

A guide for landowners and managers

Eight-toothed spruce bark beetle (*Ips typographus*)



Ips typographus beetles bore into wood where they attract mates and lay eggs. Adult *Ips typographus* beetles are approximately 5mm long.



Aerial view of stressed trees from the original 2018 outbreak site in the UK.

Introduction

Woodland owners, managers and timber processors in the south of England should be vigilant to help stop the spread of this pest and aid eradication. The eight-toothed spruce bark beetle (*Ips typographus*) is considered a serious pest of spruce trees in Europe and was first found in England on Norway spruce in woodland in Kent as part of routine plant health surveillance activity in 2018. Further populations have since been found in woodlands in West Sussex, East Sussex, Surrey and Kent, though these don't appear to relate to the original outbreak site. The beetle is currently subject to eradication measures in the south of England.

Although spruce trees are not a major component of woodlands in lowland England, they are important for the forestry industry elsewhere, making up around 50% of commercial planting in the UK and supporting thousands of jobs. It is vital that the beetle is prevented from establishing to protect this wider industry.

The beetle prefers stressed or dying trees, attacking bark on trees above 8cm diameter which is sufficient size to create breeding galleries. As a woodland owner, manager or timber processor, **you can help eradicate the pest through active management, which will in turn benefit your woodland.**

Impact

The eight-toothed spruce bark beetle is present in spruce trees in most of continental Europe and is also present in some parts of Asia. If the beetle were to establish in Great Britain, it could cause significant economic damage to our spruce-based industries.

Statutory eradication action is employed to manage incursions, whilst movement restrictions prevent any *Ips typographus* being moved elsewhere in the UK.

What to look out for

Adult beetles are dormant and hibernate over winter under the bark of trees, logs and in leaf litter. They then re-emerge in spring, when the temperature rises above 20°C. The beetle prefers stressed or weakened spruce trees e.g. windblown or damaged trees, as well as recently felled spruce trees and larger harvesting residues. Inspections of trees or material in this category should be a priority for landowners and managers in the south of England.

Also look for standing individual stressed trees and groups of dying/stressed spruce trees. This can arise when beetles 'mass attack' trees. Under the right conditions, this phase can lead to extensive tree death.

Adult females lay eggs along a linear system from which galleries radiate, becoming wider as the larvae grow. This pattern shows underneath the bark when this is peeled from the sapwood and is unique to this pest. Look for this symptom in dead trees – whether standing or fallen. If you strip back the bark the breeding chambers will be similar to the photo below.

The eight-toothed spruce bark beetle (*Ips typographus*) can often be confused with the great spruce bark beetle (*Dendroctonus micans*). A symptom guide is available on the [Forest Research webpage](https://www.forestresearch.gov.uk/tools-and-resources/ftth/pest-and-disease-resources/)¹ to assist with identification.



Stressed Norway spruce trees which creates ideal conditions for *Ips typographus* infestation.



Larval gallery under the bark of spruce showing larval galleries radiating out from a straight, vertical maternal gallery.



Exit holes (2.5-3 mm approximately), caused by eight toothed spruce bark beetle (*Ips typographus*).

¹ <https://www.forestresearch.gov.uk/tools-and-resources/ftth/pest-and-disease-resources/>

What you need to do

All landowners, managers and timber processors should remain vigilant for this pest, particularly in areas where spruce may be stressed or damaged. Please report any suspected findings through [TreeAlert²](#) and actively manage your trees to reduce the risk of infestation.

We encourage owners and managers to:

1. Be aware of their location in the demarcated area (DMA) and therefore the level of risk of an *Ips typographus* outbreak. See back page for more information about the DMA.
2. Identify whether you have any spruce in your woodland.
3. Familiarise yourself with the signs and symptoms of *Ips typographus*.
4. Get in touch with your local Woodland Officer. See back page for details on how to contact them.
5. Report any suspected findings to Forest Research via the online portal TreeAlert. Please note that TreeAlert requires photographs to be uploaded. These should be clear, well-lit, close-up pictures of symptoms, photos of the trees *in situ* and/or the beetles themselves.
6. Remove stands of high-risk stressed, dead and dying spruce trees, and the proactive removal of healthy spruce trees, replacing with non-susceptible tree species in the DMA. You must apply for a felling licence to do this. Proactive removal is encouraged to limit the possibility of populations of *Ips typographus* establishing and prevent spread to other areas. See [GOV.UK](#) for more information.
7. Talk to other local landowners. Working with neighbours may help make harvesting spruce more economical.
8. Look at support available - if access is an issue on your site, grants may be available to help support works in relation to managing your spruce. See back page for more information on the Tree Health Pilot.
9. Consider developing a woodland management plan and the actions you can take to help enhance the environmental and economic benefits of your woodlands by removing spruce. For instance, spruce was often planted on ancient woodland sites and its removal would help restore the wood to a semi-natural ecosystem.

