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Prof. Aux. c/ Agregação (2002)

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Erasmus Mundus - European Master of Science in Nematology


General info about the programme

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## NEMATODES

Nematodes are everywhere. They are among the most harmful organisms of crops, especially in the tropics but, on the other hand, they can be used as natural antagonists in bio-control programmes against pest insects. Because of their ubiquitous presence, overwhelming densities and diversity (sometimes compared to insects) free-living nematodes are an ideal tool for biodiversity studies. They are used as bio-indicators of pollution in both terrestrial and aquatic environments.

## EUMAINE

The European Master of Science in Nematology (EUMAINE) is an Erasmus Mundus Master course that brings together some of the European leading Universities and Research Institutes active in Nematology. It is a network of 13 partners, consisting of 3 consortium partners and 6 supporting or satellite partners.
Ghent University is the coordinating university.

The consortium partners are :
- Universiteit Gent, Belgium : coordinator
- Universität Bielefeld, Germany
- Universidade de Evora, Portugal

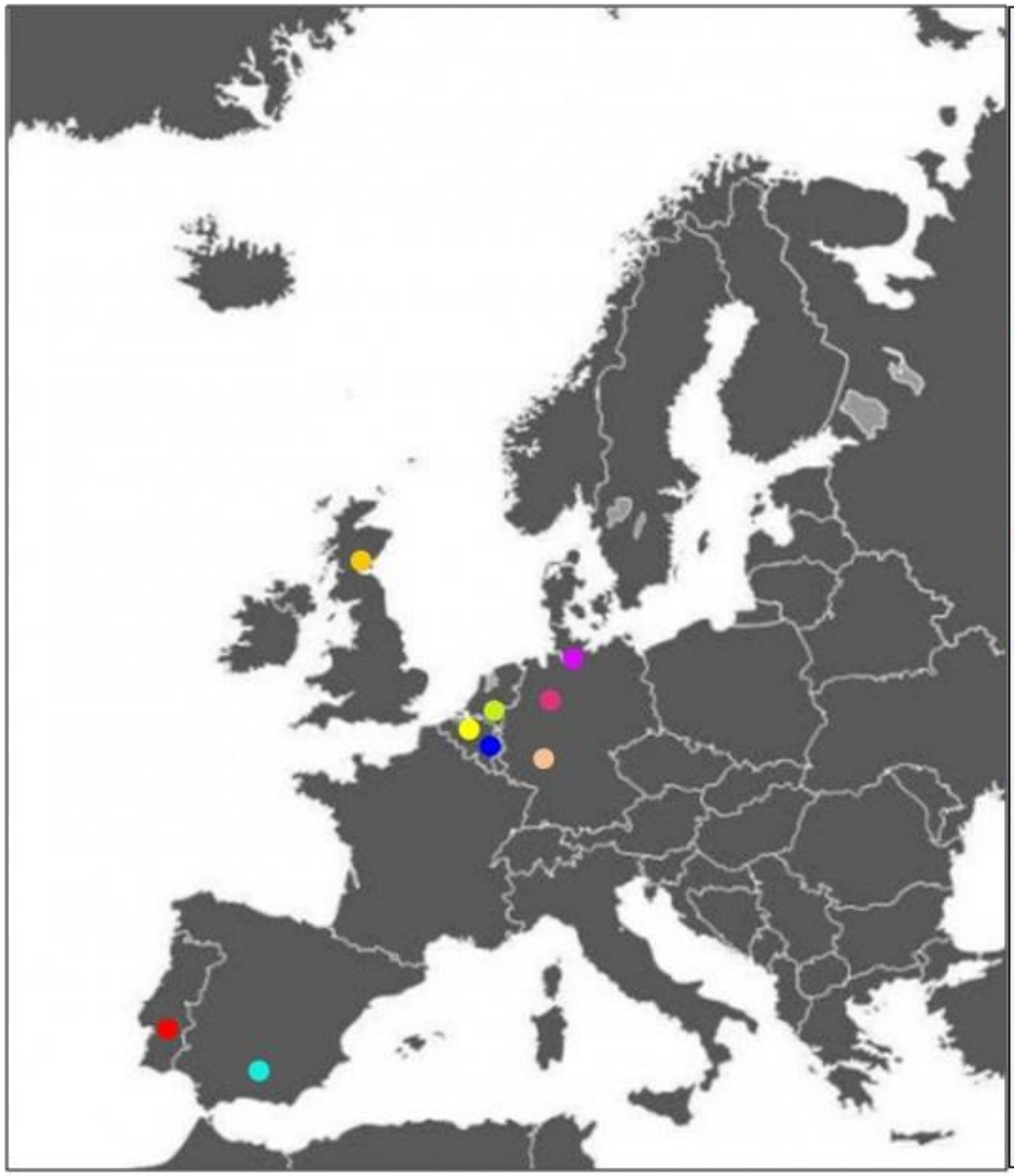
**Newsletter 15 is online!**
**Enjoy the stories!**

