



Scrub, its value for wildlife and how to manage it



Scattered scrub and dense scrub at Darland Banks, Chatham, linking chalk grassland, woodland, hedgerows and arable margins © Kent Wildlife Trust

Scrub is an extremely valuable habitat and one on which many species depend for their survival. However, if left unmanaged, it can rapidly take over areas such as grassland and heathland. The following leaflet is designed to highlight the importance of scrub for many of our native species and to give you some general recommendations on how to manage scrub on your land.

Scrub - what is it?

Scrub is often described as a 'successional habitat', meaning that it is temporary and in transition between one habitat (more open areas such as grassland and heathland) and another (generally woodland, unless the soils are very poor). It can be a few scattered hawthorn bushes, a patch of nettles and bramble, a dense thicket next to a woodland or some young birch trees and gorse bushes growing on heathland. Very different plant and animal communities will be present, depending on factors such as soil type, levels of grazing, topography, and drainage. Scrub can generally be classified into types e.g. lowland dry scrub on chalk soils, wet scrub or dune scrub.

In the past, natural processes such as fire, storms and grazing by large herbivores would have opened up areas where scrub could grow. More recently, scrub provided a much valued asset for many local communities who would use it for fuel, animal fodder, tools, medicine, bedding, wine making, basketry, dyes, thatching spars and furniture making. Many of those uses have stopped since World War II and scrub has often been grubbed out to allow for more intensive agricultural practices or development. In other areas where grazing has declined, the scrub has become woodland.

Over the last few thousand years, the landscapes of Britain have been heavily altered by human activity. Many of our native species have evolved to thrive in mixed farmland landscapes: mosaics of arable land, hedgerows, pasture, hay meadows, field margins, scrub, woodland and wetlands provide them with the best chances of finding areas which meet all their requirements for nesting, shelter and sources of food. Scrub is a vital component within these mosaics. Nationally, there are over 450 rare and threatened species of plant, insect and bird which are associated with this habitat.

This advice sheet contains information about the following topics:

- scrub - what is it?
- benefits of scrub for certain species groups
- before starting any management work
- main options for management
- ecotones
- protected species
- implications of using herbicides
- other considerations
- references and further reading
- further advice



Hawthorn berries © T.Rayfield



Juniper © Kent Wildlife Trust



Male slow-worm © Dr Lee Brady



Lady orchid © G.Hitchcock



Mistle thrush © A.Lewis



Dormouse © Kent Wildlife Trust



Duke of Burgundy butterfly © R.I.Moyses

Benefits of scrub for certain species groups

Plants

Most shrub and tree species found in scrub are common, although juniper and box are notable exceptions to this and are only found in a few locations in Kent. Shrubs can support plants such as lichens, fungi and mosses, which in turn provide a source of food and shelter to invertebrates. Other species associated with scrub and found in the grassland in and around the shrubs include nationally scarce plants such as lady orchid, found in woodlands and scrub on chalky soils (restricted to Kent), and man orchid, which is found only on the edge of chalk grassland.

Birds

There are almost forty species in Britain listed as birds of conservation concern which use scrub habitat; many of these are farmland bird species which have suffered severe declines over the last few decades as a result of agricultural intensification. These species, which include yellowhammer, corn bunting, song thrush, turtle dove, linnet, nightjar, tree sparrow, song thrush and nightingale, have different requirements. Some will prefer more open scrub, others such as the nightingale require very dense thickets. As well as using the scrub to nest or shelter in, birds feed on invertebrates and berries and they also act as seed dispersers for some shrub species. The berries are particularly important as a source of winter food to both migratory species and resident species.

Reptiles and amphibians

It is the physical structure of scrub and any surrounding habitat which seems particularly important to reptiles. This is in part due to the fact that reptiles regulate their body temperature by using the external environment and scrub can provide a source of sunny, sheltered places with nearby cover from predatory birds and mammals (south facing banks are particularly good). Root systems, stumps and dead wood provide refuges, overnight shelter and hibernation sites for both reptiles and amphibians. Dense humid scrub with good layers of leaf litter and a mix of tall and short vegetation that connect up the scrub can help these species to disperse across the landscape. This habitat also presents good hunting grounds for prey such as invertebrates, molluscs and small mammals.

Mammals

Many species of mammal benefit from the presence of scrub, including dormice which feed on nectar and fruit, and other rodents and shrews which feed on insects or use the undergrowth for shelter and denning. Bats use the edge of woodland/scrub habitat to hunt for insects and larger mammals may shelter in scrub.

Invertebrates

Many types of invertebrate use scrub including bees, spiders, ants, wasps, two-winged flies, aphids, leaf mining micro-moths, gall mites, midges and butterflies. Some invertebrates have associations with families of plants e.g. shrubs from the Rose family

(which includes blackthorn and hawthorn), some rely on a particular species, and some are generalists. Species may use very specific parts of the shrub - for example, the blue carpenter bee nests in the cut ends of bramble stems. Grass tussocks, tall and short grass and bare ground in and around the shrubs will also provide shelter, basking sites, mating areas, food such as nectar and pollen, overwintering sites and nesting habitat for many species.

