**Bursaphelenchus xylophilus**  
(Steiner & Buhrer) Nickle

The pinewood nematode, *Bursaphelenchus xylophilus* is the causative agent of pine wilt disease. Vectors of this nematode are long-horned beetles especially those belonging to the genus *Monochamus*. It is native to North America where it is a secondary pathogen of stressed or recently dead trees. The disease does not occur in conifers other than pines, although the nematode has been found occasionally in white and blue spruce, balsam fir, eastern and European larch, and Atlas and deodar cedar.

Upon infection by *B. xylophilus*, the transmission of water within the plant is hindered, the leaves turn yellow and soon the whole plant wilts and dies. It takes only two to three months from the infection to the death of the plant. The wilt disease is therefore internationally recognised to be the most harmful disease of the forestry industry.

The pinewood nematode has been introduced to Asia (China, Japan, South Korea and Taiwan) and Europe (Portugal); it has also been recorded in Spain. Remote spread of *B. xylophilus* is by means of imported plants, wood, wood product and packing materials.

In 1979 timber losses of 2.4 million cubic metres were recorded in Japan; during 1980 the Japanese government spent $35 million in control operations. Containment actions including setting up of buffer zones, surveys, eradication and insect vector control were taken up when the pinewood nematode was first reported in Portugal in 1999. Subsequently it has been recorded in other areas in Portugal and also in Spain.

Pruning dead branches from live trees minimizes attractiveness to beetle vectors. Infected trees should be removed to ground level. No stumps should be left. This prevents further spread of the nematode and its vector before they emerge from the trees in the spring. *B. xylophilus* is a quarantine pest for the European Union under Directive 77/93/EEC. The need to fully implement international standards on phytosanitary treatment of packaging wood, in order to prevent further spread of the pinewood nematode is emphasized.

**Reference:**

Global Invasive Species Database, 2011. Interim profile: *Bursaphelenchus xylophilus* (Denis & Schiffermüller) [Link]