

MAIN WORK PARTY REPORT

Jan 06 – Lingwood Pond – Annual maintenance of the site carried out. S and E boundary hedge trimmed back - N boundary - 5 Sallows coppiced, encroaching bramble on causeway and other areas cut back. All cut vegetation raked and cleared and removed from site to the village allotment green waste site. Other tasks included a litter pick, cleaning of the Parish Council and pond signs and the removal of a bike from the pond. 14 members.

Jan 20 - Howes Meadow - Area C – Willows, Small Leafed Lime and other small sallows by stream pollarded. Area B – NW corner- cut back encroaching shrubs - Area A - N boundary - cleared bramble from around newly planted oaks. E boundary - shrubs trimmed back. 12 members +1

Feb 03 – Walsham Fen – Area F – Mown raked and cleared to spoil heaps. 11 members +1

Feb 17 – Buckenham Woods – Numerous buddleia and sallows around site cut back - cleared around newly planted trees/shrubs - bramble in wooded area cut back - Hedge and understory along the permissible footpath cut back. All cut vegetation raked and cleared to spoil heap/fire site. Litter pick and dog poo bag pick up. 12 members

ADDITIONAL WORK

Jan 03 – Lingwood Pond – N boundary of pond – some willow coppiced.

Jan 04 – Sunny Cottage Lingwood – Lifted Oaks for Wyngates planting replacements.

Jan 11 – Jary’s Meadow – Burning at the 3 fire sites. Some success but still wet inside.

Jan 12 – Wyngates Blofield – 10 failed Oak removed and replaced with Oak removed from EH garden on 04 Jan.

Jan 17 – Howes Meadow – Area B – Alder creating problem with seeding cut down and cleared to fire site and new log pile. Completed cutting up trunk of fallen Willow, previously trimmed, and cleared to wood pile. Area A – small Alder by stream removed.

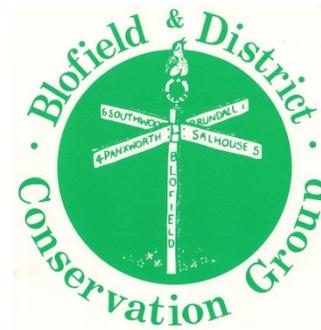
Jan 27 – Wyngates Blofield – Wood chip mulch placed around trees.

Jan 29 – Wyngates Blofield – Planted 3 Oak.

Feb 03 – Howes Meadow – Alder patch area - cleared up and pulled up the saplings leaving approx. 20 to be cut.

Feb 12 – Walsham Fen – N end of Bridleway leading to WF – improved access for parking when BVCG visit the site for a WP. Approx 30metres of hedge and bank cut back.

Feb 15 – Howes Meadow – Alder patch area. Cut and treated last of Alders.



BADCOG NEWS.

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President: Richard Hobbs

Chair: Tony McKie, Teal Barn,

Vicarage Road, Lingwood,

NR13 4TT

01603 714255

www.badcog.co.uk

CHAIRMAN'S UPDATE MARCH 2024

BADCOG is very grateful to Councillor Paul Newstead from Broadland District Council, who has granted us funds to purchase a new gate for Jary's Meadow. This gate should be installed by the time the next BADCOG Newsletter is published in May, so we'll let you know then how the work went.

In February 2022 we received a letter from Network Rail informing us of a potentially dangerous tree situation in Railway Wood. Due to the proximity of a multi-stem sycamore tree to the rail track, Network Rail was concerned that there was a risk of it falling onto the track. As Railway Wood belongs to BADCOG, it was our responsibility to ensure that this risk was mitigated. Therefore, on the 16th January 2024 a local tree surgeon reduced the tree by about two thirds. This work came at heavy financial cost to BADCOG but it's always better to put safety first.