² <http://treealert.forestresearch.gov.uk>

Steps taken by the Forestry Commission

The Forestry Commission have been working at pace to survey and gather evidence across England, investigating hundreds of sites to understand conditions for *Ips typographus* establishment before taking robust action to reduce the risk of spread by bringing the infected sites under active management. This work includes:

- Regular monitoring for *Ips typographus* and other pests and diseases.
- Conducting aerial surveys to identify potentially stressed spruce trees.
- Ground inspection of identified trees.
- Facilitating removal and destruction of infested trees.
- Facilitating replanting in the area with non-susceptible species.



Forestry Commission and Forest Research staff at an outbreak site in South East England.



Proactive felling of spruce in South East England.

Biosecurity

Pests such as *Ips typographus* can be spread through infested bark and vegetation. If you harvest spruce, ensure machinery is cleaned and free of debris and vegetation **before it leaves site**. Always follow biosecurity best practice when visiting or working in woodlands to help reduce the risk of introducing and spreading tree pests and diseases.

The Forestry Commission has worked closely with industry organisations to develop specific biosecurity guidance for those working on trees and in woodlands, for information on biosecurity best practice please visit [GOV.UK](#).

Preventing and controlling the spread

Our response and what this means for you

To protect the country against this pest, under powers conferred by The Official Controls (Plant Health and Genetically Modified Organisms) (England) Regulations 2019, the Forestry Commission has introduced a demarcated area around the confirmed outbreak sites restricting the movement and methods of forest operations. Further details, including a map of the area, and a description of the boundary can be found by visiting [GOV.UK](https://www.gov.uk), or by using the QR code.



Scan the QR code to see the latest demarcated area map for *Ips typographus*

In addition to obtaining an appropriate felling licence, the following conditions are in place in the demarcated area:

- Restrictions on the felling of susceptible material without prior notification. Landowners must provide notice of their intention to fell relevant material at least 14 days in advance of any felling in the demarcated area. Felling may only commence once written authorisation is provided by the Forestry Commission.
- Restrictions on the killing of trees (either by ring-barking, chemical injection or application, mechanical means, biological control or arboricultural intervention) of the genus *Picea* A. *Dietre* over three metres in height, without prior notification. All operations must be agreed in writing by the Forestry Commission.

- Prohibition on susceptible material being left *in situ*, unless authorised in writing by a plant health inspector.
- Prohibition on the movement of spruce *Picea* material with bark (for example, wood with bark, isolated bark, live trees over 3 metres) that has originated from within the demarcated area. Provision is made to enable plant health inspectors to authorise movements and the processing of spruce material with bark from the demarcated area where this can be achieved without risking the spread of *Ips typographus*.

Processing (or utilisation as biomass) of spruce material which has originated in the demarcated area may only be undertaken at premises authorised by the Forestry Commission to receive this material. A list of authorised processors can be found on [GOV.UK](https://www.gov.uk)

For authorisation to commence felling, or to dispatch timber from a harvesting site, within the demarcated area please contact: ipstypographus.authorisation@forestrycommission.gov.uk

For authorisation to process spruce material that has originated from the demarcated area please use the links to application forms at: [GOV.UK](https://www.gov.uk) or contact the email address.

Non-spruce conifer timber that is bark-free is not subject to the same movement restrictions, so it can be moved and processed without need for inspection or authorisation.

PLEASE NOTE: Plant passports must not be used when moving spruce conifer material with bark that originates in the area demarcated for *Ips typographus*. All other non-spruce conifer species with bark originating in the area demarcated for *Ips typographus*, must be moved with a plant passport.

For further information on Plant Passporting see [GOV.UK](https://www.gov.uk).

Advice

Your local Woodland Officer can assist you with expert advice about managing your woodland, the range of support available and the regulatory processes involved. If you are based in the South East and London, please contact southeast.fce@forestrycommission.gov.uk.

Funding Support

Do you own or manage spruce trees within the DMA? Grants are available to manage or fell your spruce trees, restock your woodland and maintain your newly planted trees. Speak to your Forestry Commission Woodland Officer about getting involved or visit our website to find out more:

<https://www.gov.uk/government/publications/tree-health-pilot-scheme-2023/grants-for-larch-spruce-and-sweet-chestnut>