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Woodland Shrub & Wildflower Project – Final Report 31st March 2014

Project Background

Established native woodlands usually consist of three layers; the tree canopy, shrub layer and ground flora. Each of these layers has its own importance for the species dependent on them, so for fully functioning woodland with high biodiversity, it is desirable to have all three layers.

As much of the woodland owned or managed by Kemerton Conservation Trust has been planted in the last 50 years, it has not yet had time to establish a full shrub layer or ground flora, so the Trust has tried a number of techniques over the years to speed up the process. Some years ago trials were set up by KCT Conservation Advisor John Clarke to see if it was possible to encourage wildflowers to grow in established woodland and the Trust's nursery project has in the past produced native shrubs from local seed or cuttings to plant out.

A reduction in the Trust resources in the mid-noughties led to the winding down of this important work. In order to continue with it, John established the Woodland Shrubs & Wildflower Project in 2009. The aim of the project was to find five corporate sponsors, each contributing £200 per year for 5 years. The funds would then be used to carry out targeted habitat management aimed at increasing woodland biodiversity and to fund KCT's tree nursery work throughout the project duration. **Cotswold Agricultural Merchants** was the first local business to offer their help and they were followed by **Bredon Forest School**, **Stanway Screens Ltd** and **Sharon Priest**. The Trust is extremely grateful to all of them. All four sponsors contributed £1000 each over 5 years as planned, with Bredon Forest School also generously donating an additional £500.00 in year 2 of the project.

Project Aims

The main aim of the project was to increase the ground flora and shrub layer within our younger woodlands at Kemerton Lake Nature Reserve and adjoining Kemerton Woods and the John Moore Nature Reserve. This would be through targeted planting of shrubs (many grown onsite from cuttings and seeds collected from the reserves) and planting of native bulbs, as well as creation of various wildlife habitats using thinnings from forestry work and erection of bird boxes.

Overview of Works

The majority of works were carried out in the winter each year, as this is the best time for tree planting and forestry works including coppicing. However, in spring and summer throughout the project, the warden carried out maintenance on the leaf litter trial areas, weeding out invasive saplings such as ash and clearing nettles to allow the bluebells and other wildflowers to flourish and every autumn seed was collected from local shrubs such as hazel, privet, dogwood and holly by KCT's Conservation Advisor John Clarke and these were grown on in the KCT tree nursery or by volunteers. It can take several years before the seeds grow into shrubs large enough to plant out and all young shrubs need to be protected from grazing by rabbits and deer so on planting out they are all guarded to ensure their survival.

Work began on the project in winter 2009/10 with a small number of holly and yew planted in John Moore Reserve, a small woodland owned by the Trust. Volunteers assisted with the planting and carried out hazel coppicing of existing trees onsite as well. Bird nest boxes were repaired by the warden and new boxes installed; primarily boxes aimed at the various tit species. At Kemerton Lake Nature Reserve, a start was made on planting shrubs, including hazel, in Collins Plantation, a section of young woodland edging the reserve, and a few were also planted around a small glade in Kemerton Woods that was used as a reception area during events. All shrubs used were grown in KCT's tree nursery or by volunteers.

In addition to planting shrubs, volunteers also created new habitat from woodland thinnings including beetle wigwams, beetle lodges and brash piles. These items aim to mimic the deadwood that would normally occur in older woodland, including standing deadwood, and they provide habitat for a large number of animals including insects, birds, small mammals and hibernating amphibians, as well as a wide variety of fungi. In 2010, a pair of treecreepers nested in one of the wigwams in Kemerton Woods, showing how they add to the biodiversity of our woodlands.

In autumn 2010, native bluebell bulbs were collected from a local site where National Rail was carrying out works and planted in protective cages in Kemerton Woods by the warden and some volunteers. In addition, National Rail agreed to donate a large quantity of topsoil to the Trust and delivered it to Kemerton Woods, where it was spread in several areas. This should contain a good seed bank which will hopefully add to the ground flora already on site. Some of the older leaf litter trial enclosures were getting overcrowded with the number of bulbs, so some were lifted and replanted in larger unprotected areas.

In winter 2010/11 more yew trees were planted in Collins Plantation and Cherry Orchard Plantation (another part of the woodland belt edging Kemerton Lake Nature Reserve). Privet shrubs were also planted on one side of the entrance to John Moore Reserve to create a small thicket for birds and to delineate the path for walkers.

In winter 2011/12, yew and hazel were planted through Kemerton Woods and volunteers used woodland thinnings to create more log piles and beetle wigwams.