Just before Christmas, I received an email from consultants working for National Highways on the A47 at North Burlingham. They contacted BADCOG asking for any ideas on how we could achieve 'Biodiversity Net Gain' with regards to this major road improvement project. A number of ideas from a range of BADCOG members have now been submitted which were well received. I think it was very good of the consultants to ask a small grassroots organisation like BADCOG for ideas to enhance the biodiversity along the A47.

In the first two months of the year we've had four main work parties, all of which have been very well attended. This was particularly true at Walsham Fen on the 3rd February when 12 volunteers turned out (picture). This enabled us to cut, rake and clear a big area of the fen in under two hours, which was a terrific achievement. Thank you all.



A NATURE CORRIDOR ON THE SUFFOLK-NORFOLK BORDER .

The Suffolk Wildlife Trust announces that they have secured 381 acres of the Suffolk Broads to create a new nature reserve - Worlingham Marshes.

Within the Lower Waveney Valley and the Broads National Park, 381 acres of land will become a Worlingham Marshes nature reserve under the custodianship of The Suffolk Wildlife Trust to create a nature corridor on the Suffolk-Norfolk border.

Wildlife desperately needs habitats which are more expansive, ecologically-rich and better connected with other natural areas and wild landscapes. The space which will become Worlingham Marshes nature reserve holds a key position within a corridor of wildlife-rich land in the Lower Waveney Valley, stretching from Beccles in the west to Oulton Marshes in the east, including Carlton Marshes.

VINE HOUSE FARM IN SOUTH LINCOLNSHIRE

An update by Nicholas Watts on the wildlife at the end of 2023.

Lapwings and Golden Plover arrived in November and were a fine sight. At their peak there were just under 3,000 of them with about 1,500 Lapwings. At dusk they went off to the fields to feed on invertebrates such as slugs and worms which normally come out at night. Golden Plovers and Lapwings have large eyes which enable them to see in the dark.

Close to 1,000 Fieldfares and Redwings have been feeding on the hedges, full of hawthorn berries which we planted for wildlife. Up to 10 native species of hedging plants produce berries which the birds eat, except for the rose hips and a few sloes. The Starlings have been probing for insects and soft grains in the soil. The frosty weather affects them more than the Fieldfares. In continuing frosty weather they will often move away.

800 Widgeon arrived on our wetland. Finding it frozen they moved on to nearby gravel pits to find open water during the day. At night they move to grass on the newly sown wheat fields. They are our only grass eating ducks.

The Barn Owls have not enjoyed the wet weather but they have been able to hunt in our farm buildings, which are not entirely shut up, to catch mice which have sought shelter.

I cleaned out all our Tree Sparrow nest boxes in late September and by mid October some of them already had fresh nesting material in them (always at the front of the box) making ready for 2024. In 2017 more than 1,000 young Tree Sparrows were reared on the farm but every year since the numbers have declined. Although they are still rearing nearly as many chicks per occupied nest box, they are declining because so many are dispersing and unfortunately probably dispersing to less favourable sites. This may be because if a large colony stops at a site too long it may be hit by disease or it may be that they have filled up the nest holes with nesting materials.

A moving poem about the life of an oak tree, written by Suffolk Wildlife Trust Youth Board member, Henry.

'Just a Tree'

In the Year of 1650, I was planted by a Jay.

It covered me with moss and then it hopped away,

Then in Spring I started to grow under the canopy, of many enormous oak trees,
much bigger than me.

It took me years to grow so tall, but I became majestic,

I spread my branches far and wide, my bark grew gnarled and thick.

Overtime, the many trees that had been all around, either fell in thunderstorms or
were cut down to the ground.

Some of us were allowed to stay and that included me.

The farmer planted in-between us. I was now a hedgerow tree.

The hedge was used for nests and food, it grew thorns, fruit and blossom,

Every year it grew thicker, with scrubby grasses at the bottom.

When the farmer didn't use his horses anymore, the hedgerow just got in his way
and was taken to the floor.

Proud, but alone in the field I stood, upon the open land.

Then one day came a man with a hard hat and a clipboard in his hand,

"This one's got to go," he said, "it's completely in the way."