**If you are interested in:**

- **biodiversity**
- **biocontrol**
- **genetic and genomic aspects of model organisms as a basis to understand human diseases**
- **food security**
- **food chain**
- **environmental protection**

**Then the European Master of Science in Nematology is an excellent choice!**

http://www.eumaine.ugent.be/index.asp



- Ghent University, Gent and Institute for Agriculture and Fisheries Research, Merelbeke, BELGIUM
- Bielefeld University, Bielefeld, GERMANY
- University of Évora, Évora, PORTUGAL
- University of Jaén, Jaén, SPAIN
- E-Nema, Schwentinental, GERMANY
- James Hutton Institute, Dundee, Scotland, UK
- Catholic University Leuven, Leuven, BELGIUM
- University of Bonn, GERMANY
- Wageningen University and Plant Protection Service (PPS), Wageningen, The NETHERLANDS

Year 1

Year 2

**Semester 1**

**Semester 2**

**Semester 3**

**Semester 4**

Basic courses

Gent

Nematodes in natural ecosystems

Bielefeld

Évora

Gent

Nematodes in agro-ecosystems

Évora

Gent

Summer course

Nematodes in natural ecosystems

Bielefeld

Évora

Gent

Jaén

Nematodes in agro-ecosystems

Évora

Gent

Jaén

Master thesis (natu/agro)

