Scrub and its management

Scrub can be very valuable for a wide range of wildlife, providing a continued source of nectar, fruits, seeds, shelter, breeding and roosting sites. A stand of scrub with varied plant species, age and structure will support a great variety of species.

Scrub is the transitory stage between open habitats such as grassland and closed canopy woodland. Scrub also exists as a mosaic within open habitats such as heathland.

Bill Stevenson

Nightingale

Importance of scrub for wildlife

Invertebrates

Some tall herbs, often associated with scrub edge, are vital to many grassland invertebrates that need nectar-rich shrubs to complete their lifecycles. Species such as blackthorn, hawthorn, bramble and herbs provide early pollen and nectar, as well as foraging habitat for herbivorous and predatory invertebrates in both adult and larval stages. Standing and fallen dead timber is valuable habitat for fungi and wood-boring insects.

Amphibians and reptiles

Amphibians and reptiles prefer south facing areas of scrub for basking and hibernation sites, for example south facing heathland gorse scrub edges provide basking for adders. Scrub can also be used as a wildlife corridor to link habitats such as wetland areas for amphibians.

Birds and mammals

Scrub is commonly used by birds such as bullfinch, yellowhammer, linnet, willow warbler, wren, blackbird, dunnock, long-tailed tit and turtle dove. Coastal scrub is important for migratory birds such as redwing, fieldfare and waxwing, which use scrub as a 'feeding station'. Fruits and seeds are a particularly important feature of scrub which provides autumn and winter food for resident and migrant birds and mammals.

Certain species will show preferences for certain structures of scrub for example yellowhammer and linnet nest in low, dense scrub edges that are thick at the base; whereas song thrush nest in thick cover, preferring mature scrub, and feed in short marginal vegetation. Raptors will often use scrub for roosting in winter, and hunting small birds and mammals. Long-eared owl will utilise the old nests of magpie in denser scrub areas. Nightingale are summer visitors (mid April – August) and restricted to the southern and eastern counties of England. Scrub has become increasingly important for nightingale, preferring thickets of dense scrub such as blackthorn and bramble, with a margin of rough grass.

Scrub management

Since scrub is a transitory habitat, it needs management to maintain it otherwise it will develop into woodland or can become invasive and reduce the biodiversity of a site. Initially it is important to look at a site and plan how it is going to be managed to ensure a balance with other features of the site such as open habitat, species of conservation importance or geological features.

