

# Shropshire Botanical Society

## Newsletter

### Autumn 2019



# Shropshire Botanical Society Newsletter No. 39

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Past copies of the newsletter are available as pdfs  
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<http://www.shropshirebotany.org.uk>

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Front Cover:

Red Hemp-nettle *Galeopsis angustifolia*  
(photo by Dan Wrench)



Our thanks to the Shropshire Wildlife Trust and the Field  
Studies Council for their generous support of our society.  
Both organisations support the work of the society in  
recognition of the importance of the contribution we  
make to understanding Shropshire botany.



Welcome to the 2019 autumn newsletter. I hope you have all had a good summer and this is a good time to reflect on what we did and look forward to the future.

We start with an article by our new Chairman introducing us to the current status of the society and botany in the county and this is followed by the first of a series of articles by invited local botanists on their vision for the future of botany in the county.

We report on the findings of some of our summer field excursions and Ruth Dawes presents some interesting research on the rare Red Hemp-nettle *Galeopsis angustifolia* at Llanymynech quarry

The newsletter also continues two themes that were introduced in the spring with an article by Liam from Caring for God's Acre (CfGA) on what they have been doing in the county this summer, and the first in a series of articles by Martin Godfrey to help you with your fern identification. Our winter meeting carries on the CfGA theme with a talk by their director Harriet Carty, at Preston Montford on 25<sup>th</sup> January.

Christmas is rapidly approaching and we have decided that we will not be decorating a tree in St. Chads this year; the bureaucracy and price no longer justify the time and effort involved. The committee would like to thank Sue and Peta for their imaginative decorations over the past few years.

## Winter Meeting

Saturday January 25<sup>th</sup> 2020 2.00 pm

Venue: Preston Montford Field Centre, Montford Bridge, near Shrewsbury, SY4 1HW

Speaker: Harriet Carty. Director of Caring for God's Acre.

The title of the talk will be The Beautiful Burial Ground.

Burial grounds can be excellent for biodiversity due to the longevity of use and management that many have received. Botanically, the grassland is particularly interesting as most burial grounds were consecrated before widespread destruction of species-rich meadows, in fact a churchyard can be the oldest enclosed land in a parish.

Caring for God's Acre is a conservation charity, dedicated to all burial grounds and we are working with the National Biodiversity Network (NBN) to bring together burial ground records and make them easily accessible. We'd love to have botanical records for every burial ground in Shropshire.

Why not brighten the dark days of January with a little creative baking?

As usual Preston Montford will provide tea and coffee but the winter meeting would not be the same without the usual spectacular collection of home-made cakes.

If you can rise to the occasion with or without the aid of baking powder, please can you let Penny know? All contributions gratefully received.

pennywysome@yahoo.com

## Spring Meeting and AGM

Sunday April 26<sup>th</sup> 2020 2.00 pm

Venue: Preston Montford.

The speaker at the AGM will be John Martin, who until recently was the National Specialist for Vascular Plants at Natural England. He will be giving a talk on "Mountain Plants."

## Obituary

Thompson, William ('Bill') A.  
(14 Mar 1936 – 23 Jan 2019).

Supplied by Alex Lockton with additional comments from Ruth Dawes, Ian Trueman and Kate Thorne.

He was born in Edinburgh, studied classics at Oxford, ca. 1961, and lived at Far Forest, Bewdley and Kinver, Staffordshire. Bill recorded SO78 for Sinker's Flora project, making many detailed and accurate records. He was nationally recognised for his knowledge of hawkweeds. Salopian records dated 1975–1990.

He made about 2,500 records (544 species) for Sinker's Flora, mostly as hectad coordinator for SO78 (the Highley-Chelmarsh area), which he



worked very thoroughly (the only person to have done so since J.B. Duncan in the 1900s). He also liked to spot rarities on the old coal mining waste heaps in Telford. One of Sinker's initiatives was to compile lists of 'associated species' to go with the rarities, and Bill was the main contributor to this project. He also enthusiastically studied the Severn Valley Railway, and found numerous rarities there, especially in the cuttings. No-one has yet repeated that work, but it would be an interesting project to do. Finally, of course, he was the main contributor of hawkweed records to Sinker's Flora. We don't have any reason to doubt any of his identifications, although a few hawkweed records are now obsolete because of changes to the taxonomy.

Outside of the county he went on to make important contributions to the Mont Flora and, especially, to the Worcestershire Flora whilst it was his excellent collection of cards with all the data for rare, scarce and uncommon plants that enabled Kate to draw up the first VC47 Rare Plant Register in 2009 .

Older members of SBS remember Bill as a very welcome companion in the field, modest but very knowledgeable, with a good sense of humour.

## Website and Data Portal

After a few changes on the technical side we are happy to report that the Shropshire Botanical Society has a new website up and running with our own domain name: [www.shropshirebotany.org.uk](http://www.shropshirebotany.org.uk)

Handily we can edit the website ourselves, so should be able to keep it up to date. Do take a look for the latest stories, updates and links. It provides a hub and online access point to all our activities, such as past newsletters, calendar of events, field meetings programme, news items, other social media, and importantly how to submit your plant records.

Also on the Bot Soc website, there is a link to the Shropshire Ecological Data Network flora database, maintained by Alex Lockton and stored in Dropbox. It contains the Vice County Recorder verified botanical records for Shropshire which used to be accessible via a user friendly Data Portal. You may remember in the spring we explained that the Data Portal is no longer functional and we canvassed your opinion about reviving it which would mean spending some Society funds to pay for developer time. We decided to go for it and are currently exploring options and drawing up a specification to define the exact scope and obtain some quotes.

Making the most of the high quality plant records for Shropshire remains a key role for the Shropshire Botanical Society and we look forward to seeing a return of the Data Portal, which will be accessed via our website.