Bielefeld

Évora

Ugent
ILVO

Jaén

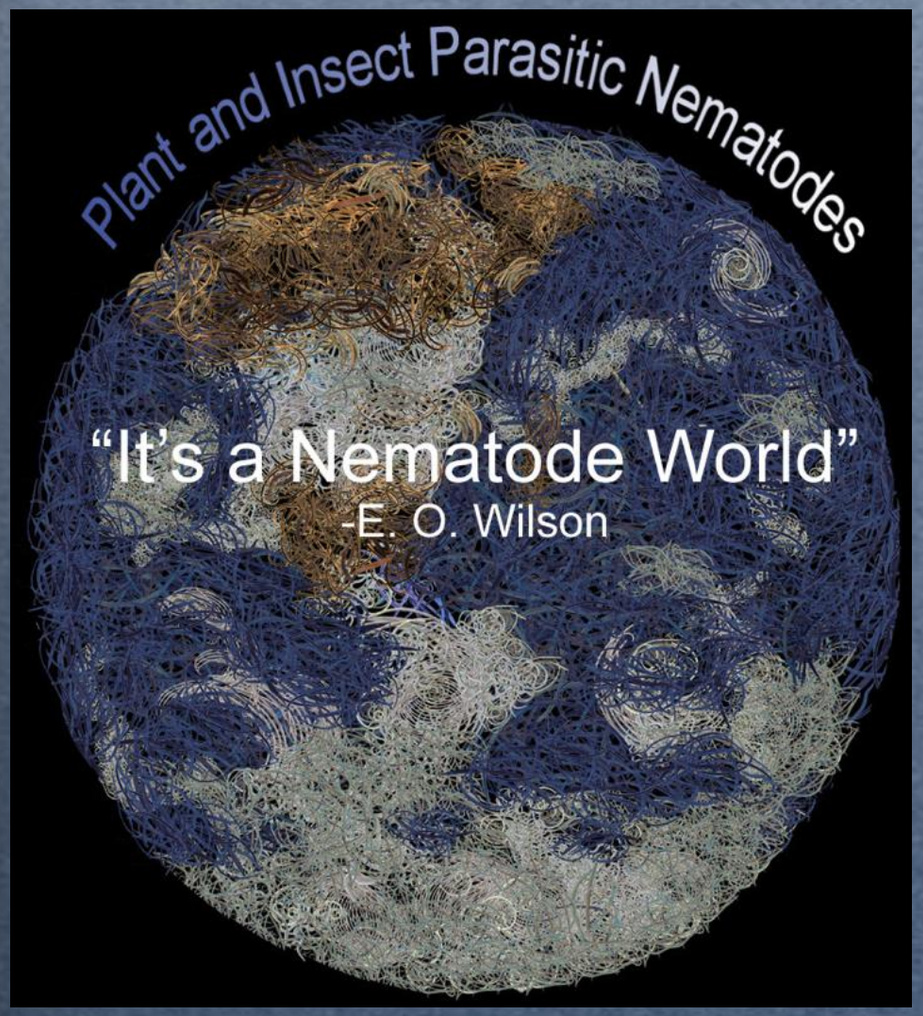
Kiel

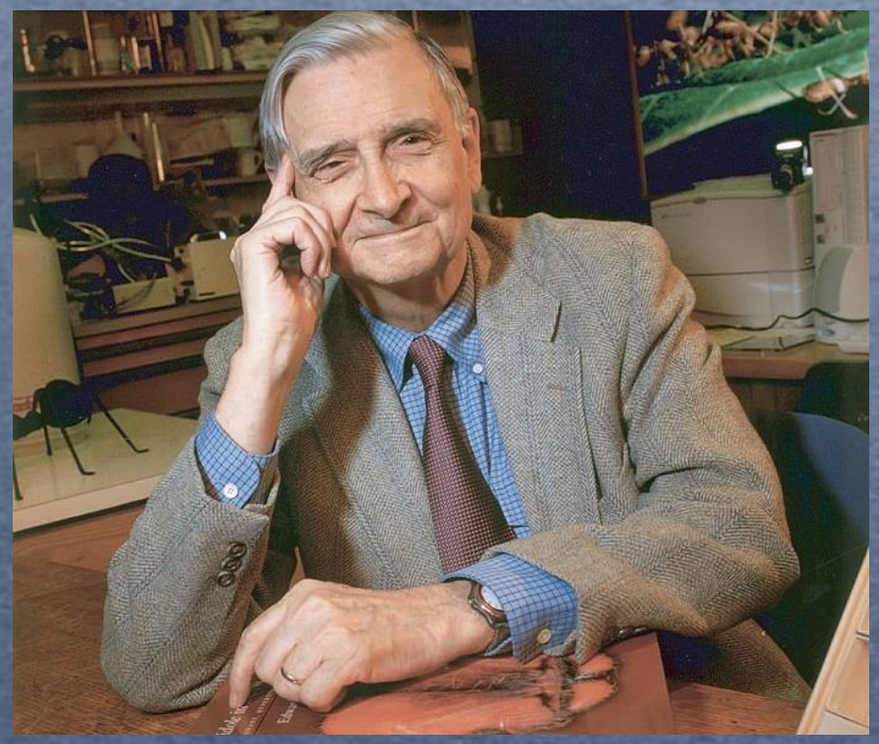
Leuven

JHI (UK)

Wageningen
WUR
NPPS

"Nematoda: o grupo mais abundante de animais da Biosfera"

