Wyre Forest and A Vascular Plant Red List for England

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Ragged Robin *Lychnis flos-cuculi* John Bingham

The Wyre Forest has few vascular plants that are rare or even uncommon in the British Isles. Despite this the flora of the forest is of interest because it represents a bio-geographical divide between the upland north-west and lowland south-east division of the country. Species associated with both areas meet in the forest and this is why the area is of interest botanically.

A new update to the English flora, A Vascular Plant Red List for England was published in 2014 (Stroh et al). This was the result of detailed assessment and looked at threats and declines in our native English flora. This England Red List (ERL) was the first time such a detailed study had been undertaken and produced some interesting and very surprising results. It followed a new scientifically rigorous approach designed by the International Union for the Conservation of Nature to assess and determine risks of extinction. New concepts were used in assessing the flora with 'Area of Occupancy' similar to the area occupied by a species and 'Extent of Occurrence' similar to range or geographic spread. It is not quite as simple as it sounds and a lot of statistical work has gone into these assessments. Looking at the Wyre Forest flora we have several plant species given listing in this new assessment (see Table on page 17).

The ERL produced categories of risk ranging from Extinct to Least Concern. Of interest to us here in Wyre Forest are the Critically Endangered (CR), Endangered (EN), Vulnerable (VU), and Near Threatened (NT). The exact definitions of these categories and the four Criterion used are given in the ERL, but in summary include factors such as population size, geographic range, rate of decline and restricted locations. Plants under no obvious threat are listed as Least Concern (LC). There are some surprising differences between this and the Great Britain Status list.

The Wyre Forest species in the ERL Categories

Looking at the main area of woodland and the immediate orchard and grasslands surrounding the forest we have quite a few plants on the lists. This article summarises the current state of play of these species in Wyre and what the Wyre Forest Study Group (WFSG) might consider in order to help record, conserve and maintain the forest's ERL species.

Critically Endangered (CR).

Just the Whitty Pear Tree *Sorbus domestica* is to be found in this category and we have to assume it is a native tree here in Wyre if it is to be considered. Depending on your point of view this is either a Medieval archaeophyte introduction and curio or a true native species. Perhaps with the discovery of other native *S. domestica* trees elsewhere in the British Isles and the five *S. domestica* trees at Withybed Wood in Wyre, the latter may be now seen as more correct. But we still have to substantiate the trees origins in Wyre to be certain. Because of the local interest in this tree and with only two possibly native locations in the forest it should be under no threat provided land managers take note.

The WFSG has measured the Withybed Wood trees and core samples have been taken to try and date

their age. Our results to date suggest they were not planted by George Jorden and possibly are remnants of sucker-growth from a larger tree, now lost. Do other native sites for this tree occur in the forest? It would seem unlikely but not impossible. The tree is easy to overlook as it is similar to Rowan *Sorbus acuparia*, but of course does not have the red berries of Rowan. More research on the Withybed Wood trees is clearly needed to establish their exact age and origins, and whether they are native trees.

Endangered (EN).

Five species of plant occur in this category. Perhaps the least unexpected is Narrow-leaved Helleborine *Cephalanthera longifolia*. This orchid has always been a special Wyre Forest plant. It has been monitored by Rosemary Winnall and others (see page 71) and botanists are fully aware of the need to record this plant. Hopefully it is under no threat. Though hardly flourishing, numbers appear to be stable. But despite conservation work it has yet to show any substantial increase in population size. The extent of the plant, although still restricted, may be greater than first thought. All the sites for the orchid are known to the various landowners and they are aware of the plant's importance. Presently the Forestry Commission in conjunction with help from Plantlife are undertaking woodland management to enhance several sites.

Chaffweed *Centunculus minimus (Anagallis minima)* is still quite common in several areas of the forest but is localised. It is declining over most of England due to land-use changes such as drainage. Wyre populations are subject to fluctuations and new sites do appear occasionally. Monitoring of existing sites and recording new locations would be useful to document distribution and abundance of this plant. Not all landowners are aware of the plant or how scarce it has now become. One issue is its tiny size which makes it nearly impossible to see by the casual observer! Wet ditches or shallow forest puddles that dry over summer are typical habitats, but a large colony was discovered at Sturt Woodland in 2008 growing on a damp, stony woodland ride. Drainage and ditch works are a potential problem to conserving this species but some minor disturbance can be beneficial.