## New publications

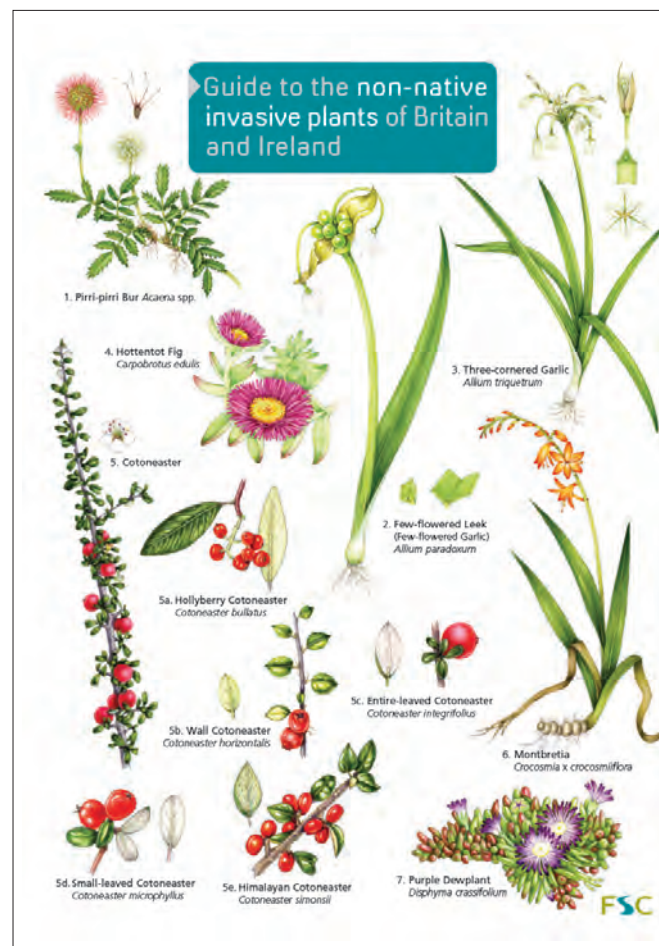
Non native invasive plants of Britain and Ireland

Farley-Brown & Harper, 2019 Price : £3.30 Code OP186

The non-native invasive plants identification guide features 31 species of land plants covered by legislation in UK and Republic of Ireland. These are plants that are causing problems and impacting on local biodiversity due to their aggressive growth.

Plants include Japanese Knotweed, American Skunk-cabbage, Variegated Yellow Archangel, Yellow Azalea, Pirri-pirri Bur, Perfoliate Alexanders and several species of Cotoneaster.

Text on the reverse side specifies the current legal status of each invasive plant. Different legislation applies in England, Wales, Scotland, Northern Ireland and Republic of Ireland. All make it a criminal offence to plant or cause to grow in the wild a listed invasive non-native plant.



## One Day courses at Preston Montford Field Centre during summer 2020

Fantastic tutors - Interesting topics - Great Value

Whatever you chose is up to you. Have a theme, pick and mix or do them all.

Most courses cost £50 - Bring your own lunch. Times 10.00 am – 16.00 pm

Book three or more courses at the same time for a 10% discount.

<b>Title</b>	<b>Date</b>	<b>Tutor</b>
Identifying Broadleaf Trees	15 January 2020	Mark Duffell
Introduction to Conifers	12 February 2020	Mark Duffell
Phase 1 Habitat Surveying	11 March 2020	John Handley
Plant ID for Field Surveyors	3 April 2020	Mark Duffell
Slug Identification	3 April 2020	Chris Du Feu
Botany for Improvers	4 April 2020	Mark Duffell
Introduction to Reptiles and Amphibians (£60.00)	9 May 2020	John Wilkinson
Introduction to Grasses	13 May 2020	John Handley
Woodland Plant Identification	13 May 2020	Mark Duffell
Wildflowers and Ferns of Limestone Woodland	16 May 2020	Fiona Gomersall
Top 10 Flowering Plants	9 June 2020	John Handley
Introduction to Lichens	13 June 2020	Catherine Tregaskes
Identification of Grasses	15 June 2020	Mark Duffell
Bogs and Marshes	4 July 2020	Fiona Gomersall
Introduction to Umbellifers	17 July 2020	John Handley
Introduction to Aquatic Plants	21 July 2020	Mark Duffell
Introduction to Grasslands NVC	24 July 2020	John Handley
Fern Identification in the Field	9 September 2020	Mark Duffell
Plant Identification Using the Vegetative Key	10 September 2020	Mark Duffell

In addition to these one day courses there are a number of intermediate or advanced level residential courses held at Preston Montford during the summer; for more details contact the Field Studies Council directly:

Telephone: FSC Preston Montford 0845 330 7378

E-mail: [enquires.pm@field-studies-council.org](mailto:enquires.pm@field-studies-council.org)

Online: [www.field-studies-council.org/prestonmontford](http://www.field-studies-council.org/prestonmontford)

## Message from our new Chair

John Handley

Shropshire is a beautiful county, with a wealth of different habitats making it an interesting place to botanise, regardless of the low number of nationally rare species. Any botanist visiting Shropshire will soon appreciate how fortunate we are to receive the ministrations of the BSBI Vice County Recorder Dr Sarah Whild, who, together with Alex Lockton, authored our most recent Flora (Lockton and Whild, 2015) which built on the outstanding Ecological Flora of the Shropshire Region (Sinker *et al.* 1985) and was published whilst Emeritus Professor Ian Trueman was the Chair of the Society. Tracing our heritage back to Charles Sinker we have so much to be grateful for, though the sum of things to be known is inexhaustible.

