

Field Identification Guide

Dothistroma needle blight



Dothistroma needle blight

In Britain, Dothistroma needle blight (DNB), also previously known as red band needle blight, is caused by the fungus *Dothistroma septosporum*.

Species affected	DNB has been found on a range of conifer species, but pines (<i>Pinus</i> spp.) are the most common hosts, with Corsican pine, lodgepole pine and Scots pine all now affected.
Symptoms	<p>Trees of all ages can become infected. Symptoms are first seen at the base of the crown on older needles. Infected needles typically develop yellow and tan spots and bands, which soon turn orange/red.</p> <p>As the disease progresses, the ends of the needles turn reddish-brown while the needle bases remain green. It is within the red bands that the small (<1 mm) black fruit bodies containing spores tend to be found.</p> <p>Symptoms are most apparent in June and July, when spores are released from the fruit bodies, leading to infection of the current year's needles.</p> <p>After this point, the symptomatic needles are shed and branches can have a typical 'lion's tail' appearance, with only a tuft of the recently infected current year's needles remaining at the branch ends.</p> <p>Defoliation can continue year on year and gradually weaken the tree, significantly reducing timber yields. It can also eventually lead to mortality.</p>
Timing	Symptoms are most apparent in June and July.
Reporting requirements	<p>If you find this disease in Scotland or on Scots pine, please report it through Tree Alert (https://treealert.forestresearch.gov.uk).</p> <p>In Northern Ireland please report via the TreeCheck website (www.treecheck.net) or phone app, or by emailing planthealth@daera-ni.gov.uk</p> <p>For traded plants and any non-tree hosts please email planthealth.info@apha.gov.uk (England & Wales), or hort.marketing@gov.scot (Scotland).</p>

Based on information available in August 2015.

Signs and symptoms



Clear example of DNB on a young Corsican pine tree.

Signs and symptoms



Clear example of DNB on a young Corsican pine tree.

Signs and symptoms



Small cluster of DNB fruit bodies, within a lesion typical of lodgepole pine, but on Scots pine

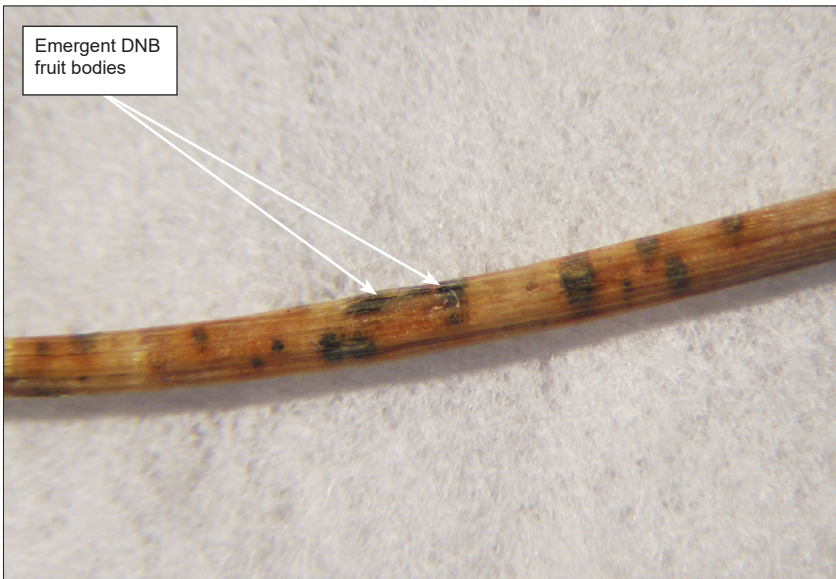
DNB on Scots pine needle.



