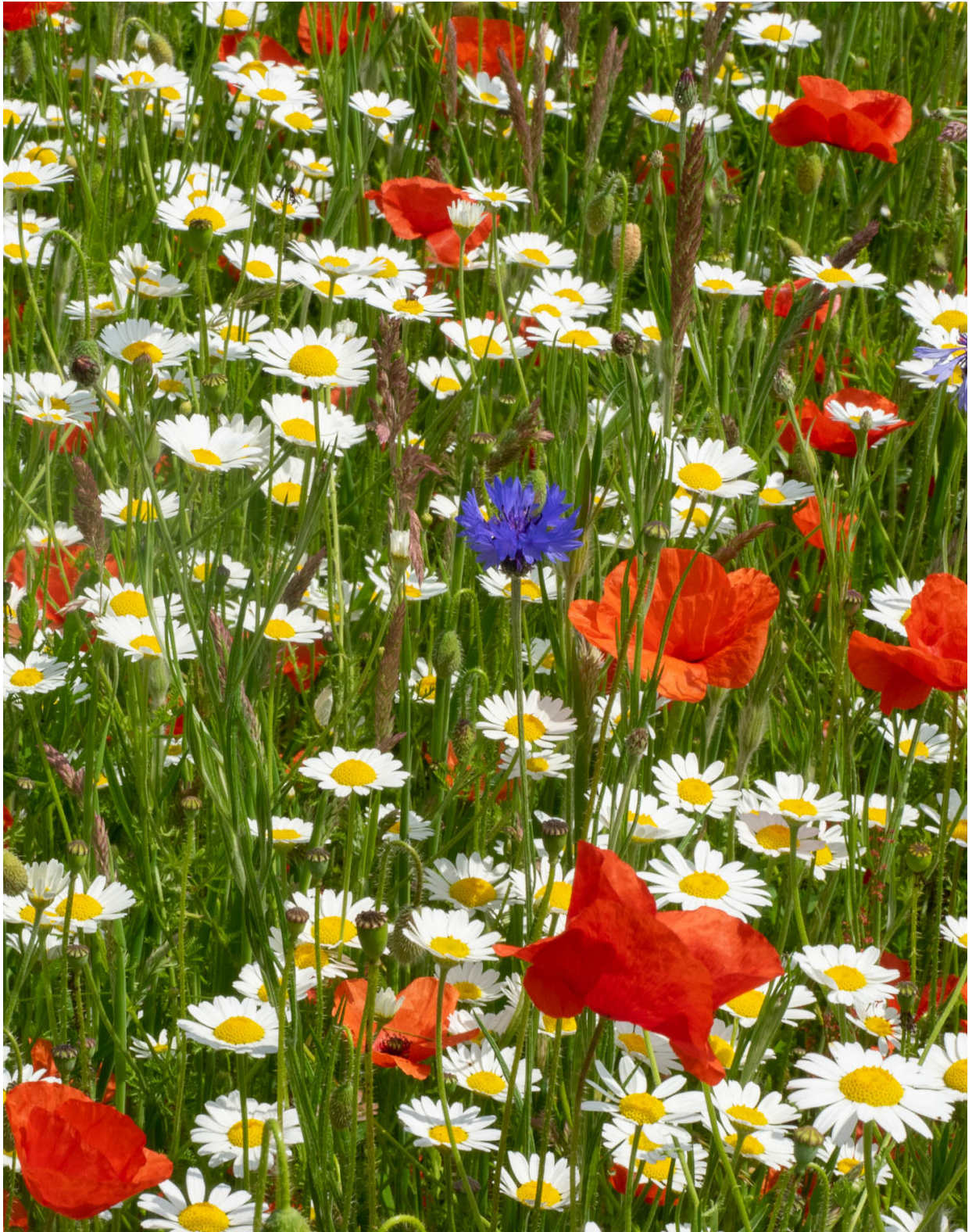


Shropshire Botanical Society

Newsletter

Autumn 2018



Shropshire Botanical Society Newsletter No. 37

Contacts

Newsletter Commissioning Editor:

