



West Wood, 4 July 2018. A sunny ride in this north-west Bedfordshire woodland. Managed by the Forestry Commission, this is one of a series of important ancient woods that are found on the ridge of higher ground that runs from Grafham in Cambridgeshire, through Bedfordshire, to Whittlewood Forest in Northamptonshire.



Felmersham Gravel Pits, 19 September 2019. This Wildlife Trust nature reserve, established in the early 1960s, is now one of the most important sites in the Ouse valley. It is a key nucleus from which species can spread out as landowners bring new areas into positive conservation management.
Photo: Josh Hellon, Wildlife Trust BCN

past 20 years conservation organisations have continued to promote the concept of conservation at a landscape scale, a Living Landscape. This approach is based on the principles of landscape-scale conservation set out in a ground breaking report to Central Government. *Making Space for Nature* considers the landscape and environment as a complete whole, as a dynamic, complex and linked system. The ways in which plants, fungi, bacteria and animals disperse are many and varied. We know remarkably little about the ecology of many species but a Living Landscape approach aims to provide a range of features and processes which allow as many species as possible to sustain their populations and disperse.

In Bedfordshire key landscapes are:

- Woods of north-west Bedfordshire.
- Ouse valley grasslands and wetlands.
- Greensand Ridge and Flit valley.
- Chiltern hills.

Bedfordshire had been quick to recognise the value of landscape-scale projects and these were joined in the 2000s by Green Infrastructure Plans at a variety of scales. In 2019 the Government is committed to the identification of Nature Recovery Networks. We might expect that at the county scale these will relate well to the work already described but identification of new networks and their acceptance by politicians and communities of the county is expected to be a focus of the early 2020s. As one might expect, the areas that are the focus of attention today would have been recognisable by naturalists 70 years ago when the first modern flora of Bedfordshire was written.

Conservation at the landscape scale

During the 1990s conservation organisations and Local Authorities in Bedfordshire worked together to produce Nature Conservation Strategies for the county and for Luton Borough. At the same time local partnerships set up the Marston Vale Community Forest, the Ivel



Cooper's Hill, 14 August 2017. Within the landscape of the Greensand Ridge, this Wildlife Trust nature reserve is an important remnant of lowland heathland. *Photo: Josh Hellon, Wildlife Trust BCN*



Pegsdon Hills, 5 October 2018. The Chiltern Hills contain one quarter of all the SSSIs in Bedfordshire. Here at the Wildlife Trust's nature reserve there are extensive areas of grassland created in the 1990s around Deacon Hill SSSI. Within the SSSI annual scrub clearance and a conservation grazing regime with sheep and cattle is vital to the survival of many rare plants and invertebrates. *Photo: Josh Hellon, Wildlife Trust BCN*

Valley Countryside Project and the Luton and Dunstable Countryside Project. Last to arrive was the Greensand Project, focused on the western end of the Greensand Ridge either side of the Bedfordshire/Buckinghamshire border. This set of landscape-scale projects survived to the turn of the century but have had contrasting fortunes since then.

In 1991 local pressure resulted in Government designating the 61 square miles between Bedford and Milton Keynes as one of 12 Community Forests in England. This was perhaps the first landscape-scale project with widespread recognition in Bedfordshire. Large parts of the Marston Vale area are farmland but at its core is a landscape that had been dominated for more than 50 years by large-scale clay extraction, brick making and landfill. At one point Brogborough landfill site was considered to be the largest landfill site in Europe! When the area was designated as a Community Forest there was just 3% tree cover and the core target was set as increasing that to 30% whilst at the same time helping to transform the social, economic and environmental prospects of the area. By 1998 a great deal of the groundwork had been done and creation of new woodland areas began to accelerate. The Forest of Marston Vale is now driven forward by the Forest of Marston Vale Trust and by 2015 more than 1,140 hectares of new woodland had been created, amounting to over 15% of the project area.

Woods on the Greensand Ridge

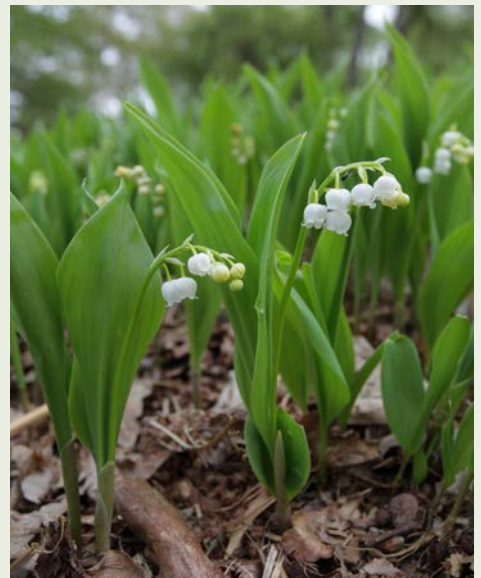
The Greensand Ridge is the most wooded area of the county, where the more acidic and drier soils are less productive for agriculture. Eight woods are featured, varying from ancient woodland to 20th century plantations. Many conservation projects over the last 20 years are the work of the Greensand Trust, and the Wildlife Trust's Greensand Ridge and Flit Valley Living Landscape. 'Greensand Country' is a shared way of describing the area. An important initiative has been to designate the Greensand Ridge as a Nature Improvement Area (NIA). A four-year project, the Greensand Country Landscape Partnership, was set up in 2017 by partners to deliver the aims of the NIA, funded by a Heritage Lottery Fund grant, to make a real and lasting difference to the habitats, species and landscape of the Greensand Ridge.

