

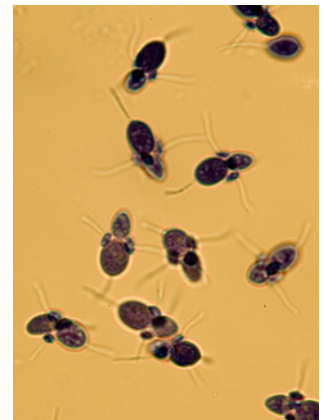
Lophodermium seditiosum on Scots pine

Browning and loss of needles on young Scots pine was reported from several locations on the west coast of Scotland this year (see right). The damage is due to infection by the needle-cast disease *Lophodermium seditiosum*, possibly exacerbated by exposure. This fungus infects young needles of Scots pine in the late summer and autumn during wet weather, causing yellow flecks or blotches leading to browning of the entire needle. Severe infections can result in total browning of trees and loss of the youngest needles by late winter and spring.



Entomosporium mespili on hawthorn

An unusual case of damage to hawthorn caused by the fungus *Entomosporium mespili* was reported in September this year. This fungus is favoured by cool, rainy conditions and causes spotting and chlorosis of hawthorn leaves (near right), leading to loss of foliage. Spores of this fungus are very characteristic (far right) and are produced in tendrils which emanate from the centre of leaf spots. Infected, fallen leaves should be removed to prevent new infections occurring in spring.



Horse chestnut

Bleeding canker of horse chestnut is caused by the pathogenic bacterium, *Pseudomonas syringae* pv. *aesculi*. This year the disease was confirmed on horse chestnut in Pitlochry, the most northerly confirmation of the disease to date. Notably, *P. syringae* pv. *aesculi* was also confirmed on the hybrid red horse chestnut (healthy *Aesculus x carnea* illustrated right). In this case, the infected red horse chestnut tree had dieback of shoot tips and small cankers on branches but no bleeding stem lesions.



Dieback of Norway spruce

Norway spruce in a number of plantations in the south and south-west of England have shown varying amounts of dieback and some trees have died. Initial investigations suggest a condition known as 'Top Dying'. This condition, first described in the late 1950s, has been found in plantations where stocking density is high and thinning has recently been carried out, the thinning having been delayed for many years. It is believed to be mainly a physiological effect but more information is needed. We would be very interested to know of any plantations of Norway spruce in England or Wales exhibiting similar symptoms.



Powdery mildew

Powdery mildew, apparent as whitish powder coating on leaves and shoot tips, has been especially visible this summer. Many hosts including oak (see right), horse chestnut, apple and *Acer* have been found infected by this fungal pathogen (mainly *Erysiphe* spp.). With severe infections new foliage and shoots are distorted and even killed. Weather conditions (warm but with high humidity) have probably favoured infection and symptom development this year.



Horse chestnut leaf miner

The highly visible reddish-brown disfigurement on horse chestnut foliage (see right) has sparked many reports of 'rust' disease. In fact, the symptoms are caused by larvae of the horse chestnut leaf miner (*Cameraria ohridella*) as they feed within the leaves. Infestations can be dramatic (severely affected trees may look 'autumnal' from midsummer onwards) but trees are well able to withstand the damage and reflush normally in the spring. More information about this pest at www.forestresearch.gov.uk/fr/INFD-68JJRC