Therefore it is with a great deal of trepidation that I took on the role of Chair after Sarah announced that she would be standing down. Her decision to step down as Chair due primarily as a consequence of poor health, which we all hope will improve, and in the intervening time Sarah has taken on the role of corresponding member of the committee.

Shropshire's contribution to the botanical database of Britain and Ireland for the Date Class 2010-2020 has been handsomely fulfilled by the recent Flora, much to the relief of many recorders within the county. But as we move towards the end of this decade the thoughts of your committee have focused on the continual loss of habitat and decline of species, many of which have occurred within our own lifetimes, and the need to ensure that our Society can play an important role in helping to meet the challenges of the next decade.

At a recent committee meeting, the question of the purpose of the Society was posed. Our constitution is well formulated to answer this question and, amongst several suggestions, the chief proposals for the immediate future are our intentions to obtain the best possible value from the field meetings that are held. These events are the highlight of the calendar year for many members of the Society, providing a sociable environment to meet with friends and learn about the plants that we encounter in interesting places.

We also recognised the importance of the Flora, its contribution to our understanding, and our responsibility to try to add to that wealth of knowledge. In this edition Mags Cousins discusses the hard work that has been going on in the background to ensure that our historical data is fully available online: a remarkable legacy and one which sets Shropshire apart, I'm not aware of any other county that makes their data as accessible.

There is a greater need than ever for the availability of reliable information. With an increasing population there is a greater need for housing developments in Shropshire. The countryside is a working environment and the impact of intensive agriculture is recorded within the recent Flora. The 2019 Report on the State of Nature is more than concerning, now more than ever before we need to have a clear understanding of the changes, and the cause of those changes, so that good decisions can be made.

In this edition we have asked a highly respected and experienced ecologist, Chris Walker, to write the first of what we hope will be a series of articles provided by a range of authors, creating a vision of the county for the future which recognises, and suggests potential solutions for, the environmental threats this county faces.

### References

- Lockton, A., and Whild, S. 2015 The Flora and Vegetation of Shropshire. Shropshire Botanical Society, Shrewsbury.
- Sinker, C.A., Packham, J.R., Trueman, I.C., Oswald, P.H., Perring, F.H. & Prestwood, W.V. 1985. Ecological Flora of the Shropshire Region. Shropshire Trust for Nature Conservation, Shrewsbury.



# The future of botany in Shropshire: views from Chris Walker

Chris Walker

I was asked to write about the three things which I thought would be desirable to improve our fair county of Shropshire botanically, and I have been reflecting on this. Of course, the context for any improvement includes an awareness of the losses which have occurred in the forty-four years that I have known the county, and the feasibility of change in the light of political and social developments. As I write this, we can only speculate on how Brexit will affect agriculture and other uses of this crowded and, some would say, over-developed land. Also, how much will the current trend towards eating less meat influence our agriculture; will there be widespread conversion of grassland to arable, or the abandonment of some marginal areas altogether? And what of climate change? Will more extremes of weather affect our semi-natural habitats, and in what way?

I have no magic wand nor crystal ball, and my suggestions later in this article are theoretical. No doubt others have been saying the same things as I do here. It also seems to me that the problems afflicting the countryside, and the possible solutions, are all linked in complex ways.

The main deleterious changes which have affected the Shropshire countryside since I arrived here more than forty years ago are, I believe:

- 1 agricultural intensification, and especially a move from mixed farming in the lowlands to intensive arable, and a concomitant loss of hedges and farmland trees
- 2 in conjunction with this, a general increase in fertility
- 3 deterioration in water quality in rivers and streams, often linked to agricultural intensification and increased nutrient loadings
- 4 removal of grazing from small marginal sites, as land use around them has intensified
- 5 as a result of lack of grazing and increased fertility, invasion by native and alien species (so-called “thugs”)

Any proposals or aspirations for change, therefore, need to take account of the use of the land for farming, and involve the farming community. In spite of the many developments which have

affected this county, such as new roads and the recent rash of new housing in and around almost all our towns and villages, it remains true now, as it was when I arrived in Shropshire in 1975, that agriculture is the biggest cause of loss in biodiversity. This is hardly surprising, as agriculture occupies the greater proportion of the county’s land area. Within a mile of my home in Conover, there have been significant losses of unimproved or semi-improved grassland to arable use in the last couple of decades; the ploughing of grassland here has also been accompanied by the felling of trees and the removal of hedges, and some of the trees lost since our arrival here



Cattle grazing streamside grassland near Conover



Former grassland ploughed

have been veteran oaks and ashes which were historically part of the parkland associated with Conover Hall.

Conversely, I have been disappointed in some of my site visits in recent years to find grassland and wetland sites which are deteriorating as a result of insufficient grazing. This has been the case with several grassland sites in the Clee Hills area, and also a small valley fen near Rhyd-y-Croesau. So, alongside a general intensification of agriculture, there has been neglect or abandonment of small marginal areas – which are often the botanically-richest sites. Often, these sites form part of a small holding which is not managed by a full-time farmer, and sometimes the owners are dependent on neighbouring farmers for management. In the past there have been grazing initiatives for nature



Valley fen at Llawnt

reserves and other important areas involving conservation agencies and farmers, and I am sure that there is more scope for further work of this sort.

These losses are background to my suggestions for re-construction of parts of our countryside. A problem as I see it is that it is much easier to reintroduce structural variety into the countryside, to the benefit of vertebrates (especially birds), than it is to recreate good habitat for plants, which are more dependent on the drainage and nutrient characteristics of soils, and may also need continuity of land-use and management. It seems to me that as botanists, we could see improvements in the countryside which lead to more variety of habitat and landscape without a big accompanying increase in plant diversity, apart from some common and adaptable species. Some people would say that the obvious answer is that we should introduce “wild” flowers at the same time, but so

often, the result of such planting look anything but wild. Personally, I have an aversion to “wild-flower meadows” which do not look like any of our semi-natural grassland types. However, where soil conditions allow, the re-creation of botanically-rich grassland by means of green hay-strewing can achieve good results.

