

### ***Phytophthora pseudosyringae* – first findings on bilberry in the UK**

In January 2009, plants of *Vaccinium myrtillus* (bilberry) in woodland on Cannock Chase, Staffordshire, were observed with symptoms of stem dieback; some plants were dead. Although it was suspected that the plants were infected with *Phytophthora ramorum* or *Phytophthora kernoviae*, samples taken by Fera's Plant Health and Seeds Inspectors and subsequently by Fera diagnosticians were tested, and ultimately found to be infected with *Phytophthora pseudosyringae*. Koch's postulates (a series of tests to confirm that the organism that is isolated is the cause of the disease symptoms on the host plant species) were completed. In May 2009, symptomatic plants of *V. myrtillus* in a woodland in the south-west of England were also found to be infected with this pathogen. These are the first known reports of *P. pseudosyringae* on *V. myrtillus*. (Beales *et al.*, 2009).

In 2007, Forest Research (FR) (Denman *et al.*, 2007) reported findings of *P. pseudosyringae* on two mature trees of European beech (*Fagus sylvatica*) and one mature hornbeam (*Carpinus betulus*) in south Wales. Sampled in 2005, these trees exhibited stem symptoms including bleeding cankers and lesions on the root flares. The trees were originally suspected to be infected with *P. ramorum*. These were the first records of *P. pseudosyringae* in the UK and the first record on hornbeam. In 2009, FR identified *P. pseudosyringae* as the cause of bleeding cankers on *Nothofagus procera* in Cornwall, another new tree host (Joan Webber, FR, *personal communication*, 2009).

*P. pseudosyringae* was first formally described as a new species of *Phytophthora* in 2003 (Jung *et al.*, 2003). Unknown *Phytophthora* isolates obtained from forest soils in France, Germany, and Italy and from necrotic roots and collar rot of European beech, and collar rot of *Alnus glutinosa* (European alder) in Germany, dating back as far as 1996, were found to be this new species. Separately, the pathogen has been reported as causing: stem cankers on European beech in Italy, stem damage on chestnut (*Castanea sativa*) nursery stock in Spain, with an isolate (no symptoms described) from *Malus pumila* in Italy. *P. pseudosyringae* has also been found in the USA, affecting various tree/non-tree species in California and Oregon, and, it has been isolated from forest streams in North Carolina.

It is possible that *P. pseudosyringae* may be more widespread than currently realised, including in the UK. Refinement in diagnostic techniques may mean that earlier identifications of isolates of *Phytophthora* species, such as *Phytophthora syringae* may, if retested, be *P. pseudosyringae*. Until this is done this remains a major uncertainty.

The risks that this pathogen poses to the UK will be investigated by the production of a Pest Risk Analysis in 2009.

Claire Sansford, Fera, June 5<sup>th</sup> 2009

## References

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