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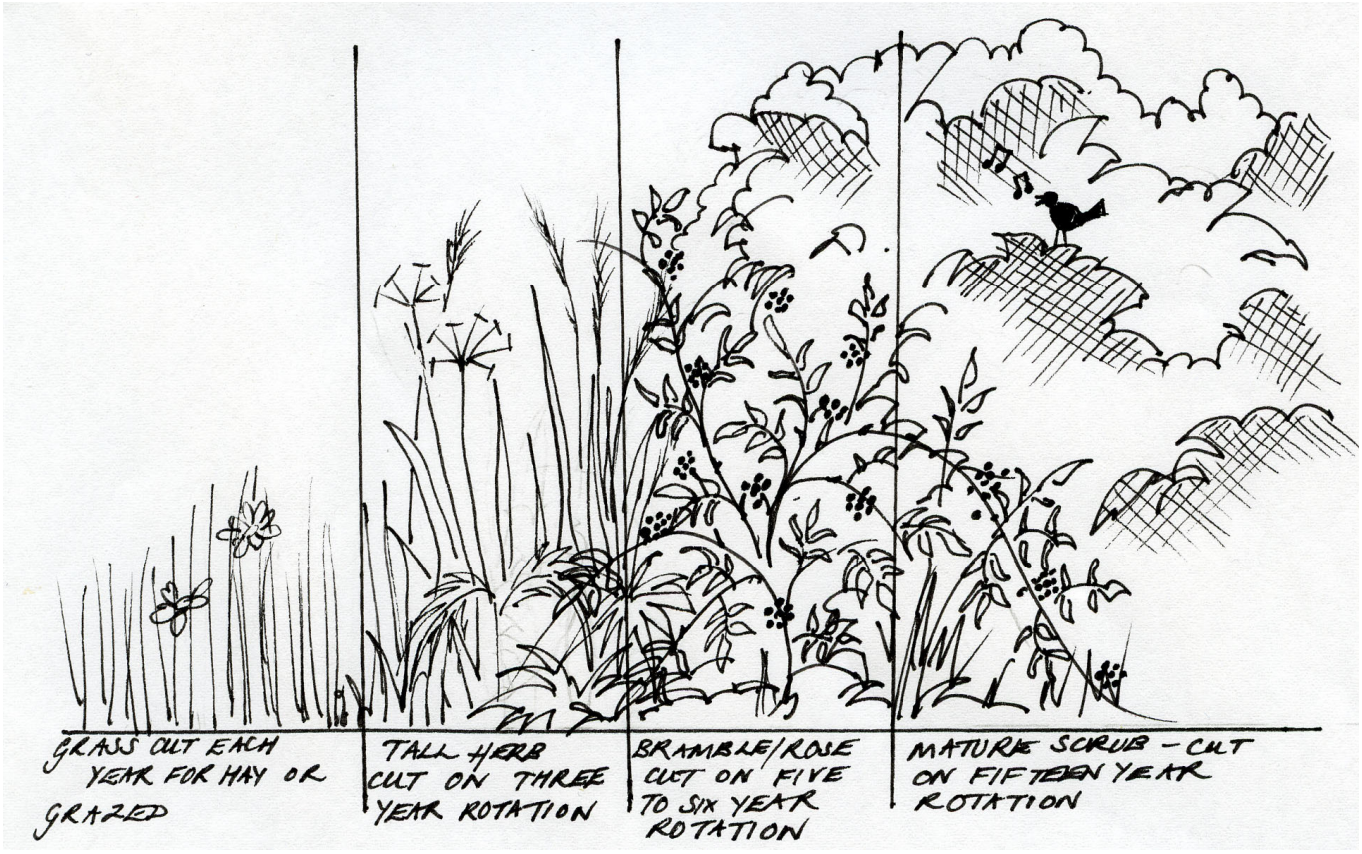
Graded scrub



Work on scrub is best carried out in the autumn/winter, ideally early February, and should never be done during the bird nesting season (March – July). Work on berry-bearing scrub is best delayed until after December, leaving valuable autumn and winter fruits and seeds as food for wildlife.

Aims of managing scrub – improvement, maintenance, reduction or eradication?

Improvement – Increased biodiversity is associated with larger areas of well-managed scrub.

If a site doesn't have much scrub, creating scrub through natural regeneration or planting can improve the variety of wildlife in the area. When planting, try to create a natural, uneven spread of planting with a mix of species and plenty of edges, which are an important part of scrub. When planning to increase the amount of scrub it is important not to create scrub at the expense of other existing high value habitat such as herb-rich grassland.

Where a stand of scrub does not attract a great variety of wildlife, the aim of managing the scrub should be to improve its value for wildlife. This can be done by increasing the variety of species and structure, encouraging natural regeneration and by rotational cutting to increase the age range within the scrub.

