



## REVISED PLAN FEBRUARY 2021

### A LEAF-ROLLING WEEVIL

#### *Byctiscus populi*

#### 1. INTRODUCTION

*Byctiscus populi* is a 4-5mm long weevil with brilliant metallic green coloration. It feeds predominantly on aspen (*Populus tremulus*) in woodland and scrub habitats and gets its common name from the fact that the female lays eggs in a specially created leaf-roll that is brown and hangs vertically. The developing larva lives inside this shelter feeding on the leaf tissue.



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Adults emerge from hibernation in spring (from May) and from then throughout the summer, they roll the tender leaves of suckering and sapling aspens after first nipping the leaf stem bases to cause the leaves to wilt, darken and die; a process which usually takes a few days. The female weevil generally lays a single egg on the leaf prior to rolling, which once complete resembles a long and narrow cigar-like tube. After a short time, the roll falls off the plant to the ground but before this occurs, the larvae have usually already hatched from the eggs. They develop by feeding internally on the leaf roll tissue and the development lasts around 16 days after which the larvae vacate the roll and pupate in the soil. There may be several generations of adults produced each year with the final generation of adults overwintering to emerge the following spring; however, poor weather can delay pupation until the following year. Research has shown that the peak activity of the species is around the end of June (Ecoline, 2012).

Regeneration of the host tree is important because research suggests that the suckering and sapling stages of tree growth are preferred by the weevil. Aspen suckers growing at the edge of rides should be allowed to mature by clearing round them during ride management (Ecoline, 2012).

2.	OBJECTIVES	TARGETS
The associated Action Plan is: 'Woodland'		
<b>PLEASE CONSULT THE '<i>GENERIC SPECIES</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL SPECIES PLANS</b>		
A.	To increase the size and range of the known population of <i>Byctiscus populi</i> through sympathetic habitat management.	ongoing

#### 3. NATIONAL BAP OBJECTIVES & TARGETS

This species of leaf rolling weevil is classified as Nationally Rare (RDB3). It is one of eight insects feeding on aspen that are [UK Priority Species](#), JNCC, 2007 (Stubbs, 2014).

## 4. CURRENT STATUS

Historically, this weevil was recorded in sixteen counties in the south of England, but it has declined considerably with confirmed post-1990 records from only Hertfordshire, Warwickshire, Worcestershire, Middlesex, Essex and East Kent; the Worcestershire populations are the strongest nationally. It is currently believed to be present at less than fifteen sites in England and is vulnerable and declining at a minimum of three sites. Reasons cited for its decline are conversion of woodland for alternative land-use, selective removal of aspen in wooded areas and the cessation of coppicing. Similar declines have been noted in several other aspen-associated insects, most notably *Chrysomela tremula* which is probably now extinct in Britain.

In Warwickshire, the species has only been recorded from Oversley Wood where it was first discovered in June 1987. Adults have since been found in May, June and September 1996, May 1999 and May, September and October 2002, July 2003 and September 2008. Additionally, leaf rolls have been observed in May 2002 and in July 2003. The population, which is very localised and vulnerable, exists primarily in one small area in the south-eastern sector of the site where woodland merges into scrub and grassland; 132 larvae and 17 adults were recorded in 2011. The most recent record is in August 2015, one individual) near the ride along the east edge of the wood (Steven Falk, 2020)

Whilst ideally the population size and range in Warwickshire should be increased by further reintroductions to historic and appropriately managed sites, the current population at Oversley Wood is not strong enough at present to source reintroductions. Several other potentially suitable sites exist and would require detailed surveys. However, a survey in 2011-12 of other aspen-supporting woodland habitat in the vicinity of Oversley Wood was unsuccessful in locating definite evidence of leaf-rolling weevil. Oversley can be viewed as the easternmost marker in a linear alignment of woodlands that extends west through Worcestershire, defining the West Midlands' regions' metapopulation of three sites: Oversley Wood, Trench Wood and Monkwood, which all lie in an E-W alignment. It is no surprise that none of the other woods were found to support *Byctiscus* because they do not offer the combination of factors required by the species, being either deficient in aspen or the right growth stage and/or not managed in a way that would encourage aspen growth, or provide sheltered sunny conditions (Ecoline, 2012).

### 4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the [Wild Birds Directive](#) (1979), the [Wildlife and Countryside Act](#) (1981), the [Conservation Regulations](#) (1994) and [EC Habitats Directive](#) (1992). Protection of sites is afforded nationally through [Sites of Special Scientific Interest](#) (SSSI) designation, [Special Areas of Conservation](#) (SAC) and Local Nature Reserve (LNR) statutory status. Other sites are offered recognition of their value through Local Wildlife Site status (LWS), Local Character Areas and identified Landscape Scale Areas. The [National Planning Policy Framework](#) (2019, para.175) states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of the [Conservation of Habitats & Species Regulations](#) (2017, as amended) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

No legal protection exists for this species but national [Red Data Book](#) status and corresponding Regionally Scarce status in Warwickshire should aid the future preservation of Oversley Wood which is a Local Wildlife Site (LWS).