Round brown DNB lesions, with small single fruit bodies, as often seen on Scots pine

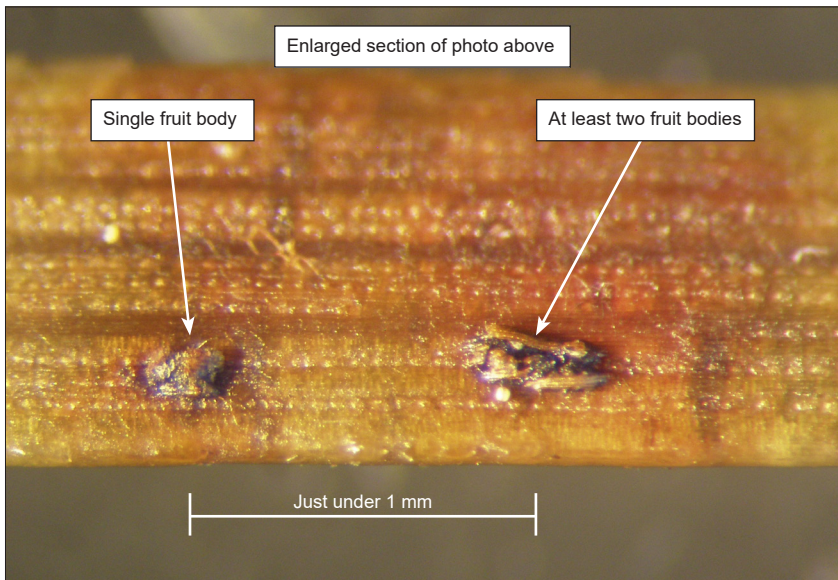
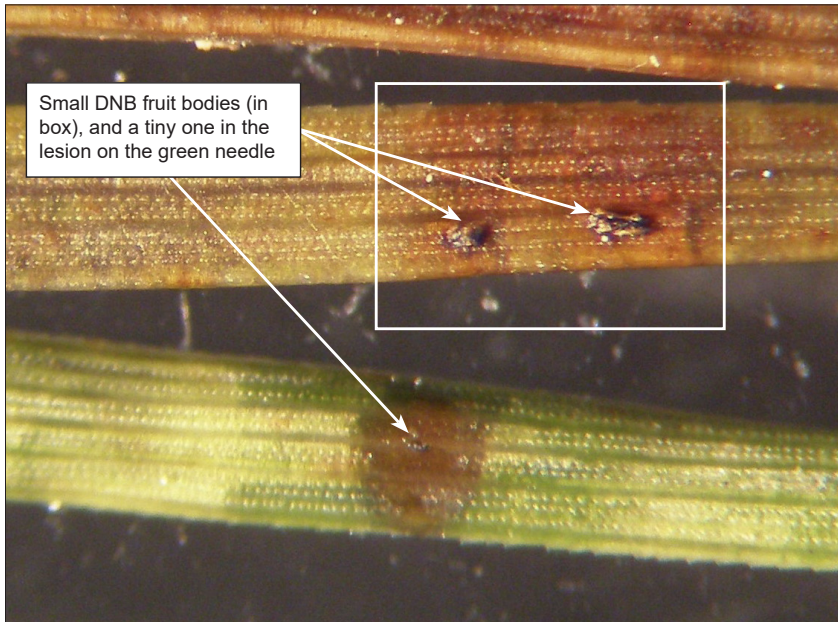
DNB on Scots pine needles.

Signs and symptoms



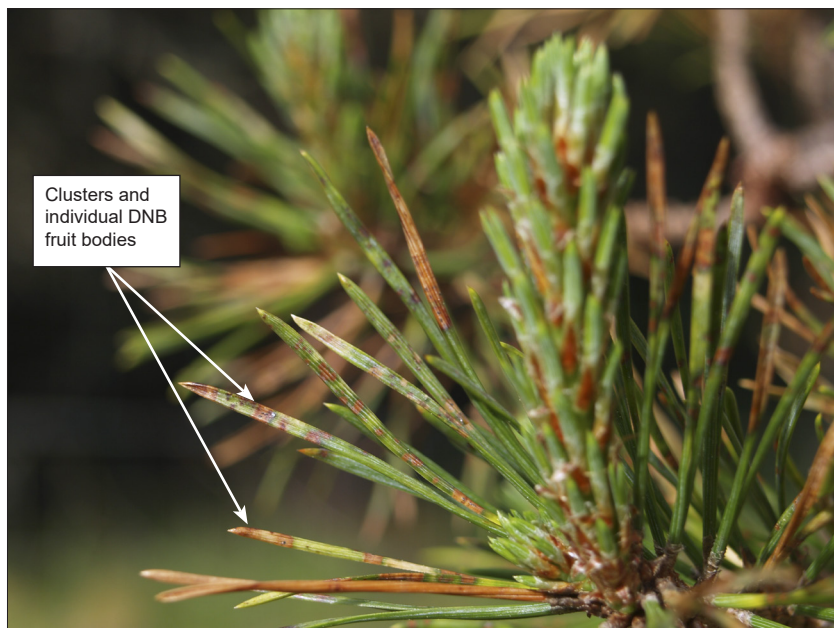
Enlarged photos of needles showing DNB on Scots pine.