In some areas at least, I believe we should aim to restore natural ecological processes over a comparatively wide area. In effect this would be a form of re-wilding, although in some instances it may be that we would try to accommodate targeted, sustainable grazing in order to maintain those habitats, like unimproved grassland, which are dependent on it. By restoring natural processes, we may lose some of the plant species that we value. I believe this is a risk we have to take. It may be more important to restore sustainable ecological process, with the diversity which arises from this, than to nurture a few rare species.

One of the areas where I would like to see the return of natural ecological processes over a whole catchment is the Crose Mere, Sweat Mere, Whattall Moss complex. It is likely that these formed one wetland system before drainage lowered water levels in the nineteenth century. Species which are dependent on wet marshy grassland may well be unable to survive flooding. Providing the land use in the catchment is suitable, wet grassland may re-establish by natural processes at a higher level. We would hope that some of the more sensitive species, e.g Grass of Parnassus *Parnassia palustris*, would be able to re-establish, if they or their seeds have survived the unsuitable management that the margins of Crose Mere have been subject to over



Crose Mere





Wet grassland at Crose Mere

the past few decades. A recent visit to this site was encouraging; it seemed to me that Crose Mere and its surrounding wet grassland were in a better state than they have been for many years. Natural England has been working with the owners and occupiers of the land to improve the management of this site, and the results are commendable – but no doubt this is work in progress, and further changes will occur.

Another area where I would like to see an attempt to reconstruct a more diverse and rich countryside is Clun Forest. In spite of agricultural intensification (sometimes involving ploughing of alarmingly steep slopes) and the spread of Christmas Tree growing in this part of Shropshire, I believe that there is enough interest in some of the oak woods and steep-sided valleys to permit “re-wilding” on a small scale. In the absence of sheep-grazing, woods would develop a more diverse structure, and there may be scope for expansion of woodland through natural regeneration. The need for some grazing would need to be assessed for any area selected, and grazing would need to be managed with a view to maintaining grassland and heathland while permitting the spread of woodland in other areas. Of course, this suggestion is based on the assumption that the will and means exist to set aside areas primarily for conservation.

It is difficult to know how to tackle the almost universal increase in fertility which has affected so many semi-natural habitats. The conservation organisations have very little control over aerial pollution from traffic and intensive livestock units. Water pollution may be somewhat easier to tackle, and it may be possible to reduce inputs from agricultural land by the provision of buffer zones for sensitive sites and watercourses, with the co-operation of farmers, and involving statutory agencies (e.g. the Environment Agency). This technique has been, and is being, used in various places, with varying degrees of success, apparently. Beside leading to an improvement in water quality in streams and wetlands, it may present opportunities for habitat creation as adjoining land is taken out of intensive agriculture.

To summarise, then, the three areas where I think action would improve Shropshire botanically are restoration of grazing to marginal areas, the restoration of ecological processes over whole catchments or tracts of countryside, and the reduction of pollution by nutrients.

I am sure that some readers of this Newsletter will know more about these topics, and about specific sites, than I do, and may be able to provide more specific information. I hope that this short article will act as a stimulus for further discussion.

## Field meetings 2019 – reports

Chris Walker, Andrew Perry, John Handley

### Field Meeting at Wildmoor Pool, 15 June 2019

A group of intrepid botanists met a few days before the summer solstice to explore the Wildmoor Valley. It did not feel like June, as the day started cold and wet; it did, however, improve later. To begin with, it was disappointing to see the extent to which overgrazing by ponies, and the deposition of large heaps of dung, had affected the site – apparently a recent adverse influence on this part of the Long Mynd. We started by examining the environs of Wildmoor Pool itself, before wandering upstream. Wildmoor Pool is the lowest of a series of small pools formed by damming the Wildmoor stream. The lowest and largest pool has a good population of Bottle Sedge *Carex rostrata*, which threatens to spread across the whole pool and is cleared from time to time. Bog-bean *Menyanthes trifoliata* is another species which, like Bottle Sedge, tends to be found in oligotrophic to mesotrophic wetlands, and was moderately abundant in shallow water here. The smaller pools further up the valley supported Common Spikerush *Eleocharis palustris*, Water Horsetail *Equisetum fluviatile* and Bog Pondweed *Potamogeton polygonifolius*.

Upstream, between the pools, the water course flows through a narrow channel, but on either side there are areas of flush. There are stands of tall vegetation dominated by Soft Rush *Juncus effusus*, but also shorter (and generally more interesting) areas in which such species as Blinks *Montia fontana*, Marsh Pennywort *Hydrocotyle vulgaris*, Star Sedge *Carex echinata*, Carnation Sedge

*C. panicea*, Common Sedge *C. nigra* Common Yellow Sedge *C. demissa*, Lesser Spearwort *Ranunculus flammula*, Round-Leaved Crowfoot *R. omiophyllus*, Marsh Speedwell *Veronica scutellata* and Creeping Forget-me-not *Myosotis secunda* were found. We found a few shoots of Sneezewort *Achillea ptarmica* in one damp area. Towards the top of the valley there is a flush with Dioecious Sedge *Carex dioica* and Few-flowered Spikerush *Eleocharis quinqueflora*. In the same general area we found Tawny Sedge *Carex hostiana*, and, in drier areas around the flush, Flea Sedge *C. pulicaris*. This valley yielded 10 species of sedge *Carex* (the species not already mentioned were Oval Sedge *C. leporina* and Pill Sedge *C. pilulifera*, which was just about surviving the intense grazing). Of those which I have previously seen here, the only one we failed to find was Glaucous Sedge *C. flacca*.

