



" Focusing on *Monochamus* spp., insect vectors of *Bursaphelenchus xylophilus*"

Hans Peter Ravn

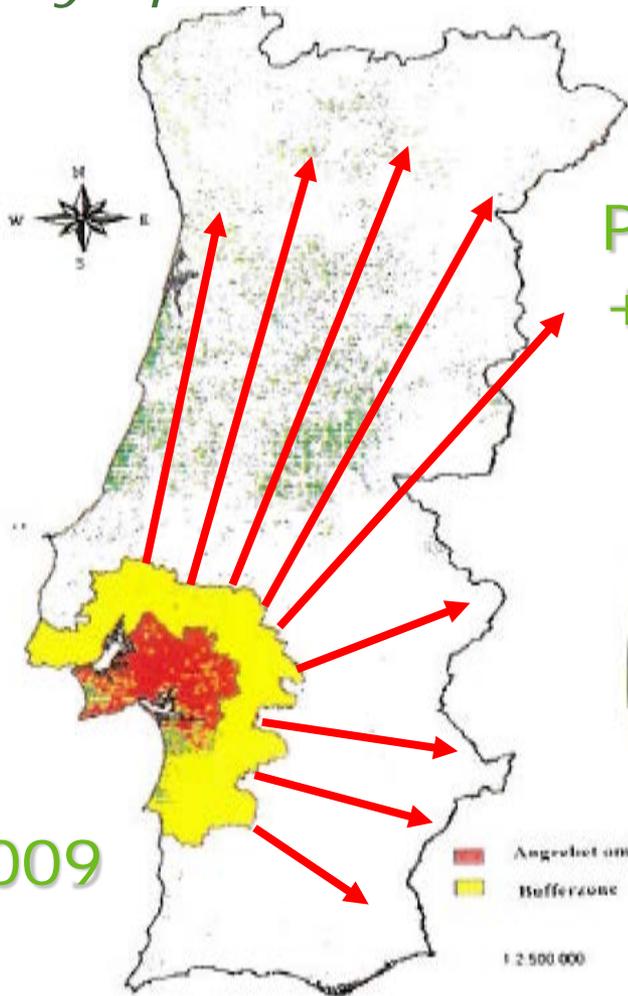
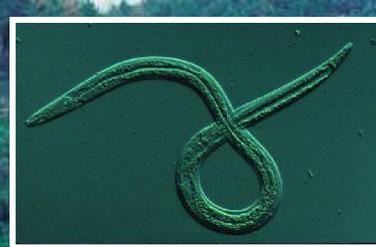
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Pine Wood Nematode

Bursaphelenchus xylophilus



Portugal + Spain



Longhorn beetle, pine sawyers - *Monochamus* spp. Is the local vector

Wooden packing material is the global pass way



2009



MONOCHAMUS – The project partners

Partner No.	Partner Organisation	Country
1	University of Copenhagen, Institute of Geosciences and Natural Resource Management (UC)	STATUS MONOCHAMUS PWN Denmark - -
2	University of Ljubljana, Biotechnical Faculty, Department of Forestry and Renewable Forest Resources (BF-G)	Slovenia M -
3	Slovenian Forestry Institute, (SFI)	Slovenia
4	Aarhus University, Department of Agroecology (AU)	Denmark
5	Institute for Agricultural and Fisheries Research (ILVO)	Belgium M -
6	Netherlands Food and Consumer Product Safety Authority (NVWA)	The Netherlands M -
7	Instituto Nacional dos Recursos Biológicos (INRB)	Portugal M PWN

Oct 2013- Sept2016



Background and Objectives

Background

The obligation to carry out monitoring surveys in EU MC and the wish to optimize the efforts

Objectives of the MONOCHAMUS project are

- Incidence mapping for PWN and possible vectors
- To optimize the monitoring methods using attractant traps a.o.
- Evaluate phenology of relevant vectors and their PWN relationship
- Molecular identification based on molecular markers of selected specimens of *Monochamus* spp.



Energy wood – an increasing market – imposing a risk of introduction of invasive species



What you may find in imported tree for energy production



Occasionally introduced:
22 species of longhorn
beetles,
10 of which are non-
native species

Among these:
Monochamus sutor
M. sartor
M. galloprovincialis

Source: Jørn Misser 2013 Ent. Medd.81(1)27-36



Portugal, April 2014



Portugal



Slovenia, June 2015



Dias 9



Denmark, June 2015



Key deliverables and outputs:

Results from testing of several monitoring methods in different European countries - best monitoring strategy for *Monochamus*

Suggestions for a trans-national monitoring strategy

Updated transnational incidence mapping of PWN and occurrence of native *Monochamus* species across Europe

Phenology studies of *Monochamus* spp. (SLO) and prevalence of nematodes in cerambycids (B, NL), dispersal studies of *M. galloprov.* (P)

Description of possible factors that lead to variations in expression of disease due to *Bursaphelenchus* spp in different regions of Europe(DK). Impact of forest management practise on *Monochamus* spp. (SLO)

Development of molecular detection methods for *Monochamus* spp. Revision of phylogeny (SLO)



Thank you for your attention!

