

**'I sing of brooks, of blossoms, birds,
and bowers'** Robert Herrick b.1591

The diversity of habitats on Shotover, created by a diverse geology, makes the hill especially rich in wildlife. The contrasting geological layers produce many different soils, as well as areas that are very wet and very dry.

Whether wet or dry, sand or clay, deep shade or sun, there are many 'specialist' plants and animals that have adapted to one or other of these specific circumstances. A good example is the dry acid-soil grassland on Shotover that is scarce in Oxfordshire.



Some animals depend upon this variety of habitat.

This leaflet describes the seven main habitat types found around Shotover Hill: Woodland, Heath, Wetland, Meadow, Arable, Gardens and Hedgerows.

Woodland

Shotover is about one-sixth 'closed canopy' woodland: ranging from young woods that have grown up over only the past 50-80 years, to mature 'Ancient Woodland' of many hundreds of years standing.

One only has to look at the diversity of plants on the woodland floor to have an idea of its age. A good example is a comparison between Brasenose Wood (Shotover's largest area of ancient woodland) and Open Brasenose (which was pasture about 100 years ago). Although these two woods are side by side, Brasenose Wood has about 50% more species by area. Not surprisingly, many of the additional species are scarce in Oxfordshire, e.g. Cow-wheat, Saw-wort and Wood Millet. Some of these plants can also be

found in nearby old hedgerows showing where ancient woodland may once have been.

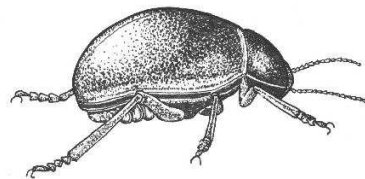
Young woodland (60-120 years old) generally has a poor ground flora. On Shotover, these areas are either where grazing (wild and domestic) ceased in the mid 20th century, or are areas of plantation.

For birds, mammals and insects, older woodlands are the more valuable because of the accumulated dead wood and the greater variety of nesting and feeding opportunities. However, younger woodland can be rich in insects, and provide nesting for birds and cover for mammals.



Heathland, Scrub and Acid Grassland

Probably the most important habitats for wildlife on Shotover are those associated with the sandy soils: heath, scrub and acid grassland. Most of the heath is within the Country Park and contributes to its SSSI status (Site of Special Scientific Interest). The acidic soils of Shotover are not common in Oxfordshire, and the associated plants that grow there tend to be rare in the County: Bird'sfoot (*Ornithopus perpusillus*) and Pill Sedge (*Carex pilulifera*). This fascinating habitat, of which the heather is only a component, includes the short rabbit-grazed grass areas and the gorse, birch and bracken scrub. Many of the scarce plants have their own way of coping with the hot dry soils. For example, there are spring flowering annuals (which seed and die before things get tough), tap-rooted biennials (that spend the first year getting down to the water) and tough thin-leaved grasses (that can cling onto the little water that they need for survival).



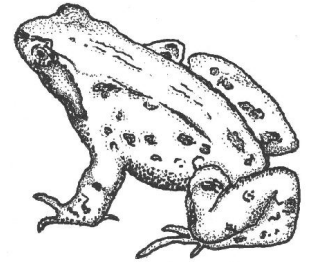
Compared to heavier soils, sandy ground provides a home for a great many ground burrowing creatures. Not only foxes and small rodents, but also the scarcer lizards, snakes, beetles, bees and wasps.

Marsh and Open Water

For a sandy hill, Shotover has a surprising density of marshy areas. These are caused by thin layers of clay, quite high on the hill, that bring ground water to the surface at springs and flushes (see 'Geology on Shotover').

Although the total area of marsh is small, the contribution to the diversity of wildlife is profound. The marshes have a greater density of flora species than any other habitat on Shotover. Just 3 hectares of Shotover marsh has about the same number of plant species as 20 hectares of Brasenose Wood. Living amongst this lush growth are snails, frogs, grazing deer and a myriad of insects.

Out of all the habitats, the wet places are the most pivotal in providing for mobile species. Many species go to the marshes to feed on vegetation, pollen, insects or small animals, yet require one or several other habitats for their nesting and breeding. Good examples are grass snakes, insectivorous birds and many of the heathland insects.