After lunch, a slightly depleted group explored the area downstream of the dam and road at Wildmoor, where the stream valley runs towards the north. There were fewer wet flush areas here, but we saw good clumps of Lemon-scented Fern *Oreopteris limbosperma* alongside the stream. We were also pleased to find Bog Asphodel *Narthecium ossifragum* in a boggy area. Two dragonfly species livened up the afternoon; a chaser *Libellula sp* and the spectacular Golden-ringed Dragonfly *Cordulegaster boltonii*.

Chris Walker

### Stretton Westwood Quarry

Andrew Perry

Look up one of Shropshire's calcicole plants in the atlas and you can usually pick out the limestone ridge of Wenlock Edge ridge running diagonally through the county. With much of the Edge being wooded, disused limestone quarries offer some of the best botanical hotspots, and in June 2019 a Shropshire Botanical Society field trip explored the former Westwood Quarry, approximately 2.5 miles from Much Wenlock.

#### Site history and present management

This site ceased to be an active quarry around 50







years ago and is currently owned by Shropshire Council. In 2018 it was used to house excavated material from the creation of two flood attenuation pools in Much Wenlock, providing the opportunity to create Priority Habitat calcareous grassland. The excavated topsoil had been agriculturally improved and was too fertile for such a habitat, and so the topsoil was placed in the quarry first, and then topped with the limestone subsoil and bedrock. The spoil was also landscaped to provide a varied topology and to leave the existing rockfaces unobstructed (the rock exposures are geological features within the Wenlock Edge Site of Special Scientific Interest).



Greater Knapweed (photo: Mags Cousins)

Funding was secured by Shropshire Wildlife Trust to stock fence the site, and the quarry has been leased to the National Trust who will introduce grazing with Hebridean sheep to control scrub and maintain the grassland. I first visited the site as an ecologist for the National Trust in May 2016, and I was impressed with the remnants of calcareous grassland on the quarry top, resembling the CG3 Upright Brome *Bromopsis erecta* community in National Vegetation Classification (NVC) terms. The material from the flood alleviation scheme was deposited in 2018 and some green hay from



Pyramidal Orchids and Bird's-foot Trefoil on the quarry top





Rigid Fern-grass (photo: Mags Cousins)

a suitable local meadow (by Ippikin's Rock) was strewn in places to aid the habitat restoration. I was keen to get back in 2019 to see how the vegetation was recolonising, and it seemed like a perfect opportunity for a SBS outing!

### Field trip 2019

On the 29<sup>th</sup> June I met with ten other keen botanists from the Society to explore the quarry in more detail. We started on the old quarry top north of the carpark and it was commented that the grassland had certainly read the book on limestone plants for Shropshire! We quickly ticked off Greater Knapweed *Centaurea scabiosa*, Restharrow *Ononis repens*, Ploughman's-spikenard *Inula conyzae*, Quaking Grass *Briza media* and a host of other calcareous specialities.

After some keying out of bromes and umbellifers, we looked at the quarry top to the southwest. This grassland had apparently suffered more disturbance and was partly shaded by boundary trees, but nonetheless there was a good show of Pyramidal Orchids *Anacamptis pyramidalis* in one patch.

Braving the mid-day sun, we went down into the quarry to look at the restoration areas. Salad Burnet *Sanguisorba minor* was clearly doing well on the spoil, as were early colonisers of bare ground such as Weld *Reseda luteola*. One of my favourites on this site is Rigid Fern-grass *Catapodium rigidum* which has established in numerous places across the restoration area. Many alien species have also found a place in the quarry, from the invasive (Cotoneasters and Japanese Knotweed *Fallopia japonica*) to the more interesting, e.g. Mediterranean Spurge *Euphorbia characias*. The latter was first picked up by Mags Cousins when assessing the SSSI this year, and she found only one

other record of it naturalised in Shropshire.

After sheltering from the heat to eat lunch we explored another area of the quarry where we debated the identification of tiny *Cerastium*. Keying out in Stace led us to Dwarf Mouse-Ear *C. pumilum* which is not recorded in Shropshire. The habitat fits, but the specimen wasn't perfect, and so a sample has been sent off for verification. Another nice find was Basil Thyme *Clinopodium acinos* which is scarce in Shropshire.

### Conclusions

Overall, we had a successful outing recording a total of 158 species including an impressive 27 axiophytes. There was a good amount of natural regeneration on the spoil, extending well beyond the few areas that were strewn with hay, and including species not present at the donor site. Perhaps the small areas of grassland on the top of the quarry were a sufficient seed source for the site after all. The limestone spoil also proved an excellent place for Silurian fossil hunting. It was great to have a range of expertise on the field trip and to see people sharing their botanical knowledge. Thanks to all who attended.

The site now appears on Google Maps as Stretton Westwood Nature Reserve and has a small carpark. Please feel free to visit and to let me know if you get any interesting finds!

### SBS field trip to Dudmaston Estate on the 4th May 2019

John Handley

The weather was set fair for a botanical foray to look at the Limes in Long Covert, a beautiful ancient woodland that is part of the National Trust Dudmaston Estate. The inspiration for this outing was provided following an article written for the Spring edition of the Newsletter. Within the article Emeritus Professor Donald Pigott is acknowledged for his work on the genus *Tilia* (Malvaceae); Donald Pigott is the botanical authority for several taxa in that genus (Pigott, 2012).

