



Butterfly
Conservation

factsheet

Aspen

Populus tremula

A key hostplant for moths and other insects

Aspen leaf

Aspen *Populus tremula* is named in Latin from the way its leaves tremble in the breeze, caused by having a flattened leaf stalk that makes the leaves flutter even in the lightest winds. This tree is an important foodplant for moths with nearly 50 associated species. Aspen is found throughout the UK and occurs widely in damp woods in south-eastern and central England. In Scotland it is a true relict of the Boreal forest and hosts a unique and important biodiversity. Aspen is dioecious (with separate male and female plants), but they are often widely separated and it spreads mainly by suckers, with the result that many clumps of Aspen belong to a single clone, these in effect are a single tree linked under the ground by a root network. Individual trees rarely live longer than 50 years, but in the Highlands can survive for up to 100 years, whilst the stands can be considerably older.

The moths of Aspen

There are two species of moth on the UK Biodiversity Action Plan (BAP) that feed solely on Aspen. The Scarce Aspen Midget *Phyllonorycter sagittella* has been recorded from Gloucestershire, Herefordshire, Warwickshire and Worcestershire, whilst a locality for this species at Colwyn Bay was destroyed by road building. The larvae mine the underside of the leaves. The Scarce Aspen Knot-horn *Sciota hostilis* has been recorded at a number of sites in southern England, as far north as Warwickshire. It is now extremely scarce with few known populations. The larvae feed from July to September, living inside a silken tube woven between two leaves. Single-brooded, the moth flies at night in June and comes to light.

A few moths feed primarily on Aspen, but can occasionally use other foodplants. These include the nationally scarce Light Orange Underwing *Archiearis notha* and the micro-moths *Ancylis laetana* and *Epinotia maculana*. Other species will additionally feed on poplars *Populus* spp. as well as Aspen, for example Lead-coloured Drab *Orthosia populeti*, Figure of Eighty *Tethea ocularis*, Seraphim *Lobophora halterata* and Olive *Ipimorpha subtusa*. Many others can also utilise willows *Salix* spp., such as Poplar Kitten *Furcula bifida*, Poplar Hawk *Laothoe populi* and Chocolate-tip *Clostera curtula*. The larvae of the Hornet Moth *Sesia apiformis*, a hornet mimic, feed on the wood beneath the bark of *Populus* spp.

The elusive micro-moth *Cydia corollana* has a particularly unusual habit as the larvae live in the tunnels within the elongated galls of the Small Poplar Borer beetle *Saperda populnea*. Very few individuals of this moth have been recorded, although the beetle is widely distributed over southern and eastern England, with occasional records in Wales.

In the last century, five species associated with Aspen became extinct in the UK, three of these from England: the micro-moth *Gibberifera simplana*, the Lesser Belle *Colobochyla salicalis* and the Clifden Nonpareil *Catocala fraxini* (although this handsome moth may be in the process of recolonising this country).

Other invertebrates associated with Aspen

There are a wide range of other invertebrates associated with Aspen. Amongst these is the Poplar Leaf-rolling Weevil *Byctiscus populi*, a UK BAP Priority species which is associated with Aspen and White Poplar *Populus alba* in woodland and thickets in southern England north to Worcestershire. Others include the nationally scarce leaf beetle *Phytodecta decemnotata* which feeds on Aspen leaves and the leafhopper *Idiocerus tremulae* feeding on the leaves and stems of Aspen and White Poplar, whilst the larvae of the weevil *Dorytomus tremulae* develop in the catkins.

Habitat management for moths on Aspen

Aspen is of significant biodiversity importance, but may be overlooked as the tree is often found in the understorey or as a minor component of woodland, dominated by larger trees such as oak *Quercus* spp.

The main aim of management should be to ensure the long-term continuity of Aspen stands. A good mix of age classes will increase its value for biodiversity. Some moths, such as the Light Orange Underwing, prefer mature Aspen, and the loss of the Clifden Nonpareil has been attributed to the felling of mature trees.

Other species are associated with suckers and regenerating growth. The demise of the Lesser Belle has been blamed partly on regular woodland ride mowing which prevented suckers growing. Within larger woods, Aspen clones may occur in patches and management should aim to increase patch size and reduce isolation.

For more information on Aspen in Scotland see www.scottishaspen.org.uk.



How to survey and monitor

Moths of Aspen can be surveyed by a range of different methods:

- ◆ Running light traps. Many Aspen associates will come to light, e.g. Lead-coloured Drab and the micro-moth *Ancylis laetana*
- ◆ Netting flying insects by day, e.g. Light Orange Underwing
- ◆ Sugaring and wine ropes, e.g. for Poplar Lutestring *Tethea or* and Olive
- ◆ Checking catkins in spring for adult moths, e.g. for Lead-coloured Drab
- ◆ Tapping Aspen tree trunks, e.g. for the micro-moth *Epinotia maculana*
- ◆ Collecting leaf mines, e.g. for the micro-moths *Stigmella assimilella* and *Ectoedemia argyropeza*, which can be found by searching for bright green islands in individual yellowing autumn leaves.

Beating Aspen for larvae is less likely to be successful as most either mine the leaves or spin between them and cannot be easily dislodged.



above Figure of Eighty *Tethea ocularis*

left Mine of the Scarce Aspen Midget *Phyllonorycter sagittella*

below left Light Orange Underwing *Archiearis notha*

below top Poplar Leaf-rolling Weevil *Byctiscus populi*

below bottom Scarce Aspen Knot-horn *Sciota hostilis*



Butterfly Conservation

Saving butterflies, moths and their habitats

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Butterfly Conservation

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