



You can also collaborate!

Fight against the Pine Processionary

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What is the Pine Processionary?

The Pine Processionary, *Thaumetopoea pityocampa* (Den & Schiff, 1775) (Lepidoptera: Nodontidae), constitutes one of the plagues of major socioeconomic importance in the pinegroves of the Mediterranean region.

It's a nocturnal butterfly that feeds on pines needles, and is one of the few insects that lives exposed to environmental conditions and is kept active in winter.

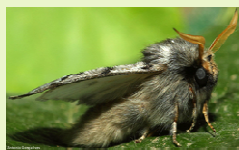


Figure 1: The adult of the Pine Processionary.



Figure 2: Larval phase, specifically the caterpillar third phase (L3).

Location

It typically plague the Mediterranean with wide distribution.

Prevailing principally in the pinegroves.

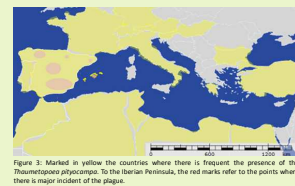


Figure 3: Marked in yellow the countries where there is frequent the presence of the *Thaumetopoea pityocampa*. To the Iberian Peninsula, the red marks refer to the points where there is major incident of the plague.

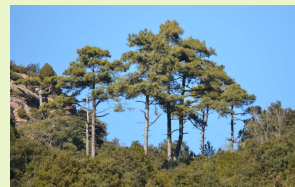


Figure 4: Pine processionary's habitat, the pinegroves.

The factors responsible for its expansion

- Changes in the structure of the forest.
- Decrease of its natural predators.
- Increase of the global temperature.

The problems that it generates

Impacts to Ecological Level

In the Iberian Peninsula, annually, 500,000 ha. of pines are completely defoliated because of the assaults of the caterpillars of this lepidopterous.

The principal consequences are:

- Loss of the forest biomass.
- Decrease of the revenue due to the lack of high productions.
- Difficulty of recovery of the forests, since the trees lose their reserves.
- Increase of the susceptibility of the forest to it being attacked by secondary parasites.



Figure 5: The nest in the proximity of a path.

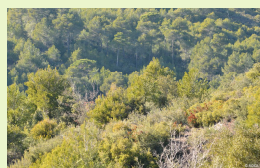


Figure 6: Woodland without enduring the plague.



Figure 7: Woodland completely defoliated, after the assault.

Impacts to Public Health

The hair that the caterpillars develop from the third phase (L3) presents stinging and allergens properties that makes Pine Processionary pose a danger for public health.

The principal implied agents tend to be the forest workers, hikers or for any other person or animal that has contact with this organism (L3-L5 o chrysalises), its nests or simply comes into the infected zone.

The most frequent symptoms are:

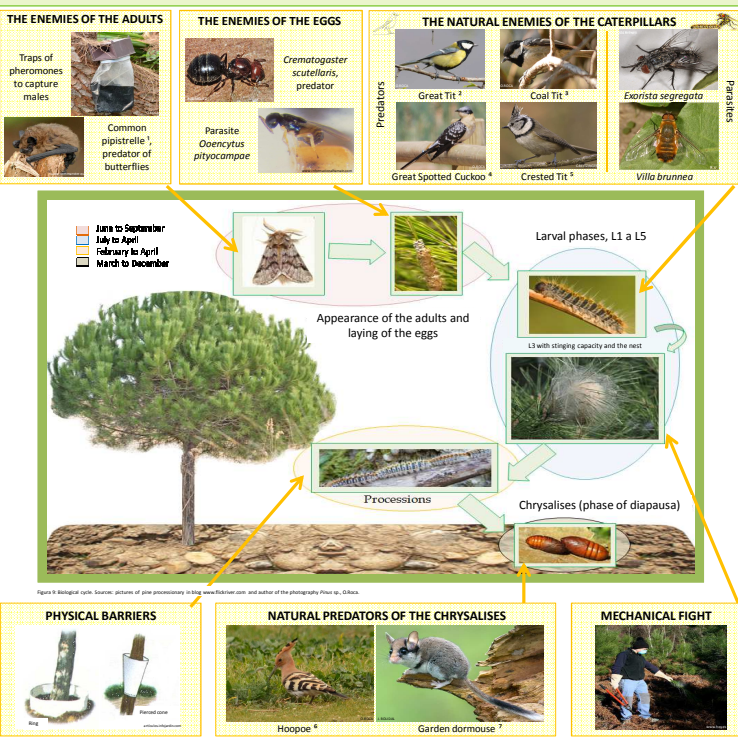
- Nettle-rash of contact or papular dermatitis
- Conjunctival mucous irritation
- Affected eyes
- Allergic reaction and hypersensitivity
- Serious respiratory problems (possibly lethal)
- Necrosis and partial loss of the tongue (in pets)

Table 1. List of produced reactions for *Thaumetopoea pityocampa*.



Figure 8: Above, cutaneous effects. Below, inflammation or partial loss of the tongue.

Biological control depending on the cycle



How can you help to control the plague ?

1. You can facilitate the detection of the infected zones by contacting the rangers to notify the sighting of the plague.



2. You must avoid the employment of chemical product as a remedy to the plague. There is variety of biological methods with the same efficiency as chemical treatment.

3. You can take part in the preparation of the physical barriers or in the installation of traps for this lepidopterous.



4. Finally, if you are a worker of forest management generate more heterogeneous environments with diversity of plants species. This way, you help to make the establishment of Pine Processionary difficult and favors the presence of its natural enemies.



Figure 14: Heterogeneous forest with combination of species.

To control the plague is possible !

Diversification of the pinegroves
Conservation of natural enemies

To conclude, it's necessary to emphasize that the collaboration of volunteers and forest workers is indispensable to achieve a decrease of the population of Pine Processionary.

We need your help !
Avoid the spread of the plague !