King's Wood, Heath & Reach is part of our largest area of deciduous woodland, lying at the western end of the Greensand Ridge. Partly on Boulder Clay, it has a wide range of soil types from slightly calcareous to acidic, and from wet to well-drained, which is reflected in the rich variety of habitats and



Bluebell is abundant in some areas of the wood.

species. The quality of the site is recognised as an NNR and it is, unusually, in multiple-ownership, with some areas in private hands with no public access. The nature reserve is managed jointly by the Wildlife Trust, the Greensand Trust, Central Bedfordshire Council and Tarmac. The Trusts cut the rides to maintain access and coppice the ride edges and elsewhere to let in light and maintain a diverse structure with important open areas in the woodland. In the last 20 years, 30 butterfly species have been recorded including Silver-washed Fritillary, White Admiral, Purple Emperor and Purple Hairstreak.



The largest county population of Lily-of-the-valley grows on the acid woodland soils, where it is locally frequent in open heathy sites among Bracken.



Small-leaved Lime, a locally rare native tree, continues to be coppiced; it is thought that this was a dominant tree in the original wildwood.

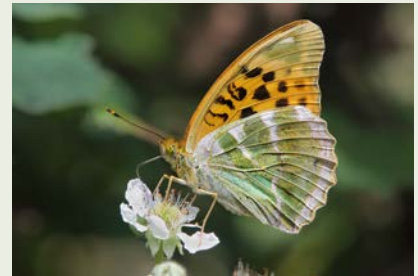


King's Wood in the 1950s

Prior to 1950, John Dony noted the wood as having well-maintained rides and rich vegetation, with rides well-grazed by Rabbit and herbage no more than an inch high. In the 1950s, J.B. Barnwell recorded violets, which are the food plant of fritillary butterflies, being abundant in some rides.

S.H. Kershaw recorded 34 species of butterflies, including sightings of over 200 Pearl-bordered Fritillaries in May and June 1955, and around 200 Silver-washed Fritillaries in July 1956 as well as High Brown, Dark Green and Small Pearl-bordered Fritillaries, and many White Admirals. Like the county's other woodlands King's Wood is now a shadow of its former glory, much more closed-in with a reduction in the forest management as coppice-with-standards. Of those fritillaries mentioned, most disappeared decades ago, and only a few individuals of Silver-washed Fritillary and White Admiral are likely to be seen here today.

These cross rides at **King's Wood, Heath & Reach**, and some of the adjoining rides, provide good open areas, and are one of the best places to find woodland butterflies and other sun-loving species of woodland wildlife.



Silver-washed Fritillary, our largest species of fritillary, derives its name from beautiful streaks of silver on the underwing. They are occasionally seen in the wood where its larval food plant, dog-violet species, grows; the male above is feeding on Common Knapweed.



Purple Hairstreak, our commonest hairstreak, is most likely to be seen flying high in the canopies of our larger Pedunculate Oak woodlands, where they feed on honeydew.



Noctule, our largest bat, has been seen roosting in bat boxes at King's Wood, Heath & Reach, as well as using traditional tree holes as roosts at Baker's Wood.

Lost breeders and species in decline



Many of our long-distance migrant woodland species have declined or have been lost as breeders, perhaps as a result of problems encountered during migration or in their wintering areas. One of these is **Common Redstart**, which last bred in the county in 2008. However, the long-term trend for England is positive so this species may once again populate the woods along the Greensand Ridge. *Photo: Steve Blain*



Many of our farmland species are in severe decline as a result of intensive agricultural practices. **Tree Sparrow** has suffered a dramatic decline, with the last known breeding record in the county in 2007. Winter flocks of several hundred were fairly typical until the early 1980s. *Photo: Steve Blain*



Another species showing a massive reduction in numbers is **Grey Partridge**. In the East of England it has declined by 54% since 1995, and in Bedfordshire probably even more so. It is one of the most strongly decreasing species in Europe.



Perhaps the farmland species in most trouble is **Turtle Dove**, with a reduction since 1995 in the East of England of 94%. It has suffered through hunting pressures during migration, as well as the loss of weedy fields in its former breeding areas. It is considered possible that it will become extinct as a breeding species in Britain in the near future.

The breeding population of **Spotted Flycatcher** has decreased, in line with many of our long-distance summer migrants. Since 1995 the population in England has decreased by 67% according to BBS results.



Greenfinch has undergone the quickest decline of any of our resident species with, for example, a drop of 56% in Bedfordshire since 1994. The cause is outbreaks of the parasitic disease trichomonosis, probably spread through contaminated food and water. Routine hygiene precautions are recommended for garden bird feeders and bird baths.

Amphibians, Reptiles and Fish



Previously recorded in the area until the 1980s, a project to reintroduce **Adder** to Maulden Heath began in 2000, led by English Nature. Young from the New Forest Reptile Centre were released over a number of years. Volunteers from the Greensand Trust monitor the area regularly.



Natterjack Toad lived in the Sandy area until at least 1905 but, having become locally extinct, was reintroduced to the RSPB The Lodge NR in 1981-1983 from Syderstone Common, Norfolk. A pond was created for them at the top of the old heath, an ideal location with bare sand for their hibernation burrows. Syderstone subsequently lost the species, and there have been attempts to reintroduce them back from The Lodge. The latter population has been made secure by the construction of more shallow ponds and bare ground.



The UK is one of the strongholds of **Great Crested Newt** but the species appears to have suffered a decline in recent years. Factors could include pond loss, poor pond management and fish predation as well as loss and fragmentation of their terrestrial habitat. Mitigation measures are required when permission has been granted for development of known sites.



Although present in modest numbers in some tributaries to the Ivel, where water rises from springs in the chalk, **Brown Trout** are seldom seen. The sight of this 50cm long individual at Jordans Mill, Broom was quite an event.