#### 4.2 Current Factors Affecting the Species

- **Natural succession of scrub into woodland** – the species appears to prefer suckering and sapling re-growth and sheltered, warm pockets of woodland edge habitat.
- **Clearance of aspens during woodland management** – clearance of aspens could potentially wipe-out the weevil population.
- **Conversion of broad-leaved woodland to coniferous woodland** – Oversley Wood is owned by [Forestry England](#), so any land-use conversion for commercial reasons could adversely affect the population.
- **Cessation of coppicing** – this traditional management promotes the continuous provision of young aspen growth.
- **Over-collecting by entomologists** – this is a striking and rare species that is known from only a handful of sites in the UK. If the Warwickshire site is widely and indiscriminately disclosed, there is a possibility that entomologists will target the locality for this species.

#### 5. LOCAL ACTION

- A full research survey was carried out in 2003 by J. Mellings. The survey places the Oversley Wood population in a National context and provides important information about the species' requirements at its known UK sites.
- Oversley Wood was designated as a Local Wildlife Site (LWS) in September 2009.
- SITA Trust funding was obtained in 2010 by the Forestry Commission (now Forestry England) for a research programme entitled 'Improving the woodland habitat for invertebrates at Oversley Wood in Warwickshire'. This was carried out in 2011-12 by Ecoline and included a survey of 12 other woods within a 10km radius of Oversley but no definite evidence of the weevil was found. The species' habitat needs are accounted for in the current Forest Design Plan (2011-2021) with two areas managed by [Butterfly Conservation Warwickshire](#) (BCW) on a 6yr. rotation to ensure that there is always young aspen available for the weevil.
- There has been planting of aspen at Ragley Hall and by [Heart of England Forest](#) based at Studley.
- Occasional visits to Oversley Wood by entomologists provide feedback to the Warwickshire Biological Record Centre regarding the continuing presence of the weevil population with the last record of an adult in 2015 (pers.comm. Steven Falk, 2020). However, in 2019 a visit to a part of the wood containing a lot of short growth sapling aspen revealed plenty of leaf rolls although no weevil activity was seen; newly cleared patches of woodland also contained good densities of sapling aspen, available to the weevil next year (pers.comm. Ian Tanner, 2020).

## 6. PROPOSED LOCAL ACTIONS

ACTION	Lead	Partners	By
<b>PLEASE CONSULT THE 'GENERIC SPECIES' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL SPECIES PLANS</b>			
<b>Policy, Legislation &amp; Protection</b>			
<b>PL1.</b> Ensure that Forest Design Plans continue to account for the needs of this and other scarce species.	FE	WWT	ongoing
<b>Site / Species Safeguard &amp; Management</b>			
<b>SM1.</b> Continue to account for the species' habitat needs in the current Forest Design Plan for Oversley Wood with two areas managed on a 6yr. rotation to ensure that there is always young aspen available for the weevil.	FE	CRec BCW	ongoing
<b>Research &amp; Monitoring</b>			
<b>RM1.</b> Monitor the weevil population at Oversley Wood, by counting leaf rolls and adults between May and October. Record results and responses of the population to any management changes in the wood.	FE	WBRC LEs FoOW CRec	ongoing
<b>RM2.</b> Carry out searches for <i>Byctiscus populi</i> at other potentially suitable sites where aspen is present, raising the profile of the species' needs with the landowners.	WBRC	WWT WCC HBA BCW CRec LOs	ongoing

**Abbreviations:** BCW – Butterfly Conservation Warwickshire, CRec – County Recorder, FE – Forestry England, Commission, FoOW – Friends of Oversley Wood, HBA – Habitat Biodiversity Audit partnership, LEs – Local Entomologists, LOs - Landowners, WBRC – Warwickshire Biological Record Centre, WCC - Warwickshire County Council, WWT – Warwickshire Wildlife Trust.

## 7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Progress with this plan up to 2019 can be seen at <https://www.warwickshirewildlifetrust.org.uk/LBAP>

## 8. BIBLIOGRAPHY

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## 9. FURTHER INFORMATION

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**10. CONTACT**

Mike Slater: Butterfly Conservation Warwickshire Branch Conservation Officer.  
Email: [mikeslater1956@outlook.com](mailto:mikeslater1956@outlook.com)

Richard Wright: County Beetle Recorder. Email: [richardwrightuk@yahoo.co.uk](mailto:richardwrightuk@yahoo.co.uk)