It may be already too late to save Heath Cudweed *Gnaphalium sylvaticum*. It had two known sites in recent years and one, a former timber stacking area, has been lost recently to changes to the vegetation. It is a plant of disturbed ground on heathy soils and does not compete well with other vegetation. The last extensive population was along the forest roadside verge at Wimperhill Wood where several hundred plants occurred, but they declined over a few years as the vegetation developed to a dense grassy sward. Monitoring the only extant site at the Roxel Rocket site in Postensplain is needed and surveying potential areas, especially if recent soil disturbance has taken place such as forest road maintenance or woodland management, might reveal more locations. Open heathy rides with rather sparse vegetation are the possible habitats. It has suffered a massive decline nationally and Wyre is perhaps not ideal habitat as it requires a more open, free draining sandy soil.

Finally there are two plants that are on the fringe of our understanding in Wyre. Lesser Butterfly Orchid *Platanthera bifolia* has been recorded occasionally over the years but most records are now historical, although it has been reported in more recent years at Huntsfield Farm, Eyemore. It would be worth establishing if it is still present at Huntsfield. It could appear in the more acid grasslands around the forest where public access is restricted, but to discover any such sites landowners would need to report it. The latest species to appear in Wyre on the Endangered category was Small-flowered Catchfly *Silene gallica* first recorded in 2014 on a grassland re-creation area on a field near Winwoods Farm. It may have appeared from the seed bank due to soil disturbance and therefore be classed as an

Heather, *Calluna vulgaris* John Bingham

archaeophyte, or if it arose from seed used in pheasant feed or seed crops, then it would be a neophyte and of less interest. In any case it needs to be monitored every year.

Vulnerable (VU).

This is a more extensive list of plants but includes some unexpected species that we would consider common in the forest. The first five species need to be monitored and recorded if found as they are now rare in Wyre.

The small fern Moonwort *Botrychium lunaria* has suffered loss from many lowland sites in England possibly for similar reasons: changes in grassland management. It still occurs at four sites around the forest and has persisted at three, but disappeared from one site for no apparent reason. It can be hard to locate in the grassland sward and certainly has fluctuations in population sizes. It is best described as stable in Wyre as most sites are within the SSSI and managed for their unimproved grassland habitat.

Anacamptis morio Green-winged Orchid has a few sites still but has suffered most over recent years. Wyre is too acid a site for it to really flourish well, but it is found in a few unimproved quality meadows. Populations may not be stable and some appear to be declining. Heath Violet *Viola canina* is rare in the forest and requires acid soils. It appears to have a stable population at Bell Coppice Meadows but has been recorded only occasionally elsewhere. Identification is often uncertain and a voucher specimen is needed providing enough plants are found. No records from within the woodland are known.

Common Cotton-grass *Eriophorum angustifolium* has a small number of sites but is never abundant. It is difficult to find unless in flower or fruit so may be missed. Nationally it has declined dramatically due to drainage of upland bogs. Our Wyre flushes also have Broad-leaved Cotton-grass *E. latifolium* which locally is very rare but Nationally not under such severe decline, so not listed as VU.

Tubular Water-dropwort *Oenanthe fistulosa* has one extensive site where it flourishes but this is vulnerable and is possibly the only site in the forest. Wetland drainage would be the main issue, but hopefully it is not under threat as it is on Forestry Commission land.

Bird's-nest Orchid *Neottia nidus-avis* has so few records from the forest that it is on the verge of extinction here. Populations do not persist, although old sites are always worth checking, and new sites may well appear. We need to establish if the plant is still to

Common Lousewort *Pedicularis sylvatica* John Bingham

be found in the forest, the last record was in 2007 at Postenplain but reports from the disused railway still occur occasionally suggesting that it may still be found somewhere on a shady embankment.

Finally there are two ELR VU species that are still abundant in the forest, and both are grassland species. Dyer's Greenweed *Genista tinctoria* has seen decline over recent years but seems to flourish at the sites where it is present. It nearly always occurs in unimproved grasslands, many of which are now protected. Common Lousewort *Pedicularis sylvatica* also occurs in unimproved grassland as well as along many of the more species diverse forest rides where it can be quite frequent. Human pressure from trampling along grassy rides has reduced our Wyre populations, but it is not under threat yet.

National Threatened (NT).

To make better sense of these species it helps to consider the habitats that they occur within as these are under threat and declining nationally.

Heathland. Wyre has little true heathland, except that on Pound Green Common, but the woodland is acid and supports a heathy flora. Species in Wyre listed in the ERL as NT include Heather *Calluna vulgaris*, (due to a considerable loss of heathland nationally) Bell Heather *Erica cinerea*, and in the damper areas Cross-leaved Heath *Erica tetralix*. Any site with an abundance of *Calluna vulgaris* and *Erica cinerea* ought to be considered as having conservation significance and should be mapped. Even if a plant is common in Wyre, it should not be undervalued.