What to think about before starting any management work

Many species will either favour or indeed depend entirely on a particular type of scrub: scattered scrub, dense scrub, scrub of a particular age or with particular species of shrubs present. Some key points to consider before starting any management work include:

- doing a site survey to find out what wildlife is currently present (see our leaflet *Recording wildlife: getting started*), including checking for the presence of protected or rare species, and reptile hibernacula (hibernation sites)
- writing a brief management plan (a couple of pages) showing a map of the site and what areas you plan to cut or graze and when you intend to do the work over the next few years



Scrub gradually encroaching on grassland
© Kent Wildlife Trust



Clearing scrub using brushcutters and rakes
© Kent Wildlife Trust



Tussocky grassland and scrub suitable for reptiles
© Kent Wildlife Trust

Main options for management

Options for management will depend on the size of the site and what you are trying to achieve. As a general rule, the following recommendations will apply:

- rotate the management so there is a mix of young and mature scrub; this ensures more structural diversity and will appeal to a wider variety of species. Low intensity management at regular intervals is generally better and easier than major work every few years. Scrub generally takes about 15 years to reach maturity so you could, for example, coppice 3/15th of your site every third year if the site is large enough to allow this.
- leave some bare ground and dead wood to increase the range of micro-habitats
- always leave some scrub as a source of shelter and food and ensure there are patches of tall and short vegetation in and around it
- make sure the scrub links up with surrounding habitats such as hedgerows, woodland and wetlands: scrub can provide vital wildlife corridors and enable species dispersal through the landscape
- control invasive species such as rhododendron, which have very little value for wildlife

- time work to minimise the impact on wildlife: do not cut during the bird breeding season (try to do the work between November and February). However, even in January, reptiles can be found basking in a sunny, sheltered spot, so avoid cutting near hibernation sites.

- dispose of arisings by stacking into piles of deadwood. Alternatives such as burning, chipping and mulching are available but can be costly, difficult to implement or may leave unwanted nutrient on the site.

Various techniques or combinations of techniques can be used to control scrub, some of them more sensitive than others, and include:

- cutting with brushcutters, chainsaws and hand tools
- cutting by mowing or flailing
- coppicing and thinning
- stump removal and grubbing out
- altering water levels
- grazing and browsing with varying stocking levels and different types of livestock
- chemical control - a last resort

Ecotones

Many species thrive in areas where two different habitats meet such as woodland/grassland or grassland/water. However, these transitional zones or 'ecotones' are even more valuable for wildlife when there is a gradual change from (for example) short vegetation

through to tall vegetation, a scrub/shrub zone and then taller woodland. This gradation allows for many more subtle changes in aspect, soil quality, vegetation structure and type, and topography, and thus encourages much more species diversity and abundance. Woodland/grassland edge habitat is particularly important when it is south facing, since there are more hours of sunlight. The amount of edge can be increased by creating 'scallops' which also helps to create sunny, sheltered areas for species such as butterflies.



Harsh grassland / woodland interface
© Kent Wildlife Trust



Zoned grassland / scrub / woodland interface
© J. Weightman



Protected species

A number of species such as dormice, breeding birds, reptiles and amphibians have varying levels of protection and you need to make sure that you are complying with all relevant regulations before doing any habitat management work. A good place to start for more information is to look at the Natural England Protected Species List and Frequently Asked Questions webpages, available for download from here: <http://www.naturalengland.org.uk>.

Alternatively, contact your local Natural England office and explain what surveys or management work you are planning to do.

Implications of using herbicides on your site

Where possible, you should avoid using herbicides. However, if the need arises, then we recommend the following:

- always use a contractor with an appropriate Certificate of Competence to ensure that you are following the *Code of Practice for the Safe Use of Pesticides on Farms and Holdings [PB3528]* or DEFRA's *Code of Practice for using Plant Protection Products*. These Codes are available from DEFRA Publications.
- all operatives working on the site must wear adequate personal protective equipment and adhere to all health and safety requirements set out in law

or regulation, in particular The Health and Safety at Work Act 1974 and The Management of Health and Safety at Work Regulations 1992

- use selective herbicides in preference to non-selective ones to avoid destroying non-target species
- if the site is designated (e.g. a Site of Special Scientific Interest) or in a government scheme such as the Environmental Stewardship Scheme, you will need to follow guidelines set out in any agreements
- try to target the plants when they are in a period of growth, but before they are flowering

Other considerations

Depending on the site, it may be important to consider factors including:

- landscape character: has it historically been a very open landscape, with little scrub present?
- public access: for sites with good public access or which are very visible to the public, you may wish to inform the public in advance of the work and explain why it is necessary
- historic and archeological interest: if there are archeological features on your land such as ridge and furrow, burial chambers and hill forts, then you need to be careful how you undertake the management of any scrub that is growing on those features and should seek expert advice. Scrub can cause damage through rooting into the ground or shading out the vegetation underneath to a point where there is only bare soil and this gradually erodes, leaving the features more vulnerable to the weather. Inappropriate management such as using heavy machinery or shifting soil can cause compaction and other damage to underlying features.

Further reading and references

Edgar, P., Foster, J., and Baker. (2010). *Reptile Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

Kent Wildlife Trust
Land Management Advice Series
A brief guide to choosing livestock for conservation grazing

Day, J., Symes, N.C., Robertson, P.A., Bacon, J. (Ed) (2003) *The Scrub Management Handbook*. FACT. This is an excellent and free, downloadable resource, which covers in detail every aspect of this habitat (download from www.naturalengland.org.uk).

Obtaining further advice

For further information, please contact the Trust's Land Management Advice Service by calling 01622 662012 or by emailing info@kentwildlife.org.uk



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