

## PINE PROCESSIONARY (*PROCESSIONÁRIA DO PINHEIRO*/"*BICHO DO PINHEIRO*")

*Thaumtopoea pityocampa* Schiff.

*Lepidoptera, Thaumtopoeidae*

### GENERAL ASPECTS

This is an insect that defoliates pine and cedar trees.

Attacks vary in intensity according to its population levels, strongly influenced by climatic conditions.

In terms of wood production, there is a reduction in tree growth during the period when trees are defoliated.

However, with the exception of successive attacks on young trees, these generally recover and do not die.

In terms of public health, however, the Processionary Caterpillar can represent a serious problem, especially in years of high population levels and near inhabited locations.

Like all insects, it develops through stages, which are:

- Egg
- Caterpillar
- Pupa or chrysalis (cocoon)
- - Adult insect (butterfly)

The caterpillars go through 5 growth stages.

From the 3rd stage onwards they have stinging hairs that cause allergies on the skin, eyeball and respiratory tract.



Foto1 - Ataque de processionária – ninhos de inverno  
Autor: Inês Vasco

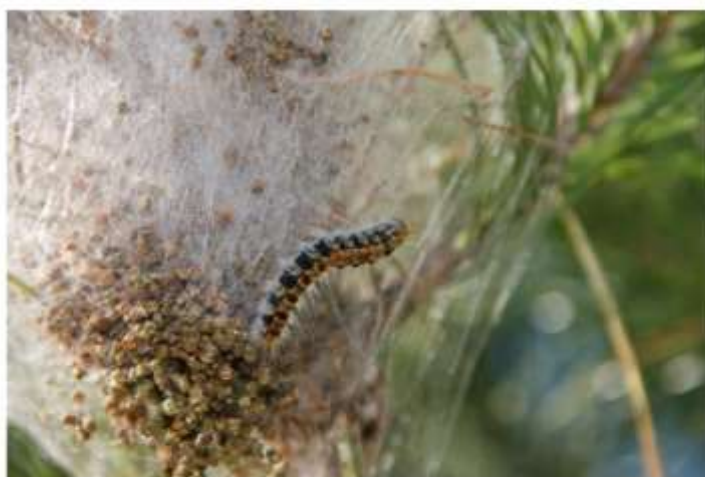


Foto 2 - Lagarta com pêlos urticantes dentro do ninho  
Autoria: Inês Vasco

These allergies are always very unpleasant and can have serious consequences, depending on the sensitivity of the affected individual.

### **CONTROL METHODS ADVISED IN INHABITED AREAS**

- AUTUMN PERIOD (MID SEPTEMBER/LATE OCTOBER)

In this period chemical treatments are quite effective.

Nowadays, two groups of products are available, which are both of low toxicity and low harm to the environment:

1. Growth inhibitors whose active substances are diflubenzuron and Tebufenozide;
2. Microbiological insecticides containing *Bacillus thuringiensis*, of which there are several formulations on the market.

Effectiveness depends a lot on correct application, so this should be carried out by qualified personnel.

Do not forget that the application of chemical products using aerial means should be communicated at least 8 days in advance to the Regional Directorates for Agriculture and Fisheries and the Regional Health Administrations (Law no. 10/93 of 6 April). If it is necessary to use these means, comply with this legal obligation.

- WINTER PERIOD (FROM NOVEMBER UNTIL THE NESTS DROP)

During this period, the caterpillars evolve from the 3rd to the 5th stage. The stinging hairs appear. They build the typical winter nests. They maintain crepuscular and nocturnal feeding habits, remaining in the nest during the day. The nest acts as a thermal accumulator.



Foto 3 – Ninho de inverno  
Autoria: Inés Vasco

Growth inhibitors are effective, but their effect takes time to be felt (the caterpillars die when they change stage) and atmospheric conditions are not generally favourable for their application. Mechanical destruction of the nests is more effective.

Sometimes these are at heights that are difficult to reach from the ground, even with the use of sticks or scissors with an extendable handle.

It may be necessary to use ladders (telescopic or classic). When on land, the nest must be burnt.

NOTE:

The classic shotgun shooting method should not be used in inhabited areas.

- SPRING PERIOD (MID-FEBRUARY / LATE MAY)

The 5th stage caterpillars, after reaching their full development, leave the nests and head in procession (hence the name Processionary Caterpillars) towards the ground, where they bury themselves to move on to the next stage of pupation or chrysalis and evolve into the adult insect that emerges in summer, thus completing its annual cycle.



Foto 5 – Procissão de enterramento  
FONTE: Ministerio de Agricultura, Pesca Y Alimentación, 1992 – *Plagas de Insectos en las Masas Forestales Españolas*. Segunda edición

Mechanical destruction of the caterpillars is, at this stage, the most effective method to use.

You should:

- Try to catch them as they come down the trunk by taping them, over a length of 0.50 m to 1 m, with plastic or paper soaked on both sides with odourless poly-solbutadiene-based glue;
- On the ground, gather them together with the help of a rake, gardening broom or any other similar tool;
- Burn or crush them gently so as not to cause the projection of hairs as a defensive reaction;
- If it is possible to identify the burial site, which is usually in a sunny area in cold and temperate climates or near the original trees in warmer climates, dig the soil to expose the pupae that have already formed or the caterpillars that have managed to bury themselves. Depending on the soil texture the depth varies up to a maximum of 10-15 cm.

NOTE:

- The months of the year indicated are those corresponding to the life cycle in normal years from the climatic point of view.

- However, some fluctuations at the beginning and end of the indicated periods are possible and natural.

## HEALTH CARE

NOTICE:

- From the 3rd stage (end of October until burial) the caterpillars have stinging hairs.
- These hairs, in addition to the body of the caterpillars, are spread over the branches and nests.
- When carrying out any of the recommended treatments, you should:
  - Wear gloves;
  - Protect the neck;

- Protect the eyes by wearing suitable goggles;
- Wear protective nose and mouth mask;
- Follow the application safety rules on the labels of each product.
- In schools and other places where children are present, prevent, where possible, their access to the area of the attacked trees especially at the time when the caterpillars come down from the tree.
- If symptoms of allergy appear, consult the nearest medical centre immediately.

Informal translation by Safe Communities Portugal