Signs and symptoms



DNB on Scots pine.

Signs and symptoms



DNB on Scots pine.

Signs and symptoms



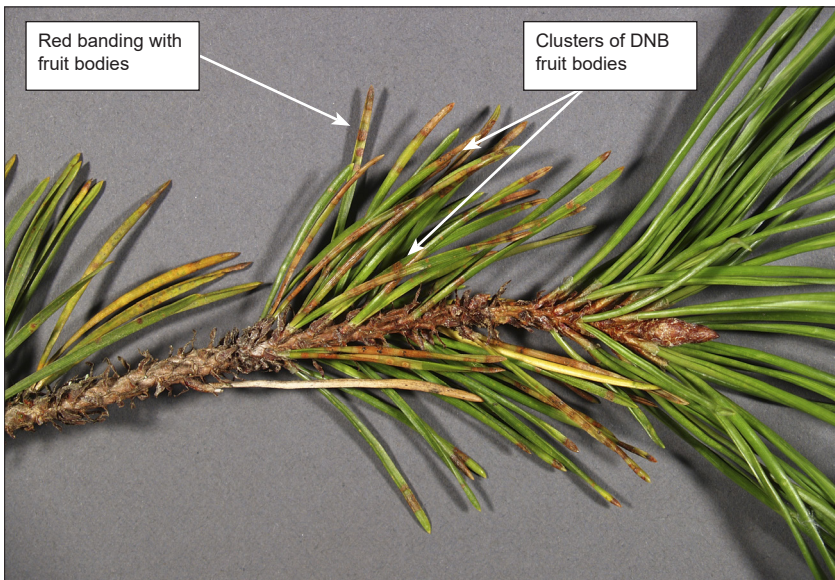
DNB on Scots pine.

