



Butterfly  
Conservation

# Welsh Clearwing

*Synanthedon scoliaeformis*



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## How to manage for the Welsh Clearwing

The Welsh Clearwing needs the bark of mature birch trees, over 40-50 years old, in open situations with sunlit trunks. All old birch trees at occupied sites should be retained, even if they are not currently used by the moth, as they may be colonised in future.

- ◆ Maintain the open structure of existing occupied birch woods by light grazing. Ensure that some regeneration of birch is occurring and that a range of age classes of birches are present.
- ◆ Retain hedgerow birch trees when laying old hedges, or preferably, leave the hedge unmanaged. Allow new birch trees to grow in managed hedges.
- ◆ Do not fell individual old trees in parkland or on roadsides, as they may be suitable for the moth.
- ◆ In even-aged stands, where a large proportion of trees may die off at the same time, it is vital to establish new trees to provide the continuity of mature trees for future breeding of the moth.
- ◆ In exceptional circumstances, it might be considered worthwhile to remove the lowest branches of large birch trees and/or to clear scrub or other trees from the immediate area, so sunlight can reach the trunk.

**If you find evidence for the presence of the Welsh Clearwing on your site, please contact Butterfly Conservation and we will be happy to provide you with free advice on suitable management.**



Saving butterflies, moths and their habitats

For further information please contact:

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Produced by Butterfly Conservation, thanks to a grant from the Countryside Council for Wales.

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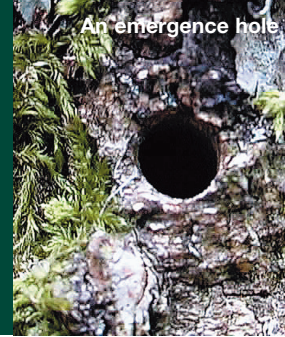
**The Welsh Clearwing is an elusive day-flying moth. It is called 'Welsh Clearwing' because it was first discovered near Llangollen, Denbighshire, in 1854. The Welsh Clearwing is a Red Data Book species and has been identified as a biodiversity priority in Wales by the Welsh Assembly Government, under Section 74 of the Countryside Rights of Way Act.**

The wasp-like adults emerge during June and July. The females lay their eggs into the bark crevices of mature birch trees. The caterpillar feeds within the bark for two to three years before pupating and later emerging as an adult moth.

The Welsh Clearwing has a restricted British distribution in Wales and Scotland. Although not endangered, this species is at risk as it only breeds on mature birch trees with sunlit trunks. These trees are uncommon in the countryside and as they near the end of their lives nearby trees may be too young to act as replacements. For these reasons, the Welsh Clearwing is both a Red Data Book species and a Species of Conservation Concern, and has been identified as a biodiversity priority in Wales by the Welsh Assembly Government, under Section 74 of the Countryside and Rights of Way Act.



A typical host tree



An emergence hole



A Welsh Clearwing cocoon



Adult female Welsh Clearwing

### Life Cycle of the Welsh Clearwing

Adult Welsh Clearwing *Synanthedon scoliaeformis* are thought to emerge from the cocoon on sunny mornings from about the third week of June to mid July. The adults spend some time on the trunks before flying off into the tree canopy.

Welsh Clearwing females lay their eggs in crevices in the bark of mature birch trees. Both Silver Birch *Betula pendula* and Downy Birch *Betula pubescens* are used. The emerging caterpillar eats its way into the bark of the tree, where it continues to feed for the next two or three years gradually growing in size. When mature the caterpillar prepares an exit hole on the trunk and larger exposed roots which remains well hidden, either by a thin layer of bark or by a plug of frass (caterpillar droppings).

Pupation takes place within a cocoon a short distance below the surface of the bark. The cocoon itself is 16-20mm (c.3/4 in) in length with rounded ends. It is formed of reddish brown granules of birch bark held together by silk.



Life cycle of the Welsh Clearwing

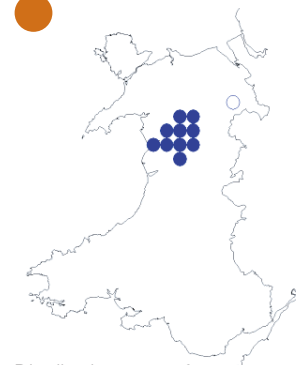
**Adult (wing span)**  
12-15mm (c.1/2in)



**Pupa (length)**  
15-18mm (c.3/4in)



**Emergence holes (diameter)**  
c5mm (c.1/5in)



Distribution map of the Welsh Clearwing

The easiest way to find the Welsh Clearwing is to search for the characteristic 5mm (c.1/5 in) diameter circular holes left in the bark of old birch trees after the adults have emerged. These emergence holes can be found on the lowest part of the trunk, including larger roots, up to a height of about 3m (c.10 ft). There is no preference for smooth or rough bark, and a covering of mosses or lichens does not affect the moth. Fresh holes are found in areas of living bark but, since the holes can remain for many years, older ones can sometimes be seen in dead wood. However, holes in dead wood cannot readily be distinguished from those of a common longhorn beetle *Rhagium mordax*.

The pupal case often remains stuck in the exit hole where it can be removed for identification. It is also worth checking the base of occupied birches for pupal cases that have fallen to the ground. In addition, the adult is occasionally found resting on birch trees, although these sightings are infrequent.

The Welsh Clearwing was presumed lost from Wales by the end of the nineteenth century. However, in 1988 a chance observation near Dolgellau, Merionethshire, re-found the species in Wales and subsequent surveys have shown that it occurs in a wider area of the county, as well as parts of Montgomeryshire.

#### Would you like to get involved?

We need your help to undertake survey work to establish the true distribution of the Welsh Clearwing in Wales. Please let us know if you want to help or have seen evidence of the Welsh Clearwing.

#### Do you have Welsh Clearwing on your land?

If you have mature birch trees on your land, you may also have the Welsh Clearwing. We would be happy to provide free advice on suitable management.

If you can help with either of the above, please contact us at:  
**Butterfly Conservation Wales**  
10 Calvert Terrace Swansea SA1 6AR