WOOD-PASTURE & PARKLAND

Nationally

Wood-pastures are areas that have been managed by a long-established tradition of grazing, allowing, where the site is in good condition, the survival of multiple generations of trees, characteristically with at least some veteran trees or shrubs. The tree and shrub component may have been exploited in the past and can occur as scattered individuals, small groups, or as more or less complete canopy cover. Depending on the degree of canopy cover other semi-natural habitats, including grassland, heath, scrub etc. may occur in mosaic with woodland communities. While oak, beech, alder, birch, ash, hawthorn, hazel or pine are often dominant, a wide range of other tree and shrub species may occur as part of wood-pasture systems.

Wood-pastures and parkland are the products of historic land management systems, and represent a vegetation structure rather than being a particular plant community. Typically this structure consists of large, open-grown or high forest trees (often pollards) at various densities, in a matrix of grazed grassland, heathland and/or woodland floras. The matrix habitats may be biodiversity priorities in their own right. The key interest of the habitat largely derives from the presence of old growth trees and their associated flora and fauna.

Parkland sites are often of great historic, cultural and landscape importance with continuity of management sometimes stretching back for hundreds of years. The richer sites may have direct linkages back to the pre-neolithic natural 'wildwood'.

The most important parklands for nature conservation are those with large numbers of veteran trees. These are more abundant in the UK than elsewhere in Europe. Their associated distinctive old growth fauna and fungi, with a rich epiphytic 'flora', are of great importance. Parklands may also be of interest for bats and birds, and important as a reservoir of indigenous tree genotypes. However, the critical component of these sites is the assemblage of veteran trees. The conservation and protection of these individuals are the principal keys to maintaining the biodiversity interest of parklands.

The age at which an individual can be termed 'veteran' varies widely depending on the species. Species such as birch, rowan, alder and willow, for example, can become veteran trees with associated biological interest at 40 - 80 years old. Size is not necessarily a good guide either, most trees over 1.0 m diameter (at breast height) are potentially interesting, the majority of trees over 1.5 m diameter are valuable and all those over 2 m diameter are truly ancient. A range of other properties are associated with veteran trees: quantities of dead and rotting wood, crown die-back, and the presence of gnarled, fissured, twisted and 'old-looking' features. Non-native tree species, if long-established, may support a flora or fauna which is somewhat different from native tree species, but which may nevertheless be of equal or occasionally even greater ecological interest. Beech, horse chestnut, common lime and sycamore may all be of particular importance locally, and trees such as these are complementary to the interest of native veteran trees.

Included in this plan are:

- Wood-pastures and parklands derived from medieval forests and emparkments, wooded commons, parks and pastures with trees in them. Some have subsequently had a designed landscape superimposed in the 16th to 19th centuries. A range of native species usually predominates amongst the old trees but there may be non-native species which have been planted or regenerated naturally.
- Parklands with their origins in the 19th century or later where they contain much older trees derived from an earlier landscape.
- Under-managed and unmanaged wood-pastures with veteran trees, in a matrix of secondary woodland or scrub that has developed by regeneration and/or planting.
- Parkland or wood-pasture that has been converted to other land uses such as arable fields, forestry and amenity land, but where surviving veteran trees are of nature conservation interest. Some of the characteristic wood-pasture and parkland species may have survived this change in state.

Not normally included:

- Upland sheep-grazed closed-canopy oak woodland, derived from coppice, or Caledonian pine forest, although in some cases grazing may be part of the desirable management approaches for these woods.
- Parklands with 19th century origins or later with none of the above characteristics.

Extent in UK: 10,000 sites

In the Peak District

In the Peak District, two parkland sites are well known - Chatsworth Old Park and Lyme Park. Parkland is also present at other locations but it is currently unclassified. However, such sites may not necessarily be in ecologically poor condition at present and sympathetic management could be initiated to enhance their value.

Veteran Oak © Debbie Alston

Chatsworth Old Park and Lyme Park are remnants of formerly extensive areas of forest with veteran trees, and there is still an association with areas of semi-natural woodland, some of which is ancient. Both of these parklands have a long history of continuous grazing by deer with associated management. Chatsworth Old Park has the greatest interest because of its history of sensitive management. It is the only site considered to be of outstanding interest for invertebrates, including 4 Red Data Book species, 13 nationally scarce species and a number of regionally significant species. The Park is currently considered to be under very good management. Lyme Park is 526ha in size but only 50ha of the habitat qualifies as parkland or wood-pasture. Due to the small number of veteran trees, the park is not currently of BAP quality.

Veteran trees are present in the wider countryside as concentrations of trees or as isolated individuals in hedgerows, woodland edges and churchyards as well as in parklands. These are also of significant ecological value.

Extent in PD: c. 588 ha

Current Factors Affecting the Habitat & Habitat Condition

- Over-pruning or removal of veteran trees and clearing of dead wood as a result of misguided management on the grounds of safety, tidiness, tree hygiene or for firewood.
- Loss of ancient trees through disease, such as Dutch Elm disease, or competition with younger trees
- Lack of continuity of dead wood habitat can occur as a result of gaps in the age structure of trees on site**.** Abandonment of traditional management techniques such as pollarding, resulting in trees becoming top-heavy and in danger of collapsing.
- Changes in ground-water levels through over-abstraction, drainage, neighbouring development, roads, prolonged drought, etc. may cause water stress and tree death.
- Damage to trees and roots from soil compaction and erosion caused by trampling by livestock and people and car parking, or from the application of fertilizers or pesticides on, or deep ploughing of land under and around trees.
- Fragmentation of this type of habitat within the landscape makes it difficult for less mobile invertebrates to colonise.
- Loss or improvement of pasture through reseeding, fertilizing or conversion to arable or other uses.
- Damage or early death of trees through horses or other stock eating, rubbing on or trampling the bark, the lower part of the trunk or exposed roots.

Recent Work

Recent survey work by volunteers led by Derbyshire Wildlife Trust, identified and described 1,277 veteran trees within the Peak District, the largest of these, and likely the oldest was an oak in Chatsworth Old Park, measuring in at 8.68m diameter.

Associated BAP Species in the Peak District

Barbastelle Bat	*Barbastella barbastellus*
Noctule	*Nyctalus noctula*
Soprano Pipistrelle	*Pipistrellus pygmaeus*
Brown Long-eared bat	*Plecotus auritus*
Lesser Spotted Woodpecker	*Dendrocopos minor comminutus*
Hawfinch	*Coccothraustes coccothraustes*
Spotted Flycatcher	*Muscicapa striata striata*
Tree Sparrow	*Passer montanus*
Song thrush	*Turdus philomelos clarkei*
Nightjar	*Caprimulgus europaeus*
a lichen	*Lecanora sublivescens*

NVC Communities

Lowland wood-pastures and parkland are most commonly associated with:
W10 - *Quercus robur* - *Pteridium aquilinum – Rubus fruticosus* woodland,
W14 - *Fagus sylvatica* - *Rubus fruticosus* woodland,
W15 - *Fagus sylvatica* - *Deschampsia flexuosa* woodland and
W16 - *Quercus* spp. - *Betula* spp.- *Deschampsia flexuosa* woodland.
Upland examples may show more resemblance to W11 and W17 woodland types. More open wood-pastures and parkland may include various scrub, heathland, improved and unimproved grassland NVC communities.