

# Field Identification Guide

## Oriental Chestnut Gall Wasp



Image: György Csöke © Hungary Forest Research Institute, Bugwood.org

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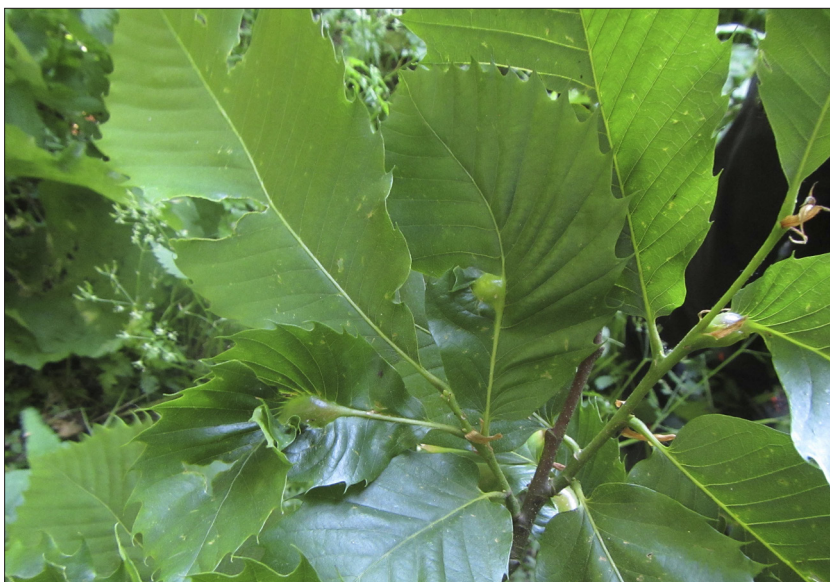
# Oriental Chestnut Gall Wasp

*Dryocosmus kuriphilus* is a species of gall wasp native to China that is commonly referred to as the oriental chestnut gall wasp (OCGW). In June 2015 it was discovered for the first time in Britain. OCGW induces galls (distinctive growth irregularities) to form on sweet chestnut trees (*Castanea sativa*) which can result in a reduction of growth and fruiting. At this time, we believe that OCGW is the only insect that is forming galls on Sweet Chestnut.

Species affected	Sweet chestnut ( <i>Castanea sativa</i> ) and other <i>Castanea</i> species.
Symptoms	<p>OCGW galls are conspicuous and distinctive. They can develop on young twigs or leaves, either on the petiole or on the midrib. The galls can cause leaf distortion and deformity. Each individual gall is between 5 and 20 mm in diameter, but larger galls may be found where several coalesce. Young galls are green or rose-pink but later turn red then brown. Galls that have developed on twigs shrink considerably over time and become woody and may remain on the tree for two years or more. Galls that have formed on leaf material senesce (age) in the autumn. Leaf retention has also been observed around the galls but this is not always the case.</p> <p>The adult wasp is only 2.5 to 3.0 mm long with a black body, translucent wings and orange legs. Its small size means it is unlikely to be noticed, especially as it does not have a sting and is harmless to humans.</p> <p>OCGW is univoltine (one generation per year) and females lay eggs in the growth / leaf buds of sweet chestnut trees during the summer, with eggs typically hatching into larvae within 30 to 40 days. The early stage larvae become dormant and overwinter in the buds but resume activity in the spring, causing the formation of the characteristic galls which are home to the developing larvae. The larvae feed for 20-30 days within the galls before pupating and adult wasps usually emerge during June to August, creating holes in the galls as they exit. These wasps live for approximately 10 days, completing their life cycle as they lay more eggs. Wasp reproduction is achieved from unfertilised eggs without any mating and male wasps have never been recorded.</p>

Timing	Current year galls can be observed from May with leaf distortion occurring as galls form.
Biosecurity	If you are sampling for galls please ensure that all potentially infected material is double bagged on site to prevent accidental escape of larvae or wasps, and that all plant debris, especially leaves and twigs, are removed from clothing, boots and vehicles, before leaving.
Reporting requirements	<p>If you find this pest, please report it through Tree Alert (<a href="https://treealert.forestresearch.gov.uk">https://treealert.forestresearch.gov.uk</a>).</p> <p>In Northern Ireland please report via the TreeCheck website (<a href="http://www.treecheck.net">www.treecheck.net</a>) or phone app, or by emailing <a href="mailto:planthealth@daera-ni.gov.uk">planthealth@daera-ni.gov.uk</a></p> <p>For traded plants and any non-tree hosts please email <a href="mailto:planthealth.info@apha.gov.uk">planthealth.info@apha.gov.uk</a> (England &amp; Wales), or <a href="mailto:hort.marketing@gov.scot">hort.marketing@gov.scot</a> (Scotland).</p>

Based on information available in December 2015.