He sprayed a big red cross on me, and then he walked away.

by Henry

BADCOG WORK PARTY DATES

Work parties start at 10.30am and finish at about 1pm.

All welcome!

2nd March Jary's Meadow

16th March—Holly Lane Pond

Note: 20th March—BVCG at Walsham Fen

23rd March—Howes Meadow

6th April—Walsham Fen

20th April—Jary's Meadow

11th May—Buckenham woods

1st June—To be decided

8th June—Lingwood Churchyard

22nd June—Hemblington Churchyard

6th July—Blofield Churchyard

Note: 9th July—Yarmouth Green Gym at Blofield Churchyard

Check website for any changes!

INSECT HIBERNATION OR DIAPAUSE

Insects are able to colonise and thrive in just about every terrestrial and freshwater habitat there is. Able to survive extremes of temperature, these 6-legged creatures have evolved a number of ways of dealing with extremes from waxy exoskeletons which minimise water loss to behaviours such as migration.

An ability to be more or less immune to the vagaries of the environment is known as diapause. Insects can stall their development until conditions improve. The diapausing animal is still alive but its cellular machinery shifts from cells dividing and organs developing to a state of 'tick over' and maintenance. Some such creatures remain active but they feed less and their reproductive development will be slowed or halted.

THE DIFFERENCE FROM HIBERNATION AS SEEN IN MAMMALS.

In hibernation metabolism slows and body temperature drops, but in essence it is a very deep sleep. In contrast diapause is a much more extreme form of inactivity as the life of an insect in this state is effectively "paused".

THE NEED TO HIDE.

In a deep state of diapause, the insect cannot respond to danger and flee from predators. Usually, diapause takes place in a sheltered location either in the soil, behind flaking bark or deep within a plant stem with a degree of protection from external threats.

The peacock butterflies one may encounter in a garden shed in the depths of winter are in diapause. Falling temperatures and a shorter day length trigger some cellular changes. Shutting down for the colder months their bodies undergo some radical changes such as the production of anti-freeze chemicals and the shrinkage of their flight muscles which will grow back to normal size as diapause comes to an end.

BADCOG Talk

8th March—A talk about Cantley Sugar Factory by Stephen Cash

All BADCOG Talks take place in the

Strumpshaw Community Hall starting at 7.30pm.

Please be at the hall in good time ready for a 7.30pm start!

THE RACE TO SAVE THE BLACK POPLAR.

Once common across the landscape, mature black poplars have dwindled to just a few thousands. Tree enthusiasts across Britain are devising creative ways to boost their genetic resilience and replant huge numbers of the "ballerina poplars".

Jamie Simpson was in his late 20s when he became serious about poplars. It was 2008 and, as he tells it, London authorities were threatening to cut down several veteran black poplars along the Thames towpath in Barnes, where the river twists into one of its more dramatic curves.

Simpson, an arborist, had long known about the local population and believed it to be unequalled in the UK, where black poplars most often occur as lone sentinels in remote fields. Here, a few dozen were improbably thriving along a concrete stretch of the Thames and, to the chagrin of the Port of London Authority, breaking up the revetment (which protects against erosion). But Simpson mobilised opposition and successfully lobbied for the trees to stay.

Energised by the victory, he promptly sent some cuttings to the Forestry Commission, which had recently begun offering genetic testing for trees. "All three of them came back as unique," Simpson recalls.

More tests have since shown the Barnes black poplars to likely be the most genetically diverse population of *Populus Nigra Betulifolia*, a subspecies native to Britain. That's a big deal because it is also the country's rarest native hardwood - past estimates have put the total number of mature trees across Britain at only 7,000.