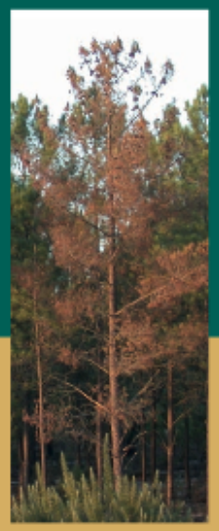


http://www.ted.com/talks/e_o_wilson_on_saving_life_on_earth.html

Manuel M. Mota · Paulo Vieira
*Editors*
**Pine Wilt Disease: A Worldwide Threat to Forest Ecosystems**

The pinewood nematode (PWN), *Bursaphelenchus xylophilus*, the causal agent of pine wilt disease (PWD), is a serious pest and pathogen of forest tree species, in particular among the genus Pinus. It was first reported from Japan in the beginning of the XXth century, where it became the major ecological catastrophe of pine forests, with losses reaching over 2 million m3/ year in the 1980s. It has since then spread to other Asian countries such as China, Taiwan and Korea, causing serious losses and economic damage. In 1999, the PWN was first detected in the European Union (EU), in Portugal, and immmediately prompted several government (national and EU) actions to assess the extent of the nematode's presence, and to contain *B. xylophilus* and its insect vector (*Monochamus galloprovincialis*) to an area with a 30km radius in the Setúbal Peninsula, 20 km south of Lisbon. International wood trade, with its political as well as economic ramifications, has been seriously jeopardized. The origin of the population of PWN found in Portugal remains elusive. Several hypotheses may be considered regarding pathway analysis, basically from two general origins: North America or the Far East (Japan or China). World trade of wood products such as timber, wooden crates, palettes, etc… play an important role in the potential dissemination of the pinewood nematode. In fact, human activities involving the movement of wood products may be considered the single most important factor in spreading of the PWN. Despite the dedicated and concerted actions of government agencies, this disease continues to spread. Very recently (2006), in Portugal, forestry and phytosanitary authorities (DGRF and DGPC) have announced a new strategy for the control and ultimately the erradication of the nematode, under the coordination of the national program for the control of the pinewood nematode (PROLUNP). Research regarding the bioecology of the nematode and insect as well as new detection methods, e.g., involving real-time PCR, has progressed since 1999. Inter-national agreements (GATT, WTO) and sharing of scientific information is of paramount importance to effectively control the nematode and its vector, and thus protect our forest ecosystems and forest economy.



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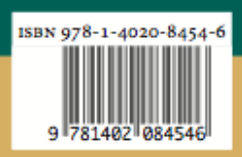