Of these Ericoid species only *Erica tetralix* can be considered rare in the forest. It is restricted to a few sites at Pound Green Common, although this is now confused by more recent introduction of seed from Clee Hill. Two woodland flush sites at Brand Wood and

Wyre Forest Study Group

Woodwards Coppice may still contain small colonies. These will be very sensitive to disturbance from forestry operations, and yet may need more light to thrive. Our native sites need to be monitored and checked with some assessment of extent and plant numbers. Any site should be recorded with a full grid reference.

The NT list includes a moorland grass, Mat-Grass *Nardus stricta*, which is rather scarce and well worth a full six figure record if found. It seems less common in the forest now than it was 20 years ago. Forest rides are the typical habitat but it can occur in acid grassland. More common NT plants are Heath Milkwort *Polygala serpyllifolia* and Goldenrod *Solidago virgaurea,* both found in more open woodland and along forest rides. I wonder about *Solidago virgaurea*, just how widespread and abundant is it? I suspect it is more localised than we think. It is worthy of at least a monad recording with perhaps some note on the local abundance and a full map reference for sites with good populations.

Wetland. The wet flushes and seepages in Wyre are common, but restricted in location. In addition we have the wet areas associated with the Dowles Brook and similar streams. Several wetland ERL NT species are still locally abundant. They include Star Sedge *Carex echinata*, Marsh Pennywort *Hydrocotyle vulgaris,* Corn Mint *Mentha arvensis*, Marsh Ragwort *Senecio aquaticus*, Marsh Valerian *Valeriana dioica*, Common Valerian *Valeriana officinalis* and Marsh Speedwell *Veronica scutellata. Mentha arvensis* has the issue of hybridisation and our Wyre plants are often not pure, we have *M. arvensis x M. aquatica = M. verticillata.*


Goldenrod *Solidago virgaurea* John Bingham

Other less common species are Flea Sedge *Carex pulicaris* which is still to be found at a good number of sites. One species, Marsh Arrow-grass *Triglochin palustris,* is now rare and localised in the forest and worthy of careful recording when found.

Recording the locations of the forest's wet flushes has been an ongoing project for the Wyre Forest Study Group, but we need more information on the associated plants found. Not all wet flushes are the same, and they can vary considerably with some much more species diverse than others. Conservation issues of these wet areas vary. Succession to woodland and drying out has been one issue but shade can be of benefit to some plants. Forestry management is another problem as vehicles can cut deep ruts into wet areas and can create drainage channels. We need to keep our woodland wet!

Unimproved Grassland. Bloody Cranesbill *Geranium sanguineum* (see photo on gae 48) has long been regarded as a Wyre Forest speciality, but a possible garden escape. It has one large grassland-edge colony where it flourishes, but it has disappeared from other previously known sites. It can occur as a woodland herb on steep rocky banks above the Dowles Brook on the Shropshire side of the forest. Such sites are hard to locate as the plant rarely flowers and is often suppressed by shade from the oak canopy. Here it looks like a truely native species as it is hard to imagine any garden plant surviving on such stressed habitat. Any new sites need to be fully recorded.

The numerous grassland sites around the forest and forest rides support some of the NT plants listed; Quaking-grass *Briza media,* Harebell *Campanula rotundifolia*, Crosswort *Cruciata laevipes,* Field Scabious *Knautia arvensis*, Lesser Spearwort *Ranunculus flammula*, Devil's Bit Scabious *Succisa pratensis,* Ragged Robin *Silene flos-cuculi* and Heath Speedwell *Veronica officinalis* are all found in reasonable numbers but some are quite restricted in extent. How common are these plants? There has been a decline in unimproved grasslands around Wyre and many sites have become degraded due to changes or lack of management.

The Harebell *Campanula rotundifolia* was formerly so common in acid grassland that it would go unnoticed, yet it appears rather scarce around Wyre today. The ERL reports that it is a poor competitor with vigorous

grasses and negatively strongly associated with Nitrogen deposition. Crosswort *Cruciata laevipes* was always uncommon in the forest, but more frequent around the smallholding landscape of road verges. It again seems less common now than in the past. Could Ragged Robin *Silene flos-cuculi* be slowly disappearing due to drainage of wet grasslands? Any new sites for these species, especially if several are occurring together should be recorded with full information as they will indicate quality grassland.