Long Covert is an ancient ash woodland on slightly acid loamy and clayey soils with impeded drainage. The woodland ground flora included a number of Ancient Woodland Indicator species including Moschatel *Adoxa moschatellina*, Wood Anemone *Anemone nemorosa*, Pignut *Conopodium majus*,



Bearded Couch *Elymus caninus*, Woodruff *Galium odoratum*, Yellow Archangel *Lamiastrum galeobdolon* subsp. *montanum*, Wood Millet *Milium effusum*, Goldilocks Buttercup *Ranunculus auricomus* and Wood Speedwell *Veronica montana*, along with Thin-spiked Wood-sedge *Carex strigosa*, which favours the wet ride edges in the wooded valleys along the lower Severn Valley extending up towards Ironbridge. An extensive patch of Common Vetch *Vicia sylvatica* is being maintained through periodic management underneath the powerlines. Common Comfrey *Symphytum officinale* was also recorded here as well as the increasingly common hybrid Russian Comfrey *Symphytum* × *uplandicum*.

The ground flora is diverse and the return journey back alongside the river meant that the party were able to record 185 species of plants including Black

Mustard *Brassica nigra*, Cuckooflower *Cardamine pratensis*, Slender Tufted-sedge *Carex acuta*, Wild Radish *Raphanus raphanistrum* and Great Yellow-cress *Rorippa amphibia*.

We were delighted to have Andrew Perry, an ecologist for the National Trust and new member of the Botanical Society committee with us for the day; he was delighted to receive forty five incidental records of invertebrates and birds made by John Lyden who had travelled from Rhos Fiddle, where he is doing a great job of recording a range of taxa as part of his role as Reserve Warden.

### References

Pigott, Donald (2012). Lime-trees and basswood: a biological monograph of the genus *Tilia*. Cambridge: Cambridge University Press. ISBN 9780521840545.

## Field trip to Benthall Edge



L to R: Kate, Penny, Martin, John Clayfield, John Martin, Liam

Martin Godfrey holding a hybrid *Polystichum* and a hybrid *Dryopteris*



## Update on *Galeopsis angustifolia* – Red Hemp-nettle

Ruth Dawes

I am pleased to report that *Galeopsis angustifolia* is still flourishing with over 1400 plants at Llanymynech Telephone Exchange. Fortunately, some BT staff have taken this pretty little “weedy” plant to their hearts and like to see it remain. Long term monitoring by a succession of local botanists and good communications between individuals and organisations have played a major part in this success story – if only this was the case everywhere.

I had become increasingly concerned about the ever burgeoning *Buddleja* on site. My husband, Allan, a former BT engineer, managed to contact a sympathetic services manager and permission was given to remove the Butterfly-bush, “weeds”, litter and dead leaves covering the chippings that the *Galeopsis* was growing in. Then came the question of where and how to take the debris from this tiny site as it could not be burned on this small area. Gareth Egarr, Shropshire Wildlife Trust, and the Tuesday work party team came to the rescue. In November 2017 a small work team came with a vehicle and trailer and the massive *Buddleja* TREE was cut down, the stump treated, a sackful of litter was bagged and binned and the leaf litter was laboriously removed and composted. As much of

the larger *Buddleja* wood as possible was removed to our own rustic log pile for drying. When the eventual stump was revealed I was shocked at how big and dense it was. We shall see how our small wood burner copes with the dead wood. The vegetative brash was removed and ethically disposed of. It was a bigger task than expected and took all day. Allan did a good PR job with the concerned locals, including the person worried about the “lilac” being cut down.

The upshot of this was that I was able to make a further sustainable collection of seed for the Kew Millennium Seed Bank this year at their request. This time plant tissue was also required. Funding is being sought for genetic analysis to investigate any differences between populations. This is of interest because they have noticed some morphological differences in plants from different populations during their work for *Back from the Brink* with Plantlife. The 4<sup>th</sup> edition of *New Flora of The British Isles* (2019) records that this species is extinct in Scotland, SW England and most of N England and Wales; it is decreasing generally.

Plant tissue collecting involved me learning a simple new skill. Samples from each individual plant are collected into a separate coffee filter and then coffee filter is placed into a ziplock bag containing silica granules. It is important that tissue dries rapidly in the silica so using a separate coffee filter increases exposure to the silica and accelerates drying. Tearing is better than cutting as the plant cells remain intact. A couple of newly expanding or mature leaves are best because there is lots of healthy DNA and relatively little cellulose and secondary metabolites. Fortunately, this time consuming task only involved a dozen plants whereas seed can be taken from up to 20% of the healthy seed bearing population. Try keeping count of the number of plants you have collected from when the public ask you “Ruth, why are you collecting seed from that miserable industrial place when we have all this nice limestone flora here?” The plants grow in chippings, tarmac, cracks in



*Galeopsis angustifolia* - gravel habitat - Llanymynech Telephone Exchange





*Galeopsis angustifolia*, Llanymynech Telephone Exchange

concrete and lightly grassed areas on site. Luckily, I chose one of the last fine, hot days of the autumn before the rains came. I then cleaned the seed to prevent little insects munching on my precious collection and promptly sent it to Wakehurst Place, where it was placed in a specialist drying room. Apparently, the seeds germinate easily, but bringing the seedlings on is more challenging.

Allan, Gareth and I are ever vigilant about recolonization of invasive species on site and negotiations are now under way with a new services manager for another little work party in a confined space to take place. I am truly grateful to everyone involved for their cooperation and enthusiasm for this conservation task.

**The plants can easily be seen without trespassing from the canal bridge and towpath in Llanymynech.**

# Update on a summer with Caring for God's Acre

Liam Taylor

## Introduction

Caring for God's Acre help to manage approximately 34 churchyards in Shropshire – the tasks are varied including dry stone walling, hedge laying, and installing bird boxes. The bulk of the management work however, involves scything, and raking up the remains. Within our practical volunteer group of about 40 people there is a range of botanical interest and experience. There is a small group within the Shrewsbury Cemetery Friends who are particularly interested in natural history. They are learning and recording together, making use of identification sessions we have been running this year with Mark Duffell, John Handley and Rob Rowe.