Signs and symptoms



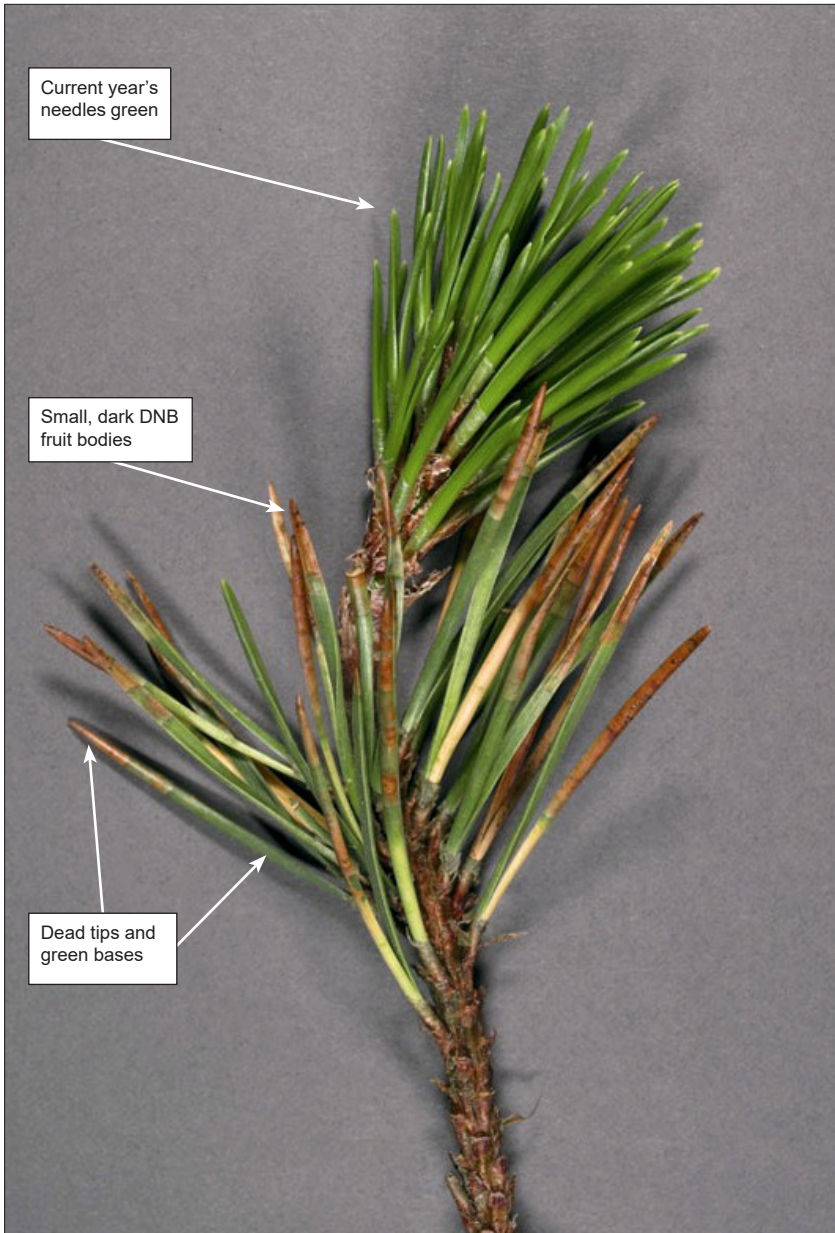
DNB on Corsican pine.

Signs and symptoms



DNB on lodgepole pine.

Signs and symptoms



DNB on lodgepole pine.

Signs and symptoms



DNB on spruce.



DNB on spruce.



Comparison - *Elatobium* on Sitka spruce.

Look-alike signs and symptoms



Douglas fir needles.

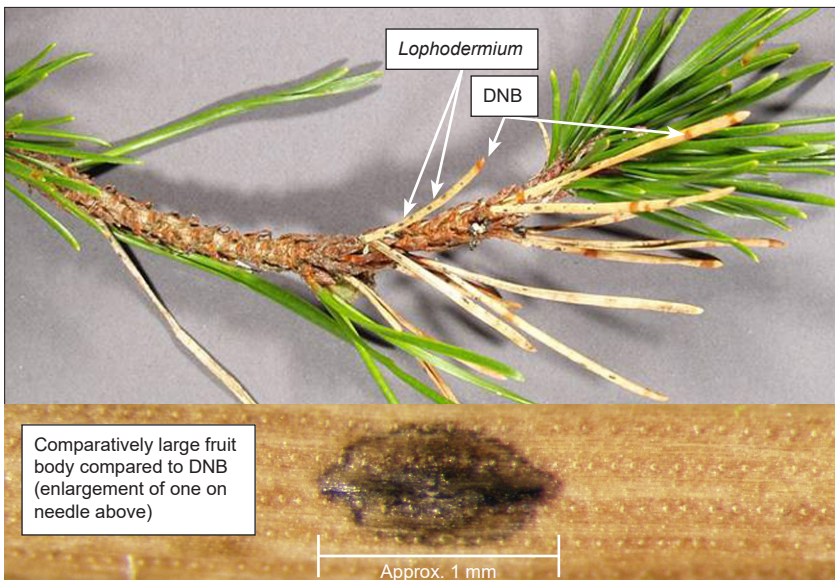


Early *Elatobium* damage on Sitka spruce. Needles will become brown, with darker bands.