Other species listed in the ERL as NT are grassland and woodland ride species in Wyre. Bitter Vetch *Lathyrus linifolius*, Heath Milkwort *Polygala serpyllifolia* and Tormentil *Potentilla erecta* are generally common in woodland glades and along rides. All appear to be widespread but the forest rides do not appear to be so abundant as they were in the past. Perhaps we should map every species at monad scale to see if what we think is really true. It would be interesting to see if newly created forest rides have developed a flora with these key species present.

There is one last query here under our NT plants, but this time from just outside Wyre; Spreading Bellflower *Campanula patula*, a rare plant that was recorded near the river just above Arley. Could any plants still survive on the riverbanks? Round-fruited Rush *Juncus compressus* needs recording too along the edge of the river and on large boulders on the bank. It seems to be absent from the Wyre Forest section of the River Severn, but still occurs close by.

Woodland. Perhaps expected on the ERL NT list for Wyre was Wood Cransebill *Geranium sylvaticum*. This is a Wyre speciality and in serious decline in its typical northern upland meadows. Although not common, it maintains a population in the core forest area heading north into Shropshire. Plants do not always persist for long and this makes recording and assessment of population size difficult. It appears to have become much less common than it was 20 years ago and some of the more outlying sites may have disappeared. This is a plant that needs to be monitored closely.

Oak Fern *Gymnocarpium dryopteris* was considered extinct until it was re-found in 1962. Since then one small population has persisted near to Dowles Brook, although it appears to be under threat from landslips. A regular check is desirable and perhaps a justifiable relocation might be needed if the bank slips any further. Cow-wheat *Melampyrum pratense* is common in Wyre, but although widespread it no longer seems to have the extensive populations of 30 years ago. The inclusion of Wood Sorrel *Oxalis acetosella* is unexpected as it is a common plant in many acid

Harebell *Campanula rotundifolia* John Bingham

woodlands, but in decline nationally. It is common in Wyre but localised in extent, the Dowles Valley being its best location.

Another Wyre special on the NT list is Lesser Wintergreen *Pyrola minor* and thankfully one population is still present in the forest discovered by Paul Reade in 2005. It has declined over the years as the habitat changes so finding further sites would be of benefit in securing a future for the plant in Wyre. The danger is that we may lose the plant due to natural succession as the habitat reverts to scrub woodland. Sanicle *Sanicula europaea* is a plant of more base-rich soils so it has never been common in the forest. It is typically found along brook sides or road verges. How widespread it is in Wyre is uncertain but records really need to be made with a full grid reference.

Perhaps the biggest surprise is Wild Strawberry *Fragaria vesca*, a species that competes poorly with other plants. It was once common along the disused railway and forest tracks but now less so. Perhaps it is still quite widespread but no longer forms large populations. But is it so uncommon we need to map it with full grid references?

County Differences

The differences between counties are fairly clear especially with the acid upland species and wet flush or mire species which are more common in Shropshire (and Staffordshire vice county). Worcestershire as a county lacks the large semi-improved areas of upland like the Long Mynd or Clee Hill, so appears to have more species under threat or in decline. Even crossing the Dowles Brook county boundary shows variation between Shropshire and Worcestershire, and some species are localised such as *Cephalanthera longifolia* with no Shropshire record.

Also the abundance of species can be quite different in part due to the slope of the dissected plateau. The Shropshire side is more south facing and slightly warmer. This is reflected in the geomorphology along the Dowles valley, which slopes more gently on the Shropshire side. Worcestershire has more unimproved lowland grassland and a warmer climate so *Briza media* and *Succisa pratensis* for example are not so rare.

There are many others plants in the forest of local County rarity, though not under any threat on the ERL. We should not ignore them, and perhaps this new list is a wake-up call for both some scarce and some seemingly common species. Mapping the distribution of some of these species would be the first step, followed by some indication of abundance. Some are clearly uncommon and need to be recorded when found, but others are more problematic as they still appear to be widespread and common. Perhaps with these species we need at least to identify good key sites where they are still abundant, such as floristic rides, glades or verges.

From this we can commence further recording looking at habitats and threats to see how we can best conserve species for the future. Wyre has many important plants that may still be common in the forest, but in England have declined and are under threat. We should not take them for granted.

References

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Bell Heather, *Erica cinerea* John Bingham

Wyre Forest List for the Two counties found on new ERL under - CR, EN, VU threats.

