

## Entrance and Distribution of the Pinewood Nematode *Bursaphelenchus xylophilus* on the Body of its Vector *Monochamus galloprovincialis* (Coleoptera: Cerambycidae)

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Aspects of the interaction between the pinewood nematode (PWN) *Bursaphelenchus xylophilus* (Steiner & Bührer 1934) Nickle 1970 (Aphelenchida: Aphelenchidae) and its vector, the pine sawyer *Monochamus galloprovincialis* (Olivier 1795) were studied in Portugal, the only region where the two species coexist. It was found that, between January and July, third stage dispersal juveniles ( $J_3$ ) were the most abundant *B. xylophilus* life stages on pine wood in general and near insect larval galleries and pupal chambers with pupae. On the pupal chambers with callow adults, the dispersal  $J_4$  larvae were the pre-dominant life stage. The analysis of *M. galloprovincialis*' immature stages shows that 11% of insect larvae (mean of  $2 \pm 0.7$  nematodes per insect), 17% of pupae ( $4.4 \pm 3.4$ ) and 91% of callow adults ( $1089 \pm 1219$ ) (mean  $\pm$  SD for all) had pine wood nematodes on them. Two and 30 days after emergence, 40 adult *M. galloprovincialis* of both sexes were analysed for the distribution of the PWN on their bodies, with the vast majority of nematodes detected on the thoracic region, most abundantly on the meta-thorax. The body segments containing less nematodes were the antennae, legs, wings and elytra. The results are compared with other well-studied *B. xylophilus*-*Monochamus* associations from North America and East Asia, and the possibility of surging new functional interactions between the PWN and the European *Monochamus* spp is briefly discussed.

**Key words:** *Bursaphelenchus xylophilus* (Steiner & Bührer 1934) – *Monochamus galloprovincialis* (Olivier 1795) – pine wilt disease – *Pinus pinaster* – Portugal

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A interacção entre o nemátodo da Madeira do pinheiro (NMP) *Bursaphelenchus xylophilus* (Steiner & Bührer 1934) Nickle 1970 (Aphelenchida: Aphelenchidae) e o seu vector, *Monochamus galloprovincialis* (Olivier 1795) (Coleoptera: Cerambycidae), foi estudada em Portugal, a única região onde os dois organismos coexistem. Verificou-se que, entre Janeiro e Julho, as larvas de dispersão do terceiro estadio ( $J_3$ ) de *B. xylophilus* foram o estágio de desenvolvimento mais abundante na madeira em geral e em redor das galerias larvares e câmaras pupais em particular.