springer.com

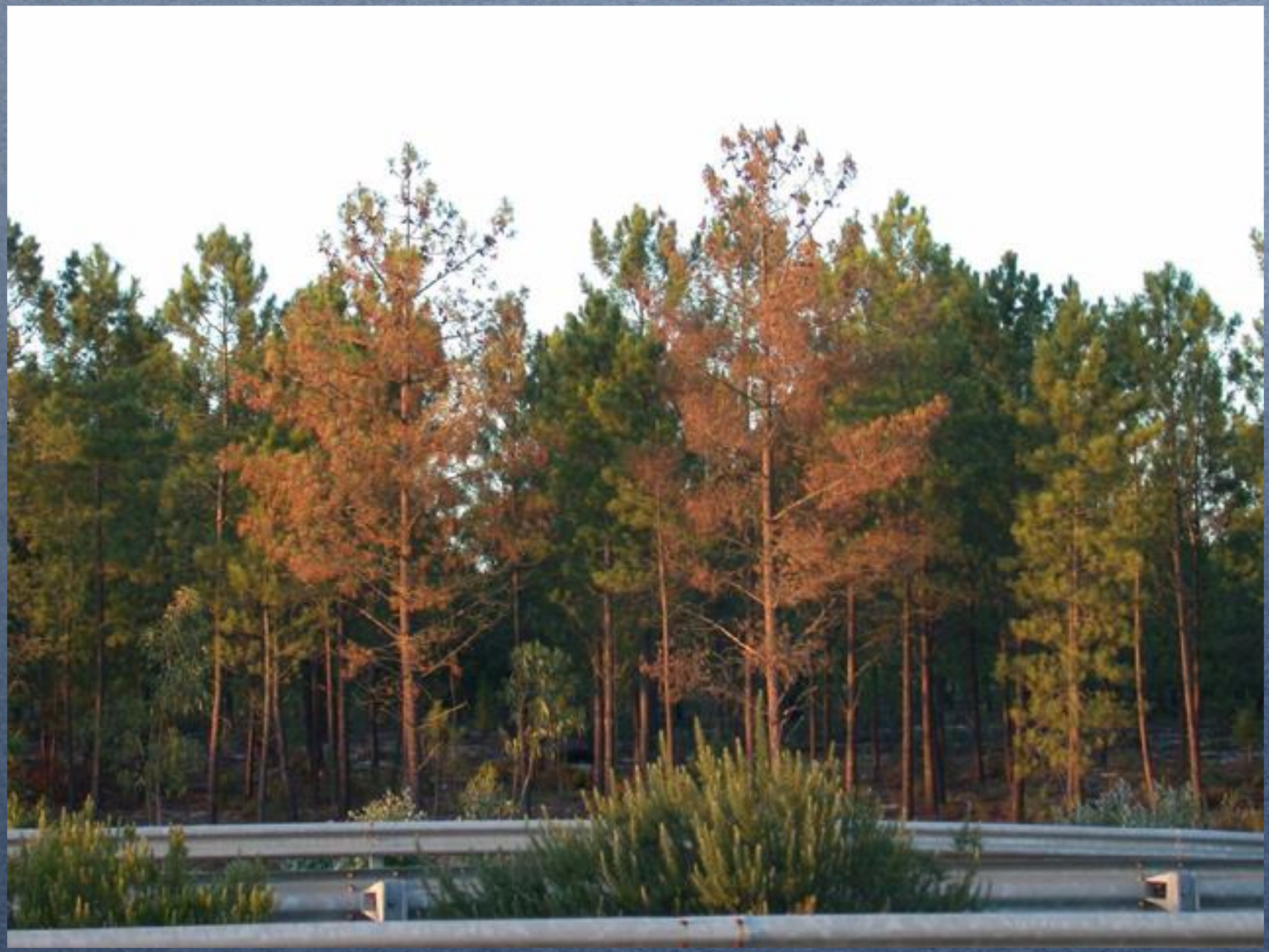
Mota · Vieira *Eds.*

Pine Wilt Disease: A Worldwide Threat to Forest Ecosystems

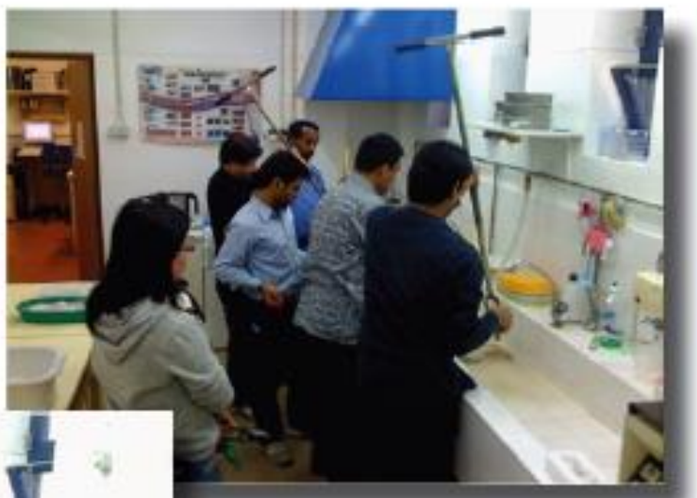
Manuel M. Mota
Paulo Vieira
*Editors*

# Pine Wilt Disease: A Worldwide Threat to Forest Ecosystems

Springer



# EUMAINE Students Hard at Work at NemaLab, Univ. of Évora, Portugal



Research assistant Pedro barbos testing essential oils against the PWN

PhD student Vera Valadas, showing off her EPNs to undergrad students in NemaLab