In winter 2012/13 a large number of the shrubs grown from seed collected at the start of the project were ready for planting. A number of privet were planted at the entrance to Beggar Boys Wetland Complex, a nature reserve on Bredon Hill. Hazel were planted in Long Ground (the newest section of Kemerton Woods) and box & hazel were planted

in John Moore Reserve. In addition, the volunteers coppiced more hazel stands at John Moore Reserve and made log piles with the cut logs and repairs were carried out on nest boxes on site as well. Yew and hazel were planted under mature woodland in Smiths, Thurstans and Upstones Woods (which are situated behind Queensmead in Bredon) and several of the leaf litter trial enclosures were extended.

In the final year of the project, even more shrubs had grown big enough for planting out, so a lot of planting was achieved in winter 2013/14. Box and holly were planted under beech woodland in Quarry Wood on Bredon Hill, whilst hazel and holly were planted in a small, remnant ash coppice woodland on the edge of Westmancote as part of a wider restoration project. Guelder rose were planted in John Moore Reserve and near the East Hide at Kemerton Lake Nature Reserve, whilst goat willow (an essential source of early pollen for bees) were planted near the settlement ponds on the reserve. More hazel were also planted in Smiths, Thurstans and Upstones Woods.

In addition to the shrubs which had been grown onsite, we also purchased 80 yew trees to plant in Long Ground and in Smiths, Thurstans and Upstones Woods, which were planted out by our volunteers. Yew are an excellent plant for creating a shrub layer in woodland, as they do not require much light and are evergreen, providing shelter for small birds throughout the winter as well as providing nesting sites in the spring. They are also extremely long-lived.

In addition to the shrubs, 500 native bluebell bulbs were purchased in spring 2014 and these will be planted in Kemerton Woods when they arrive in May.

We currently have approximately 100 shrubs still growing in the KCT tree nursery which will be ready to plant out in 2014/15 or 2015/16.

Project Results

Thanks to the generosity of our sponsors, and the hard work of our Conservation Advisor John Clarke, our warden Alan Marsh, and subsequently his replacement John Threadingham, our Support Coordinator Kate Aubury and a large group of volunteers, this project has resulted in a tangible improvement to many of the woodlands that Kemerton Conservation Trust own or manage. Several hundred shrubs were grown and planted out during the five year project, with more still to mature, and these will greatly enhance the biodiversity of the sites where they were planted. In addition, more native wildflower, particularly bluebells, have been planted in Kemerton Woods where it is hoped they will spread and multiply to one day result in a stunning bluebell woodland.

The use of volunteer labour and recycling of woodland trimmings has enhanced the value of the project, with log and brash piles already providing nest sites for Chiff Chaff, Wren, Black Cap and Willow Warbler.

The Future

The Woodland Shrub and Wildflower Project has now officially finished and all funds have been spent. However, because of its success and the important we attach to our woodland habitats, the Trust has decided to continue to allocate some day-to-day resources to running the KCT tree nursery and continuing (reduced) shrub planting in future years. Our volunteers will also continue to create deadwood habitat when

forestry operations allow, as these are a fabulous resource for a large number of animals.

Acknowledgements

Kemerton Conservation Trust would like to thank the four generous sponsors of this project; Cotswold Agricultural Merchants, Bredon Forest School, Stanway Screens Ltd and Sharon Priest, without whom this work could not have been carried out.

We would also like to thank all those who assisted in the delivery of the project, particularly our hardworking volunteers.

Woodland Shrub & Wildflower Project Pictorial Appendix



© Alan Marsh

Volunteer Mike Walton planting trees in Kemerton Woods, 2010



© Alan Marsh

One of the small bluebell enclosures, Collins Plantation, Kemerton Woods, 2011



© Kate Aubury

Newly planted privet at the entrance to John Moore Reserve, 2011



© Kate Aubury

KCT work party volunteers building beetle wigwams in Kemerton Woods, 2012



© Alan Marsh

Bluebells flowering in one of the leaf litter trial enclosures, Kemerton Woods, 2011



KCT work party volunteers planting box in John Moore Reserve, 2013



Coppiced hazel in John Moore Reserve, 2013



Small Tortoiseshell butterfly—a declining species which will benefit from the increase in early nectar at Kemerton Lake Nature Reserve



Birch Polypore—a dead wood specialist that grows on dead birch trees



Blue Tits in a nest box, Kemerton Lake Nature Reserve, 2011