

DAFM Plant Pest Factsheet

Phytophthora pluvialis



Fig 1: Western hemlock stand in England where *P. pluvialis* has been detected

Pest Characteristics

- **Pest:** *Phytophthora pluvialis*
- **Common name:** Red needle cast (RNC) on *Pinus radiata* in New Zealand
- **Hosts:** Western hemlock (only in UK), Douglas-fir (UK/USA/NZ); radiata pine (only in NZ) and tanoak (only in USA)
- **Invasive Risk:** *Phytophthora pluvialis* is an oomycete pathogen that has been recorded from three geographically distant areas of Pacific Northwest USA, New Zealand, and mainland United Kingdom. Research has shown *P. pluvialis* is an introduced species in NZ. Recent findings in the UK pose an increased risk of introduction to Ireland. There is also the high possibility that *P. pluvialis* is more widely distributed than its known distribution, given the detection and impacts of the pathogen are restricted to wintertime during favourable conditions of high rainfall and humidity.
- **Entry Pathways:** It is uncertain how *P. pluvialis* has moved into new regions, possible pathways are considered to be plants for planting, wood commodities, natural spread or via soil as a contaminant.
- **Adaptability:** Prospects for establishing in Ireland are favourable. *Phytophthora pluvialis* is a cold temperature *Phytophthora* with moisture also a key driver of infection and outbreaks. Favourable environmental conditions appear to be comparable to those of *Phytophthora ramorum*.
- **Visual Symptoms:** The pathogen had been found to cause dieback on lower branches, which is common across all known hosts and locations affected (Fig 2). While foliar symptoms are characteristic in the USA and NZ, additional symptoms on wood have been reported in the UK (Fig 3).

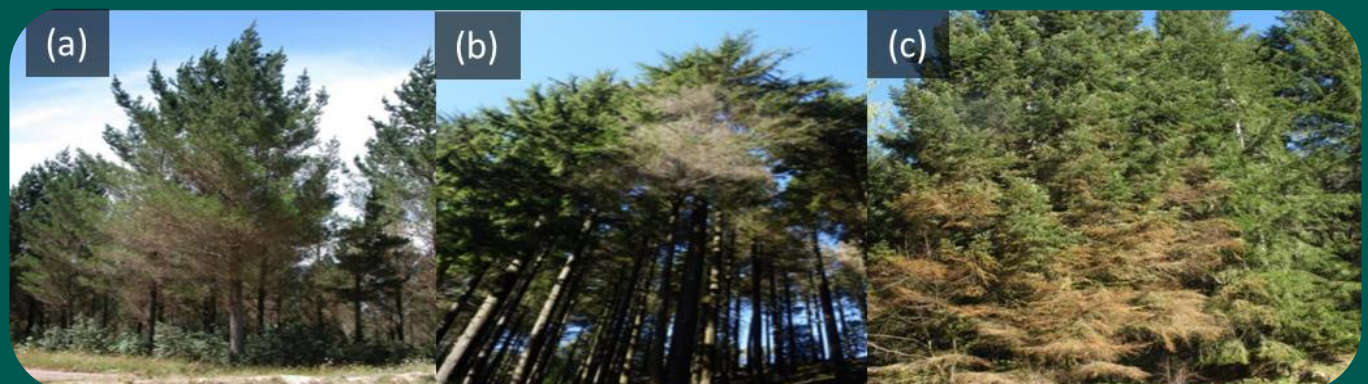


Fig 2: Visual symptoms of *P. pluvialis* causing lower dieback a) Radiata pine in NZ b) western hemlock in the UK (c) Douglas-fir in western Oregon