Firstly, I offer a disclaimer – apologies if I miss anyone off, I have various lists and emails to check to remind me of who has submitted what and when. In addition, I only list the records we at Caring for God's Acre have been made aware of via email or iRecord etc.

## Recording in 2019

Dan Wrench kicked off the year with some snowdrops in February; Green Snowdrop, *Galanthus woronowii* at Shrewsbury St Giles and Snowdrop, *Galanthus nivalis* at Shrewsbury Abbey. He followed this up with a visit to St Peter's in Cound where he shared the churchyard with a Great Spotted Woodpecker. In March, one of the aforementioned Shrewsbury Cemetery friends, Anna McCann, had another faunal companion during her botanising, this time a hedgehog at St Chad's in Montford. I took the opportunity presented through a March wedding to take a look around King Charles the Martyr in Newtown near Wem, a site with potential and deserving of a more in-depth survey.

In April, the practical volunteers were starting to ramp up the gears with their scything. One of the regulars, Peter Johnston kept a record of the plants found at St Milburgha in Stoke St Milborough; a site with frogs and Slow-worms. Two weeks later Peter and the team were at St John the Baptist in Bishop's Castle, a site we visit regularly,

which has had its fungal value highlighted and frequently documented by local enthusiast Rob Rowe. Margaret Markland and Jane Ing kindly contributed to the Shropshire Burial Grounds botany efforts when they visited St Peter's in Myddle following up twice more in May and June. I chipped in at the end of the month with some forbs I spotted at St Mary's in Hopesay whilst we were searching for amphibians. We were rewarded with Slow-worms under an onduline mat amongst a carpet of *Persicaria*, and both Smooth and Palmate Newts in a pond surrounded by Marsh Marigold, *Caltha palustris* (some work is required to manage a *Crassula* invasion here). A more comprehensive species list fell on my desk for Hopesay in April, but this time a passing chicken made it on to the list, I wonder if it was after the newts...

As we came into May, Dan shared a record of Lesser Chickweed *Stellaria pallida* at St Mary's, Shrewsbury. Peter Johnston and the team worked and surveyed at St Michael's in Munslow, a churchyard in the Corvedale. They followed this up with the first of several 2019 visits to St Margaret's at Acton Scott, a fantastic little churchyard with 1 ancient and 5 veteran yews. John Handley finished the month with a visit to Worfield Cemetery, north of Bridgnorth.

June saw botanical surveys at a trio of churchyards nestled in a gorgeous area between Ludlow and Cleehill - St Paul's in Knowbury, St John the Baptist at Hope Bagot (female Ancient Yew here), and St Mary's in Whitton. St Mary's in Hopesay was pampered with another visit, no chicken this time! John Handley led a botanical session for the Shrewsbury Cemetery volunteers, and shared his enthusiasm for the quantity of Tor-grass/Heath False-brome, *Brachypodium pinnatum*. Shrewsbury Cemetery has quickly become an extensively surveyed site following Harriet Carty's push for more activity – several botanical surveys, bird walks, moth trapping, mammal surveys, fungi forays, a visit from the Joy of Wildlife group (Bob Kemp recorded some nice lichens that day as well), bat walks, a visit from Mark Lawley and the Border Bryologists in 2018 (the site is surprisingly disappointing for bryophytes, particularly



epiphytes, in my opinion). A highlight was finding a purple hairstreak which had fallen from one of the large Oaks in the cemetery during an invertebrate training session in the summer with Caroline Uff. The old cemetery is a fantastic area located in virtually central Shrewsbury; very low numbers of visitors, occasionally people visit graves but mostly just a small handful of dog walkers who have discovered this hidden gem. If you haven't visited, it is absolutely worth your time, plenty of spaces to park.



John Handley and the Shrewsbury Cemetery friends on a botanical training session

Towards the end of June one of the Shrewsbury Cemetery friends, Sheila Jones shared some records for Christ Church in Cressage. John Handley and Penny Wysome surveyed St Andrew's in Hope Bowdler, east of Church Stretton. Andrew Perry had to work hard surveying St Nicholas in Oldbury, as when he arrived the vegetation had been recently cut. However, he still managed to record almost 100 species despite this. John Handley visited St Laurence's in Church Stretton. Several years ago, Caring for God's Acre wrote a management plan for this churchyard, and it is now a textbook example of how to manage churchyard grassland whilst maintaining structure and appearance for non-ecologically minded visitors.

In July, volunteers visited some churchyards in the Shropshire Hills AONB, part of a small project funded by the Conservation Fund. This included the lexically satisfying St Cuthbert's in Clungunford, and perennial favourite St Mary's in Hopesay. Clungunford turned up a nice species list, and someone with more botanical smarts than I was able to look past the forbs and pay some much deserved attention to the grasses at Hopesay.

Again, no mention of the chicken. Towards the end of the month the conservation volunteers visited St Mary the Virgin in Bromfield, a cracking churchyard north-west of Ludlow. Subsequently in August we received a record from Church Warden Jim Logan for a Grass Snake, *Natrix helvetica*, a species we are trying to encourage through the use of open compost heaps where they sometimes lay eggs. Bromfield is just off the A49, so if you're driving northbound from Hereford or Ludlow, do try and pay it a visit. July finished off with a survey at St John the Baptist in Doddington whilst Anna McCann continued to show some love for the more northern burial grounds in the county with a second look at St Chad's in Montford and Penny Wysome visited a very tidy Wellington Cemetery.