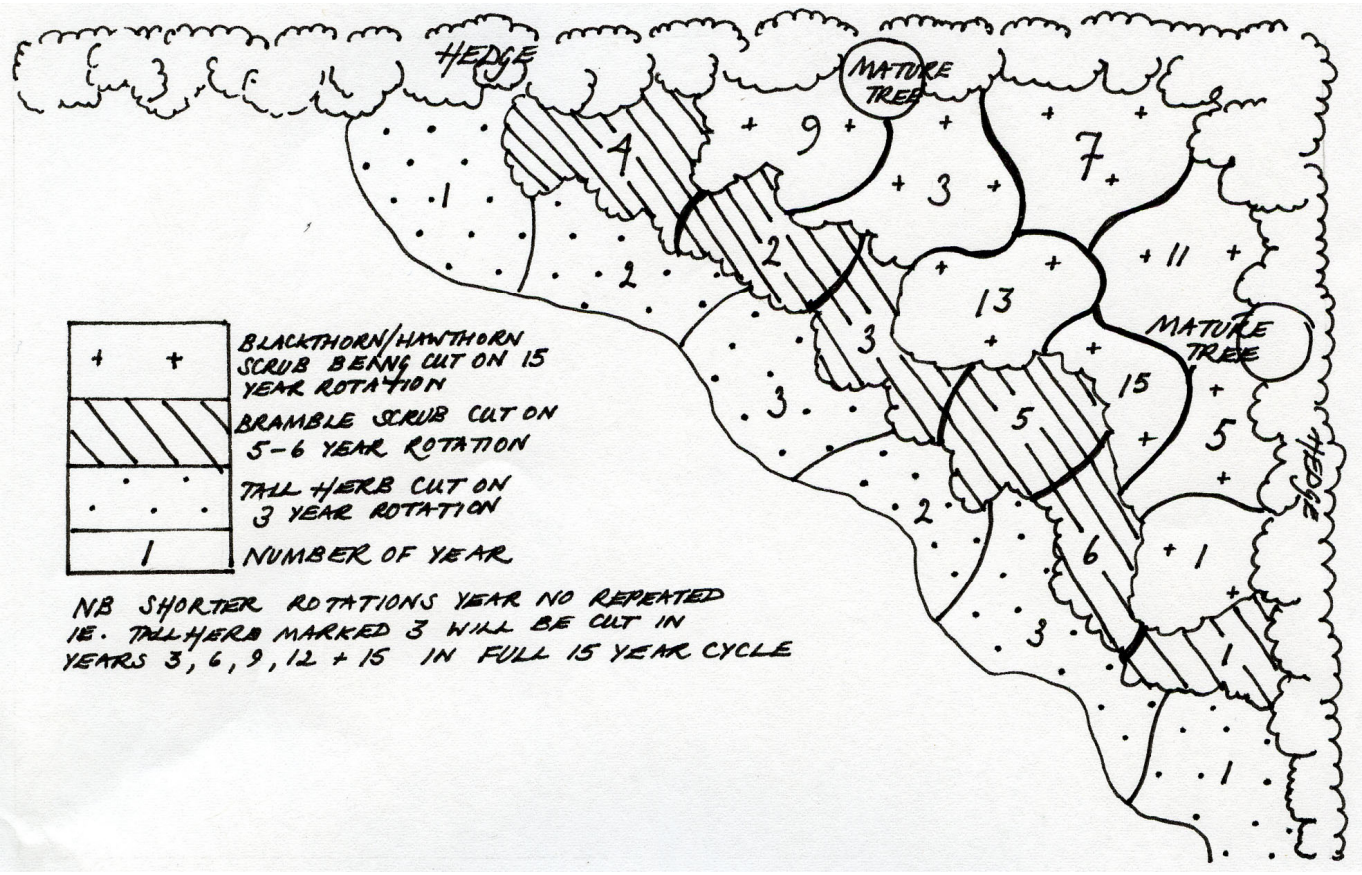
Generally it is advised that species of local provenance are used for supplementary planting. The ideal outcome is a mosaic of scrub stands of varying age and size structure with associated open habitat, which in turn will increase the diversity of the associated plant and animal communities.

Farmers/landowners who apply for Natural England's Environmental Stewardship Scheme could receive payment for the restoration or creation of a succession of scrub habitat for specific target species such as the dormouse, song thrush or turtle dove. Scrub creation is particularly aimed at sites where target species already exist and where the site is adjacent to existing areas of scrub or woodland.

Maintenance – Where a site has enough scrub in good condition it is important to maintain its wildlife value by keeping a variety of stages of growth.

Because scrub is a transitory habitat and readily colonises unmanaged open habitat, it is typically strong growing with a dense structure. However, if allowed to grow unchecked scrub gradually develops a woodland structure. Growth tends to become leggy and single stemmed, the understory is shaded out and the thicket qualities of the scrub are then lost. By rotationally

Example of rotational management



coppicing blocks of scrub and allowing them to re-grow, the scrub's characteristic thicket structure is rejuvenated and maintained.

