

Second Woodland Survey Report

Report on the Second Forestry Commission Woodland
Survey 2004 to Assess the Level of Incidence of
Phytophthora ramorum in British Woodlands

Forestry Commission
Plant Health Service
May 2005

Summary

Between May and August 2004 a second round of *P. ramorum* surveys was carried out in England and Wales. *Vaccinium* had been identified by the Central Science Laboratory to be a potential high-risk host and subsequently *Vaccinium* in woodlands was included within the sampling protocol. 109 plots were surveyed over 94 10km grid squares. Samples were taken from 73 locations and none proved positive. During August 19 water bait samples were taken and 3 of these proved positive for *P. ramorum*.

Background

Phytophthora ramorum is a fungal pathogen, which has been identified as the causal agent for the condition known as Sudden Oak Death. The first evidence of it in Britain was found during April 2002 on a viburnum but since then it has been found mainly on rhododendrons in nurseries and garden centres. In November 2003 the first evidence of an established tree having the disease was confirmed in Sussex. Further infections were subsequently confirmed on trees in historic gardens in Cornwall. Rhododendrons were present on all of these sites.

Between December 2003 and April 2004 the first major Forestry Commission *Phytophthora ramorum* survey was carried out focusing on locations where rhododendron was found growing in admixture with trees. Britain was divided into high risk and low risk areas based on climate. A total of 1348 sites were identified for survey of which 1217 were high risk sites. In England, 395 sites were surveyed, in Wales, 310, and in Scotland 512. This was complemented by surveys on a further 131 low risk sites in England and Scotland.

A total of 335 samples showing symptoms of the disease were collected. Samples were sent either to the Central Science Laboratory (CSL) in York or the Scottish Agricultural Science Agency (SASA) in Edinburgh. All samples were tested and found to be NEGATIVE.

Significant areas of infection were identified in Cornwall and it was decided that the survey programme would continue in England and Wales during the Summer and Autumn 2004. It was agreed that we would not continue with a formal programme of surveys in Scotland although ad-hoc sampling would be carried out as part of surveyors' normal duties.

Objective of the Survey

The objective of the first survey was "to obtain an understanding of the distribution of the fungal pathogen *P. ramorum* on rhododendron growing in admixture with trees in woodlands across Britain, in order to inform policy development on eradication and containment, or alternatively, management of this potentially devastating disease." For the second survey, the objective was still valid. However, CSL had identified *Vaccinium* as a potential high risk host and so for this survey, *Vaccinium* in woodlands was included in the sampling protocol.

In order to increase the chances of detecting *P. ramorum* in the wider woodland environment, water courses were to be sampled using a method called 'water bait sampling' which involved the suspension in the water of 'tea bag' type sachets containing pieces of suitable host material (rhododendron). This method had been successfully used in the USA and had proved to be a useful first alert of the pathogen.

Sampling Protocol & Timetable

For this survey, each fieldstation of the Technical Services Unit (TSU) in England and Wales was asked to identify ten high risk sites and five low risk sites that were in close proximity to their fieldstations, 'Close' was identified as being able to travel to the site, survey and return to the station in the same day. Surveying would be carried out as per the original protocol, with the additional requirement of including woodland, which contained *Vaccinium* spp. The survey was carried out between May and August 2004

Survey Data Summary

Table 1 summarises the results of the survey, which was carried out between March 2004 and August 2004.

TABLE 1

Type of samples	No. of samples taken	No. Positive
Bark	33	Nil
Rhododendron	37	Nil
Vaccinium	2	Nil
Other	1	Nil

Water	19	3

Conclusion

The second round of surveys confirmed that *P. ramorum* was not present in the rhododendron, *Vaccinium* and *viburnum* sampled. Of the 19 water samples taken, 3 did prove positive. Positive water bait tests confirmed the presence of host material. Efforts to identify and eradicate the material should continue.

Next Steps

Since this survey was carried out a new and potentially more lethal *Phytophthora* has been discovered in Cornwall. It has been given the name *Phytophthora kernoviae* after the old name for Cornwall, Kernow. At the time of writing this report, 2 English oaks and 40 beech have been infected by the pathogen. In the area of greatest infection around the Truro/Redruth area, a *Phytophthora kernoviae* Management Zone (PkMZ) has been set up and plans are currently being put in place to undertake a containment and eradication programme within this zone. Outwith the zone, Plant Health & Seed Inspectorate (PHSI) of Defra is carrying out further surveys of woodlands with rhododendrons in the Penzance area where both *P. ramorum* and *P. kernoviae* have been found. This new outbreak will also be included in the containment and eradication strategy

Acknowledgement

The Forestry Commission wishes to acknowledge the full co-operation and support given to its surveyors by woodland owners or their managers who were approached for permission to survey their land.

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Appendix I - Survey Team Details

Assessors from the Technical Services Unit (TSU) of Forest Research carried out the survey. These surveyors had undertaken training from Plant Health staff in January 2004 prior to the commencement of the first *P. ramorum* survey.

TSU Survey Team Members:

Kate Harris

Ralph Nickerson

Steve Coventry

Doug Nisbet

Barnaby Wylder

David Evans

Richard Nicoll

Tony Reeves

Alan Ockenden

Tony Price