Look-alike signs and symptoms

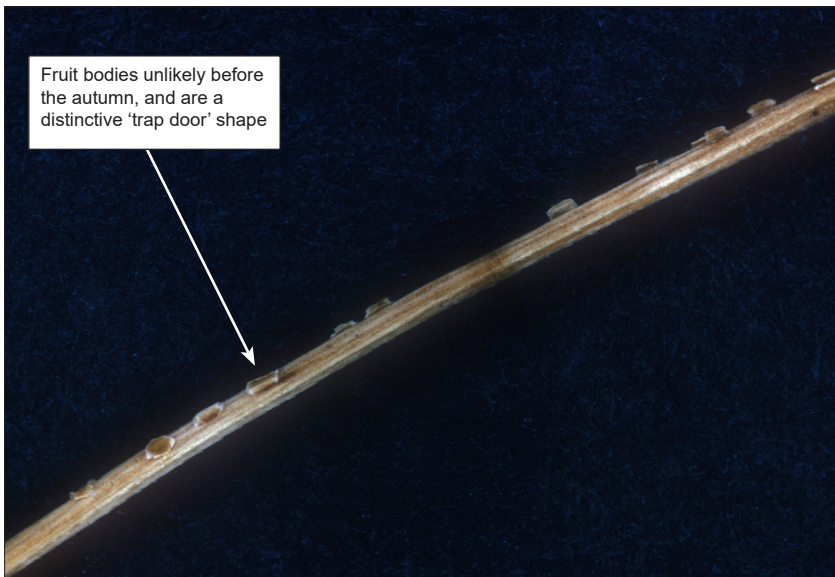
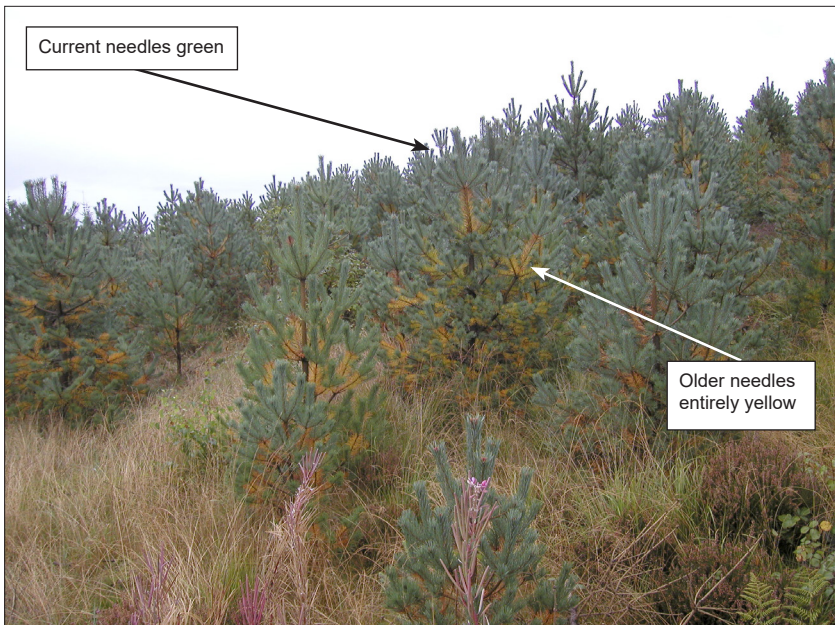


Lophodermium spp.