Scrub typically matures at about 15 years, so coppicing 1/15th every year, i.e. a 15 year rotation, is a good rule of thumb; alternatively cutting 2/15th every other year or 3/15th every third year. Where scrub is almost entirely composed of bramble, the rotation can be shorter, between 5-6 years (i.e. a fifth or sixth each winter) to provide a mosaic of bramble at different stages of growth. In any event always try to avoid cutting adjacent patches sequentially in order not to reduce foliage for invertebrates to feed on. Rough grassland fringes and damp ditch banks benefit from a shorter 'cut and rake' rotation cycle of 2-3 years where a half or a third is cut in late summer/autumn. Try to integrate this with the coppicing cycle i.e. cut and rake the edge of a block that you are coppicing in the same year.

Rotational cutting of bramble, marginal rough grass and tall herbs will increase the age ranges within the scrub and give diversity in structure, which in turn will increase the diversity of the associated wildlife. Aim to create long edges which are sunny and sheltered and a scrub mosaic effect with rides and glades. Edges are particularly important for wildlife because they have flowering plants which provide continued nectar for invertebrates, fruits and seeds for birds and mammals, shelter and nest sites and hunting grounds for raptors. Brash can be used to create habitat piles within the scrub. Limit the number of piles and once these are established as part of the rotation, use the same locations in future years.

Livestock can be allowed rotational access to rougher grass alleviating the need to cut and rake. Care should be taken that no toxic weeds are in rougher areas/scrub and that livestock does not push into, or become caught up in, the scrub edge– for example sheep can become trapped by their fleeces in bramble.

Reduction – If scrub is encroaching on to habitats of higher conservation value, for example unimproved grassland, it may be necessary to reduce the amount of scrub. The effect of scrub encroachment on, for example, geological and historical features of a site should also be taken into account. Once the extent of the scrub has been reduced, remaining scrub will need to be maintained to preserve the balance between scrub and open habitat.

Eradication – Where scrub composition is predominantly invasive/non-native species and is damaging other habitats, for example rhododendron or Japanese knotweed or snowberry eradication may be desirable.

Complete eradication is difficult and will require several years of management tailored to preventing re-growth.

Techniques used for managing scrub

There are several methods of managing scrub and methods will vary according to the aims of management and the species for which it is being managed.

Planting and sowing – for improvement Natural regeneration should be encouraged but for quick results plant with whips of local provenance and from a sustainable source.

Manual/machinery – for improvement, maintenance, reduction or eradication Whether hand tools or large scale machinery is used for scrub management will depend on the extent of the scrub and site ground conditions. It is important to use tools appropriate to the task and ground conditions, ranging from hand held tools, mower, chainsaw, to tractor-mounted hedge cutters or excavators. Where the surrounding habitat is fragile, for example herb -rich grassland or wet ground, machinery may not be feasible or advisable.

Grazing – for maintenance, reduction or eradication Grazing improves and maintains the edges of scrub and helps with reduction and eradication of scrub. The results will largely depend on the type of livestock used and the palatability of the scrub species. Grazing requires careful monitoring because if it becomes too intense, scrub structure can change through over-grazing of palatable species and fencing may be necessary to avoid an adverse impact on species such as nightingale. Livestock should not be used for managing /eradicating scrub that contains species that are toxic –for example rhododendron.

Herbicides – for reduction or eradication These can be used to help with eradication of scrub, by treating stumps to prevent re-growth. Careful consideration should be given to the methods of applying chemicals to avoid any adverse impacts on the surrounding wildlife. Hand held applicator sprayers or painting of stumps are targeted approaches with little impact on the surrounding wildlife and good long term results. To be effective it generally needs to be done soon after cutting, before the stems callous over.

Other relevant SWT factsheets:

- Grazing
- Hedgerow management
- Grassland factsheets – creation, management for wildflowers, invertebrates, butterflies, weed control

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