Meadow and Pasture

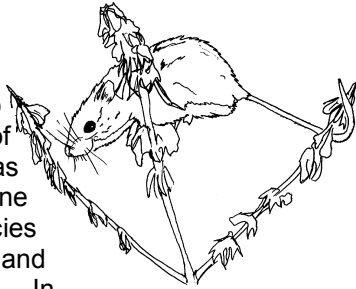
About half of Shotover Hill is grassland: either mown meadow or grazed pasture. Unimproved meadows are those that are cut once a year for hay, and have not been ploughed for many years. These meadows retain a rich wild flora, and if mown sensitively, are valuable for scarcer plants, snails and many different insects, including plant bugs, moths and butterflies.

Most of the pasture around Shotover Hill has been 'improved' over the years by reseeding and the application of fertilizer. This allows the 'strong' pasture grasses to flourish and reduces the overall wildlife diversity. Shotover has very little unimproved pasture, a rich and declining habitat not seen much these days.

Illustrations (this page left to right): Black Borer Wasp, Bloody-nose Beetle, Heath Bedstraw and Common Frog (over page) Harvest Mouse and Lesser Marsh Grasshopper

Arable (and new meadows)

Since the mid- 20th century when food production in Britain was so important, the number of arable fields has continued to decline in line with agricultural policies such as 'Set-aside' and Stewardship Schemes. In recent years, many fields around Shotover have been set-aside and then cut for hay once each year, adding to the area of fertile meadow. *Shotover Wildlife* surveys have shown that some of these fields are reasonably diverse, and have improved the diversity of butterflies.



Gardens

The Shotover area is about one tenth private garden, and these days, their importance for wildlife is much better appreciated. Although the flowering plants tend to be non-native, many insects are happy to forage for nectar and pollen from these. In fact, some species of bee are now more common in gardens than in the countryside. Birds and small mammals thrive in leafy gardens and the provision of ponds makes a significant contribution to wildlife diversity.

Many large private gardens adjoin the boundary of Brasenose Wood and Shotover SSSI, and the 'C.S.Lewis' reserve, on the north west slopes, is almost entirely surrounded by gardens. These gardens, often rich in pollen and nectar, make a valuable contribution to enlarging the effective area of these reserves, and protect much of Shotover Hill from further building development.

Hedgerows

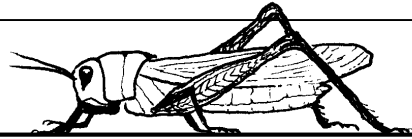
Hedges are the 'motorway' net-work for a great many mobile species, and it is crucial that the hedges all join up with each other. Even some flying insects can be reluctant to cross a gap where the hedge line is interrupted. Hedgerows are also Shotover's oldest undisturbed habitat, some of which are hundreds of years old. Consequently, some of our scarcer local wild plants can be found in the hedgerows, and their presence may indicate a very old hedge indeed.

Something Special on Shotover

It is the exceptional diversity of habitats on Shotover, within a relatively small area, which makes the hill especially rich in wildlife. Why is this?

The defining factor is the very varied geology (see 'Geology on Shotover'). The hill is made up of several contrasting geological layers, ranging from fine sand to heavy blue clay. Combined with the range of associated vegetation, this produces the different habitats: wet places and dry, cool places and hot, acidic and neutral, exposed and enclosed, the busy and the tranquil.

Wherever special habitats establish, 'specialist' plants and animals can thrive, and when a habitat is scarce it is very likely to support rarer species. ***This is Shotover.***



Shotover Wildlife is a voluntary organisation founded to research and communicate the importance of Shotover Hill for wildlife

Chair: Ivan Wright
Tel: 01865 874423

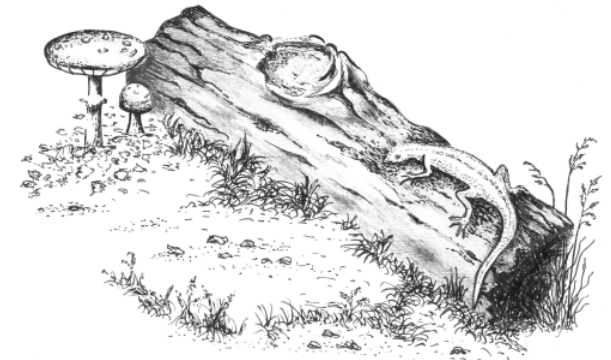
enquiries@shotover-wildlife.org.uk
www.shotover-wildlife.org.uk

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Woodland Flowers	
Grassland Habitat Project	

Leaflet written by Ivan Wright.
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HABITATS on SHOTOVER



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