Taxon	English name	GB Status	ERL Status	Salop Flora	Worcs Flora
Anacamptis morio	Green Winged Orchid	NT	VU	Scattered Scarce	Scarce
Botrychium lunaria	Moonwort	LC	VU	Local Declining	Very Rare
Briza media	Quaking-grass	LC	NT	Local Declining	Widespread Local
Calluna vulgaris	Heather	LC	NT	Local Declining	Uncommon
Campanula rotundifolia	Harebell	LC	NT	Local Stable	Uncommon
Carex echinata	Star Sedge	LC	NT	Local Declining	Very Rare
Carex pulicaris	Flea Sedge	LC	NT	Local Declining	Very rare
Centunculus minimus	Chaffweed	NT	EN	Rare Stable	Extinct*
Cephalanthera longifolia	Narrow-leaved Helleborine	VU	EN	Rare*	Very Rare
Cruciata laevipes	Crosswort	LC	NT	Local Declining	Uncommon
Erica cinerea	Bell heather	LC	NT	Local Declining	Rare
Erica tetralix	Cross-leaved Heath	LC	NT	Local Declining	Very Rare
Eriophorum angustifolium	Common Cotton-grass	LC	VU	Local Stable*	Very Rare
Fragaria vesca	Wild Strawberry	LC	NT	Local Stable	Widespread Local
Genista tinctoria	Dryer's Greenweed	LC	VU	Local Declining	Uncommon
Geranium sanguineum	Bloody Cranesbill	LC	NT	Scarce Increasing	Extinct*
Geranium sylvaticum	Wood Cranesbill	LC	NT	Scarce Stable	Very Rare
Gnaphalium sylvaticum	Heath Cudweed	EN	EN	Scarce Stable	Very Rare*
Gymnocarpium dryopteris	Oak Fern	LC	NT	Local Increasing*	Very Rare
Hydrocotyle vulgaris	Marsh Pennywort	EC	NT	Local Declining	Very Scarce
Knautia arvensis	Field Scabious	LC	NT	Wide Declining	Widespread Local
Lathyrus linifolius	Bitter Vetch	LC	NT	Local Stable	Widespread Local
Melampyrum pratense	Cow-wheat	LC	NT	Local Stable	Scarce
Mentha arvensis	Corn Mint	LC	NT	Local Stable	Widespread Local
Nardus stricta	Mat-grass	LC	NT	Local Stable	Very Scarce
Neottia nidus-avis	Bird's-nest Orchid	NT	VU	Local Stable	Rare
Oenanthe fistulosa#	Tubular Water-dropwort	LC	VU	Rare Declining*	Very Scarce*
Oxalis acetosella	Wood Sorrel	LC	NT	Wide Stable	Widespread Local
Pedicularis sylvatica	Common Lousewort	LC	VU	Local Stable	Scarce
Platanthera bifolia	Lesser Butterfly Orchid	VU	EN	Rare Declining*	Extinct*
Polygala serpyllifolia	Heath Milkwort	LC	NT	Local Stable	Very Scarce
Potentilla erecta	Tormentill	LC	NT	Local Stable	Widespread
Pyrola minor	Lesser Wintergreen	LC	NT	Rare*	Extinct**
Ranunculus flammula	Lesser Celandine	LC	NT	Local Stable	Widespread Local
Sanicula europaea	Sanicle	LC	NT	Local Stable	Widespread Local
Senecio aquaticus	Marsh Ragwort	LC	NT	Local Stable	Widespread Local
Silene flos-cuculi	Ragged Robin	LC	NT	Wide Stable	Widespread Local
Silene gallica	Small-flowered Catchfly	EN	EN	Rare Stable	Very Rare*
Solidago virgaurea	Goldenrod	LC	NT	Local Declining	Very Scarce
Sorbus domestica	Whitty Pear Tree	CR	CR	Rare	Very Rare
Succisa pratensis	Devil's bit Scabious	LC	NT	Local Declining	Widespread Local
Triglochin palustris	Marsh Arrow-grass	LC	NT	Local Declining*	Rare
Valeriana dioica	Marsh Valerian	LC	NT	Local Declining	Very Scarce
Valeriana officinalis	Common Valerain	LC	NT	Wide Stable	Widespread Local
Veronica officinalis	Heath Speedwell	LC	NT	Local Stable	Widespread Local
Veronica scutellata	Marsh Speedwell	LC	NT	Local Stable	Very Scarce
Viola canina	Heath Violet	NT	VU	Rare Declining	Rare*

Status looking at each county as a whole * indicated no record in Wyre in that county ** now rediscovered