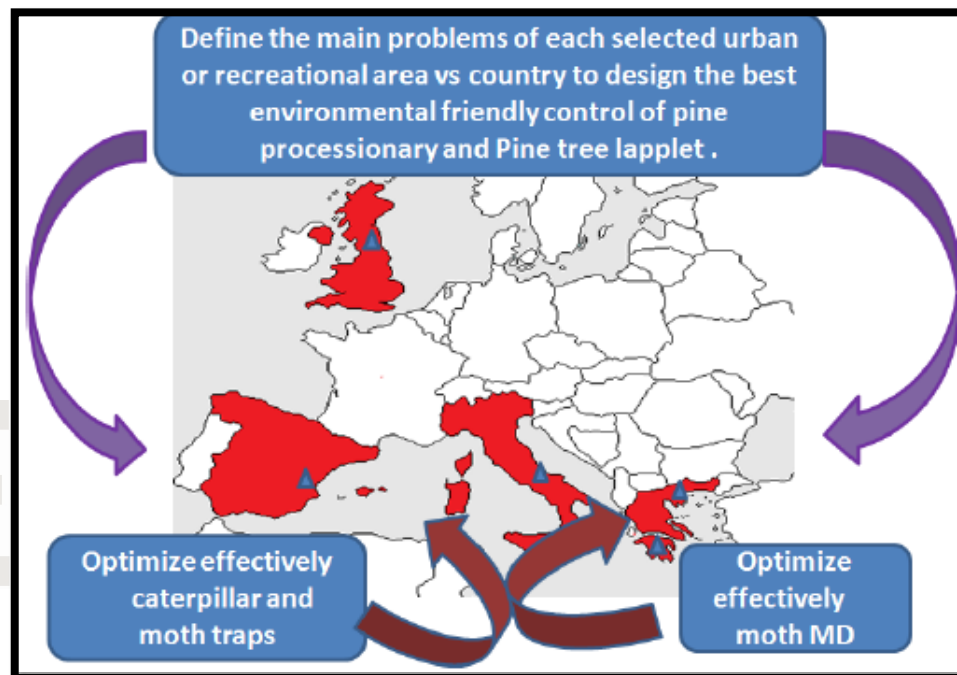


Dendrolimus pini
nest



2. Project Partners and roles

- Asociación de Investigación de Materiales Plásticos y Conexas – AIMPLAS (Spain).
- Benaki Phytopathological Institute (Greece).
- Forestry Commission Research Agency (UK).
- Regione Molise (Italy).
- Sansan Prodesing S.L. (Spain).
- University of Molise (Italy).
- University of Thessaly (Greece).



Scheme of the LIFE PISA project



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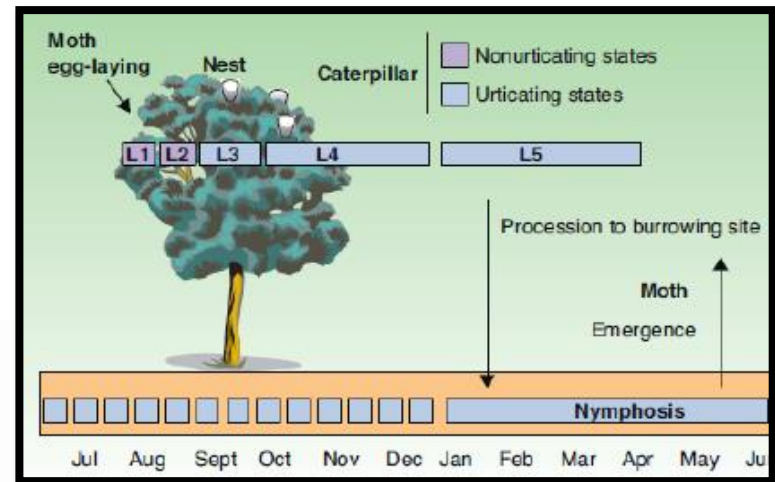


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3. Objectives

- Decrease populations of pine Processionary and Pine Lappet in 'demonstration areas'.
- Significantly reduce irritating injuries and allergic reactions.
- Deploy traps with minimal visual effect that are non-damaging to other forest animals and plants.
- Optimize an innovative trunk barrier device for easy installation and removal.
- Improve the design and efficiency of pheromone traps.
- Study efficiency of Mating Disruption (MD) techniques.
- Fulfill Directive 2009/128/CE: rational use of chemical pesticides.
- Transfer knowledge to forest pest control authorities, town halls, neighbourhood associations, etc.



Life cycle



4. Activities and main outcomes

1. Trapping of larvae



2. Mass Trapping of adults Monitoring of adults (sex pheromone = Pityolure) (Z)-13-hexadecen-11-yn-1-ol-acetate



3. Mating Disruption of adults





5. European added value

The results of this project have brought a solution to the pine processionary control mainly in Europe and other Mediterranean countries (Spain, Portugal, France, Italy, the coastal zones of Greece, Turkey, Syria, Lebanon, Palestine, Israel, Egypt, Libya, Tunisia, Algiers and Morocco as well as in some regions of Germany, Switzerland, Hungary and Bulgaria).

The combined efforts of LIFE PISA partners will ensure that the results meet the EU environmental objectives established in the project and that the dissemination & exploitation will be maximized across Europe.

The project has been aligned with the priorities of the National and EU Directives which are:

- The reduction of environmental impacts.
- Avoid the use of pesticides in urban places against pine processionary and other damage insects.
- Reduce injuries over persons and animals.
- Preserve forest from damage pests.





6. Conclusion

Trunk barrier traps.

Can be used as a control method for the management of *T. pityocampa* infestations after long-term application.

Activity of pheromone trap devices.

From the trap devices tested, prototype was found superior than the other devices.

Mass Trapping and Mating Disruption methods.

MT and MD showed an high effectiveness. Number of males monitored by pheromone traps and number of nests presents in the plot with MT and MD were lower than males and nests recorded in the plot without pheromones.

Trunk barrier traps and pheromones (MT and MD) can be applied with interesting results in private gardens, public parks, in urban and semi-urban areas.





7. Contact

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Thank you !



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