Native black poplars, known as the "ballerina poplars" for their acrobatically angled limbs, were once common across the country. Several of them loom over the hay wain in John Constable's quintessential English landscape. Prized for its durability and fire-resistance, its timber was used in everything from wagons to scaffolding. But many of its waterlogged habitats have since been drained and few native specimens were planted after a faster-growing hybrid became popular in the 19th century (*Betulifolia* shares the craggy bark, knotty burrs and heart-shaped foliage of other poplar species, but is distinguished by the fine hairs that adorn its young leaves).

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Whenever landowners did plant native specimens, they favoured males that came without the cotton-like seed fluff produced by female flowers.

Opportunities for wild specimens to reproduce naturally are consequently rare. "They've had a bit of a rough time," says Chris Jenkins nursery manager at Royal Botanic Gardens Kew, at Wakehurst, which has maintained a black poplar stool bed - a collection of coppiced tree trunks that produce new shoots each year - since the 1990s. The programme has produced thousands of cuttings for planting across Sussex, and similar efforts have long provided a lifeline to the species across the country.



Black poplars are easy to multiply this way and its an effective way to preserve a specific local population. But it also means the same clones now proliferate everywhere, since cuttings produce exact genetic copies.

In 2018, a team of scientists at Forest Research, a Forestry Commission agency, published findings from DNA analyses of 811 samples of native black poplars, sent in by landowners over more than a decade. Among them, they identified only 87 genetically distinct clones, or genotypes. The most common, clone 28, also known as the "Manchester poplar", turned up in a fifth of the samples. "Some of the clones are really everywhere," says Joan Cottrell, the agency's head of forest genetics.

That can be a problem because it leaves the species more vulnerable to disease and other threats. To make them more resilient, new trees would ideally be grown from seed, not cuttings. But because cross pollination of black poplars now rarely occurs in nature, seeds can be hard to come by. The Millennium Seed Bank, the biodiversity back-up facility run by Kew, only has four collections of black poplar seeds. Two are from the same site in Surrey, which consists of just a single tree.

"Black poplar seed, it's kind of like hen's teeth," says Ted Chapman, who coordinates Kew's domestic conservation partnerships. "We're hunting them down."

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Pollinating with paintbrushes.

In the meantime, this conundrum has spurred a passionate effort to provide what nature cannot. Zeke Marshall, a Forest Research scientist, recently started artificially reproducing black poplars in his spare time after digging up old research papers on controlled pollination. Earlier this year, he took cuttings from a female tree in Darlington and a male one in Durham, and placed them in vases of distilled water along a south-facing window in his home office.

Once the branches flowered, he used a small paint brush to transfer the male pollen to the female flowers. He managed to harvest 205 seeds and sent most of them to Kew, where Jenkins - the nursery manager—has grown about 30 seedlings - each one, crucially, a genetically distinct mix of its two parent trees.

"Vegetatively, we can propagate black poplars very easily," Jenkins says. "But the seed is what's important for the species." The pair plan to keep experimenting with other artificial pollination methods - they'd like to graft cuttings on to rootstock next year, hoping it might support more vigorous flowering - and eventually broaden the number of crosses. "Ideally we'd get some funding to set up a seed orchard," Marshall says. "That's what needs to be done."

Cottrell, the head of genetics at Forest Research, says Marshall and Jenkin's work could be crucial. By creating new genotypes, this would eventually provide a wider spectrum of specimens for natural selection to take hold - which is particularly important in an era of both worsening climate change and increasing threats from introduced pests and diseases. "If you haven't got diversity, species can't adapt," she says.

Back in Barnes, Simpson has first hand experience of how fragile Britain's black poplars really are - and how valuable preservation can be. Years ago, he helped set up a nursery to grow hundreds of saplings. That proved prescient: roughly a fifth of the veteran poplars along the towpath have now been lost to storms or old age. He says many of the local genotypes are represented by only a single tree, making them particularly vulnerable.

With almost all of them now backed up through the nursery and in replica populations as far away as Devon and The Lake District, he can at least be sure that the rarest individuals won't die out so easily.

Otherwise, he says: "they'll just fall down, and once they're gone, they're gone for ever."

Based on an article in Positive News