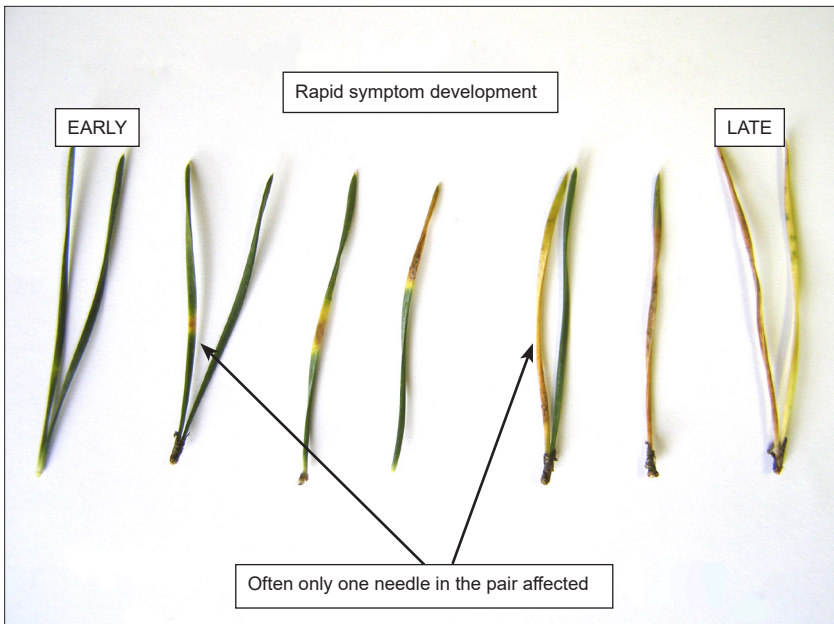
DNB and secondary *Lophodermium* on lodgepole pine.

Look-alike signs and symptoms



Cyclaneusma on Scots pine.

Look-alike signs and symptoms



Lophodermella on Scots pine needles.

Look-alike signs and symptoms

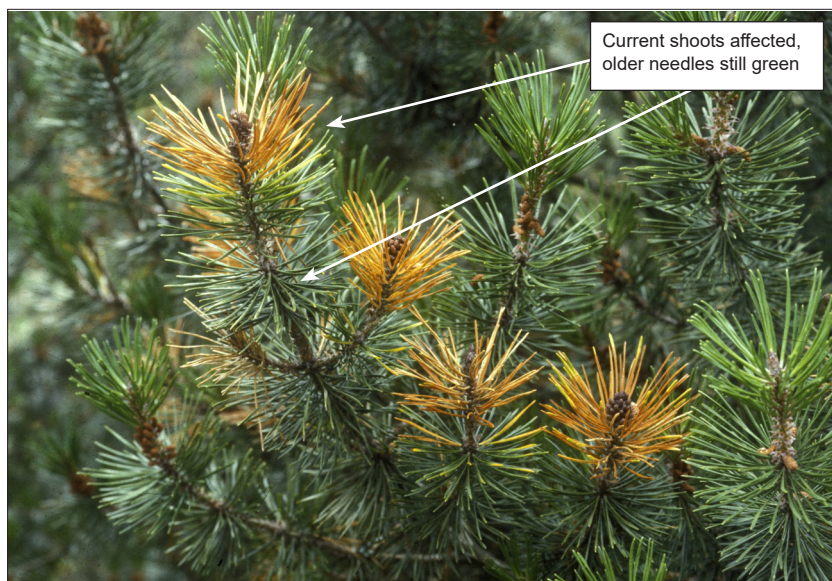


Lophodermella on Scots pine.



Scots pine needle pair with both DNB and *Lophodermella*.

Look-alike signs and symptoms



Shoot disease - *Ramichloridium pini*.



Shoot disease - *Brunchorastia pinea** (*Gremmeniella abietina*).

* In Northern Ireland, if you suspect you have seen this shoot disease, please report as per page 2.

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Observatree aims to create a tree-health early-warning system using citizen science.

Observatree is a partnership project led by Forest Research, the research agency of the Forestry Commission. Project partners are the Animal & Plant Health Agency (APHA), Department for Environment, Food & Rural Affairs (Defra), Fera Science Ltd, the Forestry Commission, the National Trust, Scottish Forestry, the Welsh Government and the Woodland Trust. Supporting the project is Natural Resources Wales. The first four years of this project was 50% funded by the EU's LIFE programme.

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This booklet forms part of a set that supports Observatree volunteers when out looking for priority pests and diseases. It supplements face-to-face training and is not intended as a full or detailed description. It will also be useful for others who have some knowledge of the particular pest or disease and understand how to look for these. Further information is available online from the websites listed below:

www.observatree.org.uk

www.forestresearch.gov.uk/tools_and_resources/fthr/pest-and-disease-resources/

www.gov.uk/guidance/prevent-the-introduction-and-spread-of-tree-pests-and-diseases

<https://planthealthportal.defra.gov.uk>