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# Management of the Pine Processionary Moth, *Thaumetopoea pityocampa* (Lepidoptera: Thaumetopoeidae), in Urban and Suburban Areas: Trials With Trunk Barrier and Adhesive Barrier Trap Devices

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## Abstract

In urban and suburban areas larvae of the pine processionary moth, *Thaumetopoea pityocampa* (Denis and Schiffermüller), cause serious defoliation to *Cedrus*, *Pinus*, and *Pseudotsuga* trees and health problems to humans and domestic or farm animals by their urticating setae. In this study, we present the results of biennial trials (2015–2016) on the management of *T. pityocampa* infestations using commercial or LIFE-PISA prototype trunk barrier and adhesive trap devices in Greece (Attica and Volos), Spain (Valencia), and Italy (Molise). In Attica, for both 2015 and 2016, the commercial trunk barrier trap devices captured significantly more *T. pityocampa* wintering migrant larvae compared to the adhesive barrier trap devices, indicating their high capture capacity. The total performance of the trunk barriers trap devices was 99.8% in 2015 and 99.6% in 2016. In Volos and Valencia, no significant differences were recorded between captures in commercial and LIFE-PISA prototype trunk barrier trap devices. In the tests that were conducted in Molise, the commercial trunk barrier trap devices exhibited high effectiveness in capturing the wintering migrant larvae during their procession, before they reach the ground for pupation. Moreover, significantly fewer male adults were captured by pheromone trap devices during summer 2016 in comparison with 2015 in the experimental area. Similarly, significantly fewer nests were formed on the experimental area trees in winter 2016 and 2017 compared with 2015. Our results show the potential of the trunk barrier trap devices in the management of *T. pityocampa* numbers after long-term application in urban and suburban areas.

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