

Ramorum disease in NW England's larch trees

November 2011

Phytophthora ramorum (*P. ramorum*) is a fungus-like pathogen known to affect more than 150 plant and tree species.

First identified in Great Britain in 2002, it initially infected mostly shrub species such as rhododendron and viburnum, and few trees. However, in 2009 and 2010 *P. ramorum* was found to be killing large numbers of Japanese larch trees, mostly in South-West England and South Wales, and also the environmentally important bilberry in 2009.

Then in 2011 it was found in larch trees in Cumbria and Lancashire for the first time. To date 15 statutory plant health notices have been issued in the North West, with six sites have been confirmed as infected in Cumbria, where larch trees comprise about 6.3 per cent of the county's total woodland area. In Lancashire nine sites have been confirmed as infected, where Larch forms 1.2 per cent of the county's woodland. The disease has since also been confirmed just across the Scottish border in Galloway.

Ramorum disease can kill larch very quickly (within one year of symptoms becoming visible), and larch needles can produce high numbers of infective spores that can be blown on the wind or moved in mists and rain to infect other host plants over a wide area. The only strategy available to minimise the risk of spreading the disease is to fell trees quickly, preferably before peak sporulation (spore production) occurs. Forestry Commission scientists' current knowledge indicates that this occurs in the autumn, shortly before the larch needles fall.

The number and area of new cases on larch trees across Britain reported so far in 2011 is down on the previous two years. However, the new outbreaks in Cumbria, the Peak District and Lancashire in England, and Mull and Galloway in Scotland, indicate a distribution of larch infection that had not previously been detected.

In most cases in North-West England, infection with ramorum on other plant species, particularly rhododendron, had previously been found in the vicinity of the infected trees. However, the exact pathways by which the trees were infected are not known.

The Forestry Commission is leading the programme to manage *Ramorum* disease in trees and woodland, in partnership with the Food & Environment Research Agency (Fera), which is leading the effort on other plants and habitats in England and Wales.

P. ramorum is a 'quarantine' organism whose presence on trees or woodland plants must be reported to the Forestry Commission, which must act to contain or eradicate it. If infection is either confirmed or strongly suspected after checks by a plant health inspector, the Forestry Commission will issue a legally binding statutory plant health notice on owner. These notices require owners to fell all larch and other sporulating

tree species, and also remove infected rhododendron, within at least 100 metres of the outermost infected tree(s).

We have been conducting aerial surveys and ground monitoring across northern England to ensure that all larch plantations are checked for symptoms. This surveillance programme has stopped for the winter now that the larch are shedding their needles which makes the symptoms difficult to detect, and will re-start in the Spring of 2012.

P. ramorum produces spores only from infected foliage (leaves and needles), not from infected timber, although the bark can harbour the spores. Therefore logs from infected larch trees may be sold into the timber market subject to 'biosecurity' measures being observed to minimise the risk of spreading the disease during timber movements and processing. Only hauliers and timber processors authorised by the Forestry Commission to handle logs from infected trees may do so. Larch timber is versatile, easily worked and well suited to outdoor uses such as fencing and garden sheds.

Most of the North West is in the highest-risk zone for *P. ramorum* infection of larch trees. This means the Forestry Commission will not approve new applications for licences to fell larch trees during the winter because of the difficulty detecting infected trees when they have no needles. Allowing larch trees to be felled without knowing whether they are infected could lead to the disease being inadvertently spread in log movements without the necessary 'biosecurity' controls on moving infected logs being in place.

Nor will we approve the use of larch trees in any restocking (replanting) proposals for infection sites. This is because the pathogen can remain viable in the soil for several years. Replanting guidance is available from the website address below.

Forestry Commission have made funding available from the Phytophthora Programme Fund administered by Fera to help affected owners with the costs of clearing larch trees that less than 26 years old, and therefore too small to be sold into the timber market. Other funding is available to help with the costs of taking professional advice on how to comply with the plant health notice and market older trees. A supplement to the Commission's usual woodland regeneration grants is also available to support replanting affected sites with new trees.

Grants are also available for help the clearing of *Rhododendron ponticum* from high-risk woodland sites. This is because *R. ponticum*, which is present as an invasive species in many woodland areas, is also highly susceptible to *P. ramorum* infection, and produces large quantities of the spores that spread the disease.

Anyone visiting or working in infected woodland is required to take precautions to prevent accidental spread of the *P. ramorum* pathogen on their boots, clothes, vehicles, tools, equipment or animals. Biosecurity guidance is available from the website address below.

Keith Jones, the Forestry Commission's Area Director for North-West England and the West Midlands, said,

“It is no longer possible to eradicate ramorum disease from Britain, but in the long term we hope that the tough measures we are taking now will result in fewer tree losses in the future. The aim of our strategy is that eventually the number and severity of outbreaks will decline to a sufficiently low level to make them insignificant in terms of their effect on our woodland ecology and the wider environment and landscape, and the timber market.

“For this reason we are very grateful for the co-operation of those unfortunate woodland owners who have suffered heart-breaking losses of valuable trees now in the effort to bring this devastating disease under control, and thereby save millions more trees in the long term.”

Suspected cases of infected larch trees must be reported to the Forestry Commission at plant_health_england@forestry.gsi.gov.uk; tel. 0117 372 1070.

Further information, including guidance on how to recognise ramorum disease, is available at www.forestry.gov.uk/pramorur .

Key facts – Cumbria woodland

Total woodland in county	67,600 hectares (ha)
Woodland as a proportion of land area	9.9 per cent
Total area of larch woodland in county	4,275 ha
Larch as a proportion of total woodland	6.3 per cent
Woodland area managed by FC	15,324ha
FC woodland as proportion of total woodland	22.6 per cent

Key facts – Lancashire woodland

Total woodland in county	20,055ha
Woodland as a proportion of total land area	6.5 per cent
Total area of larch woodland in county	244 ha
Larch as a proportion of total woodland	1.2 per cent
Woodland area managed by FC	1519 ha
FC woodland as proportion of total woodland	7.5 per cent