

Wet woodland

Introduction

Wet deciduous woodland is often found on floodplains and as small patches within larger wooded areas when damp ground is colonised by species such as willow, birch and alder. It can occur on a wide range of substrates, from acid to base-rich and peaty to mineral soils. Wet woodland is an extremely rich invertebrate habitat, supporting a very large number of species, many of which are now rare in Britain. There have been considerable losses of wet woodland habitats in Britain in the last century, mainly due to clearance, conversion to other land-uses or the lowering of water-tables through drainage or abstraction. It is important, therefore, to retain any areas of carr on a site where it occurs.

The number of invertebrates associated with alder, birch and willows, is very large, although some are now confined to just a few sites, for example the beetles *Melanopion minimum* and *Rhynchaenus testaceus*, both BAP Priority species. Even quite small seepages may support craneflies such as *Lipsothrix errans* and the near endemic *Lipsothrix nervosa*. Dead wood within the sites can be frequent, and its association with water provides specialised habitats not found in dry woodland types - the cranefly *Lipsothrix nigristigma*, for example, is associated with log jams in streams. The Netted carpet moth (*Eustromia reticulata*) is another BAP Priority species found in this habitat.

Ancient alder carr & sedge swamp - Melbury Park © Roger Key

Threats

- **Clearance**

Clearance of damp woodland for agriculture or intensive forestry; coniferisation

- **Removal of mature trees**

Removal of larger moss-covered trees and dead wood; Removal of old or diseased trees

- **Pollution**

Water pollution & nutrient enrichment of ponds from agricultural run-off

- **Loss of bankside tree cover**

- **Alteration of hydrology**

Loss or dredging of woodland ponds; ditching of streams; drainage or interception of seepages; groundwater abstraction

- **Scrub invasion**

Scrub invasion resulting from mismanagement of water levels

- **Over-tidiness**

Tidying of flood debris or major disturbance of tidal flooding; tidying of fallen wood from woodland streams

Habitat Management



Scarce yellow splinter (*Lipsothrix nigristigma*) © Roger Key

Maintain structural diversity

This Priority habitat often represents a transient successional stage between open wetland areas and drier woodland. It is important to try to maintain as diverse a habitat as possible on a site in order to meet the needs of both larval and adult stages of invertebrates, so a range of vegetation types should be ensured and any transitions with other semi-natural habitats preserved. There should also be a good age structure of trees. Larger examples with a rich moss flora, especially, should be retained for species such as the nationally scarce Black fringed moss-snipe fly (*Ptiolina obscura*), whilst the vulnerable 10-spotted Pot beetle (*Cryptocephalus decemmaculatus*) has only been recorded from smaller specimens of birch and willow.

A mosaic of sub-habitats with bare mud or peat, level moss-covered areas and higher areas that are suitable for retreat during high water levels (e.g. around the bases of large trees) is likely to be important for many wet woodland species, especially rove beetles.

Maintain open areas and edge habitat

Edge habitat is also of great importance to ground and shrub dwelling species, including many of the spiders. The nationally scarce froghopper *Aphrophora alpina* may be found on the margins of wet woodland where it grades into more open areas supporting Bog myrtle (*Myrica gale*) and Purple moor-grass (*Molinia caerulea*)

Clearings and rides should be kept in an open condition to encourage flowering plants that provide nectar and pollen for adult insects. Umbellifers such as Hogweed and Water-dropwort (*Oenanthe spp.*) are particularly attractive to soldierflies and hoverflies. Coppicing of alders can provide glades where such plants can flower, but this should not be done at the expense of stands of mature trees. Many invertebrates, such as some of the rarer craneflies, require damp, shady conditions which would be lost if there was widespread coppicing of the site.

Consider the effects of grazing

Extensive, low-level grazing to maintain open areas can be beneficial to some species such as the Eyed long-horn

beetle (*Oberea oculata*), which lives on willow scrub in open situations. However, grazing animals can cause damage to fragile wet areas by trampling. Excessive grazing by deer will inhibit tree regeneration and may have a detrimental effect on the ground flora. This will affect hoverflies e.g. *Parasyrphus nigritarsis* whose larvae feed on leaf-beetle larvae on low scrub.

Wet woodlands are also rich habitats for fungi and the number of fungus-associated calypterate flies is probably higher here than in any other habitats – with several dozen fungus-feeding species present at the better sites.

