

## **REPHRAME 2<sup>nd</sup> Project Meeting**

**Location: INRA, Orleans**

**13 – 14 March, 2012**

### **Present:**

Hugh Evans, Hannah Gruffudd, David Hall – UK

Gernot Hoch, Hannes Krehan – Austria

Jianghua Sun – China

Alain Roques, Philippe Castagnone, Sophie Mallez, Christelle Robinet,

Géraldine Roux, Annie Yart, Daniel Sauvard – France

Thomas Schroeder – Germany

Christer Magnusson – Norway

Manuel Mota, Joao Real Corte, Paulo Pereira – Portugal

Juan Pajares, Lee Robertson, Susana Cobaco, Alphonso Navas – Spain

Apologies: Edmundo Sousa - Portugal

After initial introductions, the meeting followed the Agenda:

### **1. Current position on budgets and any other administrative matters (WP1).**

The budget for REPHRAME received by the Coordinator in September 2011 was distributed to beneficiaries. The delays in setting up the contract and signature, followed by difficulties in setting up the interest-bearing bank account required by the EU have certainly delayed some of the work planned for Year 1 of the project. This was discussed and it was agreed that an early request for a time extension to the project would be made. Hugh Evans will write to the science officer to request an extension and to clarify the reporting procedures with regards the mid-term report would presently due in September 2012.

In relation to dissemination activities, work has commenced on the project website but it is not yet live. This will be done during April and it is hoped that the website will then be available for general access and will also have a password-protected Forum area for sharing of documents, etc.

### **2. Work programme (WP) related topics:**

#### **WP2**

Manuel Mota presented on progress especially on possible role of bacteria in infestation process. Some papers published, in press or in preparation.

Thomas Schroeder commented on progress in his input to WP2, and a discussion followed to clarify if this work should be extended to other susceptible species?

### **WP3**

**3.1** Presentation sent by Edmundo Sousa. The observation could be diapause suggesting rapid development when constant conditions are presented to the beetles.

Juan Pajares then described work from University of Valladolid.

**3.2** Flight mill tests in Orleans and Bordeaux over a 4 hour period.

**3.3** Mark-recapture work in Spain after releasing both immature and mature adults. Beetles were numbered so could track re-captures as well as first captures.

**3.4** Juan has collected large number of specimens in Spain; and still in process of analysing. Geraldine undertaking early stage grid sampling in Portugal but should be able to commence analysis in the autumn.

### **WP4**

An introduction was given by Juan Pajares.

David Hall described lab work underpinning the field experiments.

Edmundo Sousa carried out similar experiments in a Latin square design on 4 blocks. No significant difference between trap types, but captures much lower than in Spain.

**4.4** Work done in Huesca in Spanish Pyrenees. Used collector to make sure that they obtained live beetles. Similar results to the work done by Martin Schroeder in Sweden; also results in China by NA researchers (J. Millar/ S. Teale).

David Hall described some work undertaken. Field results from Sweden show good results. Work in Austria used traps and also trap logs as comparison. We also need to use at least one trap design that is common to all the experiments carried out in the different partner countries (and also non-REPHRAME collaborators).

### **WP5**

The CHEP sponsored work has already shown that wood to wood transfer takes place but only under certain moisture content conditions.

Christer Magnusson described planned work in Portugal which will start in April.

Forest-based experiments in Portugal; have identified suitable sites.

Thomas Schroeder discussed the original planned work.

**5.1** would start in 2011, effectively with a 1 year delay. Any work on survival in sawn wood would ideally be done under outdoor conditions to mimic natural invasion by blue stain fungi, etc.

**5.2** This would ideally be done in North America to cover situations where pine wilt would not be expected. INRB are scheduled to carry this out and plans for the work need to be assessed. Bark experiments need to be done in Portugal; can this be linked to bark composting work in Portugal with some of this type of work done in North America.

**5.3** Mostly covered by Christer Magnusson, Sweden but with some work in Germany.

**5.4** This topic was mostly covered by Christer.

**5.5** Microsatellite work to assess invasion pathways needs to be done at individual level, and scaled-up to population levels. Presentation provided by Sophie Mallez on genetic diversity and invasion routes in Europe. Manuel Mota said that work from student in Portugal indicates population diversity increased after 2008, especially on Madeira. Now obtaining more samples from across Portugal which will be geo-referenced. Paulo Vieira is also going to work in USA and has agreement with contacts there to obtain samples from across the US (possibly Canada). He could also obtain samples from Japan when post-doc spends time there. Alfonso Navas. Contributions to WP5, 6, 8 and 9 but mainly WP5, has done sampling across Spain in main conifer areas as well as some work on effects of wood preserving products on survival of PWN.

## **WP6**

Presentation from Edmundo Sousa on inoculation, and the pattern of results are similar to previous work but numbers of nematodes were much lower than expected but further assessment of significance of results are needed.

Alain Roques presented results on choice tests for *Monochamus* on range of *Pinus* spp. Although numbers of insects were relatively low, they were all derived from the same population.

Juan described work done in Spain comparing feeding and oviposition of *Monochamus* on a range of pine species.

For true comparison experiments should test for maternal and host effects on choice of hosts for newly emerged adults.

Field observations in Portugal indicate no wilt on *P. pinea* although no information on whether the trees were visited by *Monochamus*. Tests in pure stands of *P. pinea* would be valuable in assessing field susceptibility.

## **WP7**

Christelle Robinet presented a presentation on modelling work using interpolation of weather station data with Portuguese colleagues providing temperature distribution maps which will enable use of current climate data from different stations in Portugal.

Paulo Pereira described climate variables derived from range of data sets in Portugal – 19 bioclimatic variables derived. Based on assumption of combination of high temperature and low moisture produced maps of risk areas in Portugal (building on approach in PHRAME). Assumption is made that watersheds are corridors of dispersion, but it is not clear if this is supported by actual data on PWN infestations.

Parameters on vector will start with initial condition in Portugal from 1999 and some assumptions on likelihood of wilt with regard to pine only.

A survey/sampling regime on the proportion of *Monochamus* carrying PWN needs to be set up to obtain this information on a regional basis in Portugal.

## **WP8**

Presentation on Cooperation by Manuel Mota. Working on database on PWN and linking to REPHRAME webpage as well as current EU projects and the exchange of information on QBOL including sharing of PWN material and general collaboration with different organisations globally. Link to US Plant Disease Clinics is likely to provide more sample material from the native range of PWN in USA. REPHRAME participants will need to feed back relevant linkages to Manuel. Alain Roques will attend an IUBS meeting in China and cross-link to REPHRAME.

## **WP9**

The outcomes of the other work packages will be used in the synthesis and development of PTK.

## **2. Planning work for 2012 and consideration of overall timing of project in relation to delays in contract signature and allocations of funding.**

Arising from the WP discussions, a number of topics will continue according to the original and, where appropriate, revised work plans. Hugh Evans requested all WP leaders to examine the project GANTT chart and to provide him with modifications to the dates for each topic so that a new version can be produced. This will be used to support an application for a time extension to the project. This should be done by the end of April 2012.

## **3. Date and location of next meeting:**

Ideally, the meeting will be held in Portugal, and Edmundo Sousa would be contacted to ask if he can organise in Lisbon, and to include a one-day field visit to some key infested areas. The 22-24 October was seen as the best dates.