Photograph courtesy of Forestry Commission England Tree Health team

Clusters of galls formed by OCGW larvae in the canopy of a sweet chestnut tree.



## Signs and symptoms



Photograph courtesy of Forestry Commission / © Matteo Maspero

Galls formed by the larvae of OCGW on sweet chestnut leaves.



Photograph courtesy of Forestry Commission England Tree Health team

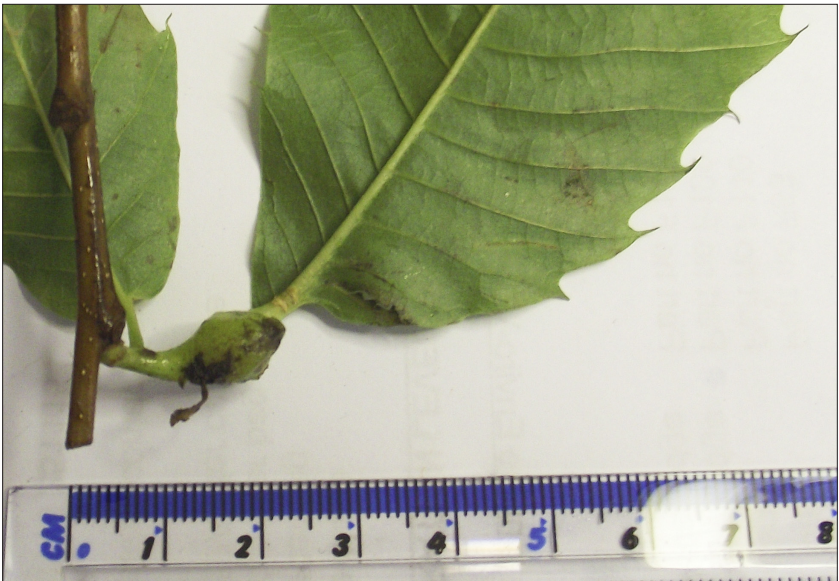
Gall on the leaf midrib causing leaf distortion.



## Signs and symptoms



OCGW gall on the leaf petiole (stalk).



OCGW gall on the leaf petiole (stalk).

## Signs and symptoms



Photograph courtesy of Forestry Commission England Tree Health team

OCGW gall dissected to reveal the developing larvae.



Photograph courtesy of Forestry Commission England Tree Health team

Rose coloured OCGW gall on the leaf petiole.



## Signs and symptoms



Rose coloured OCGW gall.



Photograph courtesy of Forestry Commission England Tree Health team

Small gall forming on the side of the leaf midrib causing leaf distortion.



## Signs and symptoms



OCGW gall over 1 year old, shrunk and lignified and far more difficult to spot than the fresh galls.



Photograph courtesy of Forestry Commission England Tree Health team

Hardened gall with the emergence hole of a parasitic wasp.

## Signs and symptoms - winter



Photograph courtesy of Forestry Commission England Tree Health team

Winter - hard, brown, desiccated galls with retained leaves.

## Signs and symptoms - winter



Photograph courtesy of Forestry Commission England Tree Health team

Winter - hard, brown, desiccated gall with retained leaf giving a 'scrunched up' appearance.



## Signs and symptoms - winter



Photograph courtesy of Forestry Commission England Tree Health team

Winter - hard, brown, desiccated gall showing adult exit hole.

## Signs and symptoms - winter



Photograph courtesy of Forestry Commission England Tree Health team

Winter – retained foliage with galls is noticeable after majority of leaves have fallen in autumn.



## Look-alike signs and symptoms



Photograph courtesy of Forestry Commission England Tree Health team

The cause of this leaf distortion is unknown, but it is not thought to be due to OCGW.



Photograph courtesy of Forestry Commission England Tree Health team

The cause of this leaf distortion is unknown, but it is not thought to be due to OCGW.



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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](http://www.observatree.org.uk)**

**[www.forestresearch.gov.uk/tools\\_and\\_resources/fthr/pest-and-disease-resources/](http://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](http://www.gov.uk/guidance/prevent-the-introduction-and-spread-of-tree-pests-and-diseases)**

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