In August the Joy of Wildlife group visited St Michael's in Madeley but we got rained off early on and will be returning in 2020. John and Penny visited St Bartholomew's in Benthall in September and met a sympathetic National Trust head gardener who informed them they are sowing Yellow Rattle and want to encourage species richness.

## Summary

In 2019 we received records from many beautiful well managed burial grounds. I'm sure there are some more hidden gems out there involving more searching, visiting and surveying. We estimate there are 321 churchyards in Shropshire and are aware that 150 of those have associated records. For the Shropshire Botanical Society winter meeting I will provide a list of sites with and without records. If you have any records for burial grounds, we would love to receive them.

As well as management and recording, we are getting involved in some different activities as well. We were recently awarded a grant by Aviva to purchase some equipment for filming. We are making short videos of our volunteers working, showcasing sites, and hope to create some identification help videos in 2020.

We welcome anyone signing up to be members of Caring for God's Acre – more than the small financial contribution (£20 p/a), the boost to morale and support for the cause is most welcome.

Liam Taylor, September 2019. [liam@cfga.org.uk](mailto:liam@cfga.org.uk)



# The Ferns – an Identification Guide: Part 1

Martin Godfrey

As a follow-on from my introduction to *Sphagnum*, this series of articles will be a gentle guide to the identification of the more tricky fern species which grow in Shropshire. Part 1 will introduce the ferns as a group and illustrate the kind of things you need to look for to make a successful ID; later parts will compare difficult species in more detail.

## Fern ID features

You need to remember that as non-flowering plants ferns have fewer, and less conspicuous, ID features than flowering plants which may well need you to use a lens to see them (the “standard” botanists x10 lens is fine) – sometimes you will even need to use a microscope to confirm which of a particular species pair you have. It is my intention here to start you looking – more detailed features will be illustrated where they are needed in other parts.

## Habitat, substrate and growth form

Ferns grow in a wide variety of habitats and substrates – soil, rock, and walls for example and some can be epiphytic or even aquatic, and this habitat can provide you with a starting point for your identification. Ferns also tend to have two different growth forms – some species growing in a “shuttlecock-like” form (Fig 1) whilst others grow from a creeping rhizome-like structure giving a rather scattered appearance to the fronds (Fig 2). Although constant in any given species these two growth forms can occur in the same genus, making them quite useful in separating species pairs which might otherwise be similar. Note that all of these features will need to be recorded in the field.

## Frond structure and shape

A particularly important point to remember is that the fern frond is actually just a leaf, the “stem” being prostrate or underground.

Just like a flowering plant leaf the fern frond effectively has two main parts – the stipe (stalk) which is the non-leafy part of the frond, and the “leaf blade” which has an extension of the stipe, known as the rachis, through the middle of it. The relative proportions of the stipe and rachis may be an important ID feature. The leafy part

of the frond can either be entire (Fig 3) or may be divided. This division may be once-pinnate (Fig 4), twice-pinnate (Fig 5) or three times pinnate (Fig 6). Note that the initial divisions (as in Fig 4) are called pinnae with the divisions of the pinnae (as in Fig 5) called pinnules and divisions of these (as in Fig 6) called pinnulets.

The overall width and shape of the frond can be important in ID too. This can be tricky to work out in pinnate leaves but if you look at the relative length of the pinnae as you move down the frond the shape should emerge – the frond in Fig 7 for example being distinctly broadly triangular, whereas that in Fig 8 is narrow and parallel sided.

## Reproductive structures – the sporangia

Ferns reproduce by means of spores, which are contained in small capsules called sporangia. Sporangia are typically arranged in clusters or patches on the underside of the leaves – these clusters being known as sori. In many fern species these sori are covered by a thin protective membrane – the indusium. The shape, size and distribution of the sori, and whether or not they have an indusium, is a very important ID feature. Examples of sori and indusia are in Figs 9 and 10 these will be looked at in more detail in future articles when we look at individual species ID. Note that some of the more unusual species of fern can have their sori on separate branches eg Fig 11.

## Starting your identification

Now that you have noted the habitat and substrate your fern is growing on, its growth form, the shape and “pinnateness” of the frond and the type and distribution of its sori you are ready to start identifying the plant. Part 2 will get you moving on this by looking in more detail at a particular species group.





Fig 1. *Dryopteris filix-mas*



Fig 4. Once pinnate. *Blechnum spicant*



Fig 2. *Pteridium aquilinum*



Fig 5. 2-pinnate. *Dryopteris filix-mas*



Fig 3. Entire fronds. *Asplenium scolopendrium*



Fig 6. 3-pinnate. *Pteridium aquilinum*





Fig 7. Broadly triangular frond. *Phegopteris connectilis*



Fig 10. Sporangia without an indusium



Fig 8. Narrow and parallel sided frond. *Asplenium marinum*



Fig 11. Sporangia on a separate branch. *Botrychium lunaria*

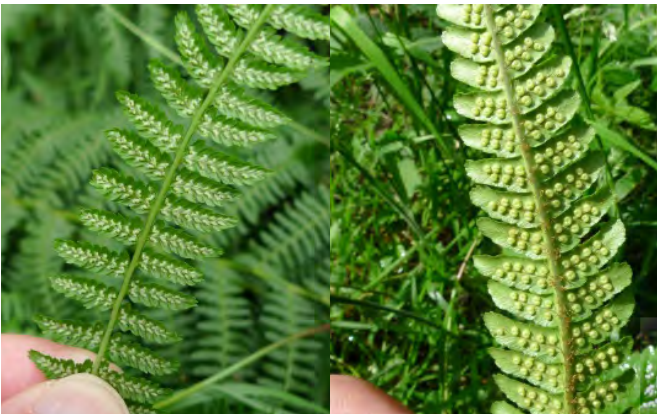


Fig 9. Sporangia with indusia