

Comparative Study of the Abundance of Winter Nests of the Pine Processionary Caterpillar in Different Forests of *Pinus halepensis*, *Pinus pinaster*, *Pinus pinea* and *Cedrus atlantica*, in Algeria

Authors : Boudjahem Ibtissem, Aouati Amel

Abstract : *Thaumetopoea pityocampa* is one of the major insect pests of pine forests in Algeria, the Mediterranean region, and central Europe. This pest is responsible for several natural and human damages these last years. The caterpillar can feed itself during the larval stage on several species of pine or cedar. The forests attack by the insect can reduce their resistance against other forest enemies, fires, or drought conditions. In this case, the tree becomes more vulnerable to other pests. To understand the eating behavior of the insect in its ecological conditions, and its nutritional preference, we realized a study of the abundance of winter nests of the pine processionary caterpillar in four different forests: *Pinus halepensis*; *Pinus pinaster*; *Pinus pinea*, and *Cedrus atlantica*. A count of the sites affected by the processionary caterpillar was carried out on a hundred trees from the forests in different regions in Algeria; Alkala region, Mila region, Annaba region, and Blida region; the total rate and average abundance are calculated for each forest. Ecological parameters are also estimated for each infestation. The results indicated a higher rate of infestation in *Pinus halepensis* trees (85%) followed by *Cedrus atlantica* (66%) and *Pinus pinaster* (50%) trees. The *Pinus pinea* forest is the least attacked region by the pine processionary caterpillar (23%). The abundance of the pine processionary caterpillar can be influenced by the height of the trees, the climate of the region, the age of the forest but also the quality of needles.

Keywords : *Thaumetopoea pityocampa*, *Pinus halepensis*, needles, winter nests

Conference Title : ICIEC 2020 : International Conference on Insect Ecology and Conservation

Conference Location : London, United Kingdom

Conference Dates : September 24-25, 2020