Maintain water levels

It is crucial to ensure that appropriate water levels of wet woodland areas are maintained. A draw down of ground-water levels in wet woodland tends to result in an invasion of stinging nettles and bramble and with it the potential loss of the specialist invertebrate fauna. Any applications for water abstraction licences must therefore be carefully considered. It may be necessary to dam existing drains to restore water levels if the site is beginning to dry out. If the woodland is prone to flooding, it is important to ensure the maintenance of the natural flood regime. Many wet woodland species of rove beetle, for example, are likely to depend on fluctuating water levels with seasonal flooding saturating much of the woodland floor. The role of floods in recruiting fresh sediment and litter and in suppressing the development of plant cover early in the year may be of some significance. The hoverfly *Cheilosia uviformis* seems to prefer seasonally flooded woodlands.

Tussocks of sedges (*Carex spp.*), reeds (*Phragmites spp.*) and grasses in damp conditions are important habitat for the nationally scarce fly *Elachiptera austriaca*, so water levels need to be high enough to ensure their continuity. Dead parts of these plants should be allowed to form a layer of deep litter, so avoid excessive cutting and tidying. Rotational management should be used if necessary.

Streams and seepages should not be channelled or piped. Seepages may appear to be of minor importance, but should always be incorporated into any woodland evaluation and management policy, as they constitute the main habitat of rare crane-fly species such as *Prionocera subserricornis* and *Dicranomyia nigristigma*.

Wet, boggy habitats are very fragile and easily damaged by trampling, so it is important to minimise or avoid disturbance. Disturbance to accumulated moss, ground litter and ground surfaces should be avoided or kept to a minimum.

Ditches and their margins support a special fauna. Strongly shaded ditches with choked with saturated organic 'mud' provide the special habitat of the rare crane-fly *Prionocera subserricornis* but biodiversity is richest where some light penetrates to allow herb or aquatic plants to grow.

Retain dead wood of all types

As in all woodland habitats, dead wood, both fallen and standing of all sizes, should be conserved and retained as it provides habitat for some of the rarest British invertebrate species. It is also crucial to ensure that there is a continuity of supply of dead wood. Old and diseased trees should not be singled out for removal – they are often the most important providers of habitat for invertebrate species. Fallen trunks, cut stumps and old and moribund trees with rotholes and other forms of decay are important to insects such as the nationally scarce hoverfly *Xylota abiens*, for example, as well as some of the larger *Brachycera* e.g. the Black fringed moss-snipefly (*Ptiolina obscura*) and the BAP crane-fly *Lipsothrix nervosa*. Trees with sap flows are of particular importance to many insects such as hoverflies, and should be retained wherever possible. Decaying sapwood is also important for flies, as is decaying sap under bark.

Another specialist dead-wood habitat is that of submerged and semi-submerged timber. Boggy areas with fallen semi-submerged timber should be managed to ensure that further timber enters the system. When felling in such locations, some fallen timber of a variety of sizes should always be left in the water. Semi-submerged logs in streams are important for hoverflies e.g. *Chalcosyrphus eunotus* and other species such as the endangered crane-fly *Lipsothrix nigristigma*. They should be retained and not cleared out of water bodies and ditches. The larvae of caddisfly species such as *Hydatophylax infumatus*, *Lasiocephala basalis* and *Lype reducta* also live or feed on submerged wood.

Piling of cut willow and alder stumps may provide useful sub-habitat for the snail *Phenacolimax major*.

Water bodies



Drainage of ditches or ponds would result in loss of habitat. They should be retained and managed by rotation over several years to ensure all successional stages are present every year. Marginal vegetation should also be managed in rotation to ensure continuity of habitat. Not all marginal vegetation should be cut in any one year, as it is important to achieve a balance between overhanging vegetation that will provide shade and leaf litter and open water that is not shaded.

As shading of water bodies is a requirement of many species, there should be no wholesale clearance of streamside trees. Many caddis fly larvae (eg *Phaenopygia brevipennis* and *Trichostegia minor*) feed on dead leaves in shaded pools and streams.

Disturbance of bankside vegetation should be avoided wherever possible. However, if clearance of vegetation is necessary, it should be done in small sections to avoid loss of host plants or populations of invertebrates.

BAP species associated with wet woodland:

Eyed longhorn beetle (*Oberea oculata*)

Ten spotted pot beetle (*Cryptocephalus decemmaculatus*)

a weevil *Melanapion minimum*

a weevil *Orchestes testaceus*

a crane fly *Lipsothrix nervosa*

a crane fly *Lipsothrix errans*

Black spotted yellow splinter crane fly (*Lipsothrix nigristigma*)

a hoverfly *Parasyrphus nigritarsis*

For a more comprehensive list of species associated with this habitat, please see the download list.

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