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## **(138) *Bursaphelenchus xylophilus* does not occur in Belgium, but what about its vectors, the *Monochamus* spp.?**

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### **INTRODUCTION**

It is unclear if pine wilt disease (PWD) threatens the conifer forests of Belgium. Entry and presence of *Bursaphelenchus xylophilus* (PWN) are monitored by the Belgian NPPO (the Federal Agency for the Safety of the Food Chain, FASFC), but the nematode was never found. However, knowledge about the presence of its vector, *Monochamus* spp., in Belgium is lacking. Single specimens of *M. galloprovincialis* and *M. sartor* were reported in Belgium on 7 occasions (Anonymous, 2013). The origin of these beetles (endemic or imported) is unknown. It is essential to gather more information about *Monochamus* spp. in Belgium to assess the risk of PWD.

### **1. MATERIALS AND METHODS**

From 2000 until today, FASFC collected suspicious samples during phytosanitary controls and national surveys in pine stands, public green areas, and logging and wood processing facilities. Imported packaging material suspected of insect attack were sampled also. An average of 170 wood and bark samples were analysed yearly at the Institute for Agricultural and Fisheries Research (ILVO). All procedures were according to the EPPO Standard PM 9/1(5) (EPPO 2012).

## 1. RESULTS AND DISCUSSION

No specimen of *B. xylophilus* were detected in the 72 and 108 samples analysed in 2000 and 2001, respectively (De Wael *et al.* 2002), nor in the following years (Table 1). Only two living *Monochamus* individuals (adult and larva) were intercepted.

**Table 2. Results of phytosanitary controls and national surveys in Belgium for *Monochamus* spp. (packaging wood from import) and *Bursaphelenchus xylophilus*; n.d.: not determined**

	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Nematodes</b>									
Total number of samples (samples of imported materials)	106	90	123	239	251 (25)	213 (55)	200 (51)	178 (96)	143 (96)
Samples with <i>B. xylophilus</i>	0	0	0	0	0	0	0	0	0
Import with <i>Laimaphelenchus</i> spp.	n.d.	n.d.	n.d.	n.d.	1	0	0	4	1
Import with <i>Aphelenchoides</i> spp.	n.d.	n.d.	n.d.	n.d.	0	0	3	17	42
Import with other saprophytic nem.	n.d.	n.d.	n.d.	n.d.	16	49	43	68	45
<b>Insects</b>									
Total number of samples	13	2	9	1	11	4	7	6	8
Samples containing <i>Monochamus</i> spp.	0	0	0	0	0	1	1	0	0
Samples containing other longhorn spp.	2	0	0	0	1	1	0	0	0
Samples containing other insects	2	1	2	1	2	0	0	0	4

However, live saprophytic nematodes, including genera closely related to PWN (*Aphelenchoides* spp. and *Laimaphelenchus* spp.), as well as some live beetles belonging to the Bostrichidae and Cerambycidae (*Anoplophora glabripennis*, *Xylotrechus rufilius* and *Phoracantha semipunctata*) were detected on several occasions on imported materials. Their presence in imported wood and bark can indicate insufficient treatment of imported wood material using heat or fumigation (EPPO Standards PM 10/6 and 10/7). The consequences of an introduction of PWN are unclear due to a lack of knowledge about the *Monochamus* spp. in Belgium. This essential information will be gathered in a three-year project of ILVO and the Biological Control and Spatial Ecology Lab (LUBIES), in cooperation with FASFC.

## 2. REFERENCES

- Anonymous (2013). *Saproxyllic beetles from Belgium*. projects.biodiversity.be/beetles.
- De Wael L; De Sutter N; Moens M (2002). Diagnostic research at the Department of Crop Protection in 2001 (Diagnostic centre for plants). IV Nematology: Survey of the pinewood nematode *Bursaphelenchus xylophilus*. *Parasitica* 58, 27-29.
- EPPO (2012). EPPO Standard PM 9/1(5). *Bursaphelenchus xylophilus* and its vectors: procedures for official control. *Bulletin OEPP/EPPO Bulletin* 42, 477-485.