Hilary Wallace.

email: hilary@ecologicalsurveys.co.uk

Secretary: Penny Wysome, 2 Christine Ave.,
Wellington, Telford, TF1 2DX. Tel. 01952 242617,
email: pennywysome@yahoo.com

Membership Secretary: Peta Sams, 14 Ballard
Close, Ludlow SY8 1XH.
Enquiries to: shropbotsoc@gmail.com

Vice-county Recorder: Sarah Whild, 9 Albert
Street, Shrewsbury, SY1 2HT.
Email: sarah.whild@bsbi.org

Past copies of the newsletter are available as pdfs
from the Shropshire Botanical Society website: :
http://www.shropshireecology.co.uk/botanical_society.html

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Front Cover:

Annual sown border at Fran's Meadow
(photo by Mike Ashton)

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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 autumn 2018 newsletter and hoping that whilst enjoying the summer heat wave you also managed to get out and about doing some interesting recording. It all now seems a rather distant memory as autumn rapidly approaches.

The spring meeting in April was held at Harley Village Hall which produced some interesting challenges due to the lack of adequate blackout facilities for the presentations.

Future meetings will return to their usual venue at the Field Studies Council at Preston Montford; with the winter meeting now scheduled for January 2019. Due to high demand on the facilities at the Field Centre around Easter the spring meeting has been delayed till mid-May. More details below.

Summer field visits came and went; unfortunately too few people were able to go up to Anglesey to make the recording effort viable and so the trip had to be cancelled at the last minute. Late in the season Mags and I led a surprisingly large group of people around a small holding near Clun; the hot weather and varied interests of the group resulted in more of a bioblitz and we didn't get more than 200m from where we parked our cars; quite a contrast to some of the meetings that Penny describes in her article.

The newsletter includes details of society meetings over the coming 6 months together with some day and weekend courses that you might find interesting that are being held at Preston Montford.

Articles cover an update from our BSBI representative on records made over the past 12 months, and also a reminder of how to submit your botanical records.

John has done a masterly guide to identifying Apiaceae, even when not in flower, and Mags provides an update on one of our northerly wetland sites and the trials and tribulations of site management. On a more uplifting note there is an article on the success of the meadow creation project in memory of Fran at Preston Montford and Ruth has provided a profile on Mary Hignet, who has been celebrated along with 100 other Women of Influence in Oswestry.

Christmas is coming – even though we still haven't had Halloween or Remembrance Sunday at the time of writing this editorial. However, we are hoping you might find that getting involved with the Botanical Society Christmas tree will provide some festive cheer in place of the winter meeting, which is deferred to January.

So here is a **Christmas tree plea from Sue and Peta**.

A little early - but just to keep members in the loop. For the past 2 years we have booked a tree at the St Chads church festival running from the first till last Sunday in December. The tree is decorated with cones collected and identified to species level - tied on with jolly ribbon and lit up with 'pine cone' lights. It is the brain child of Peta Sams and Sue Townsend - who have great fun setting it up but could do with a hand. If you are passing the church - go in and 'tidy it up', straighten the free newsletters and top up the membership forms from the box under the pew - as they can't get in every day in December!!



Winter meeting

Date: 26 January 2019: 2–4 pm

Please Note the change of date to January.

The meeting will be held at Preston Montford Field Centre, Montford Bridge, near Shrewsbury, SY4 1HW

Gin and Botany - the perfect combination

Speakers: Richard and Mavis Gulliver.

Discover some of the secrets of The Botanist gin from the botanists who were instrumental in its development. For 10 years Richard and Mavis Gulliver gathered and processed the 22 Islay botanicals which give this highly successful brand its unique island flavour. There will be a description of the special qualities of each plant and the talk will be illustrated with digital images and some dried examples.

We would like to invite offers for cakes again at this meeting – and hope that recipes used will enable people to put them in their freezers should we get snowed off again. So, since Christmas will be long gone by the time we meet perhaps this is an opportunity to try something new for 2019.

Spring meeting and AGM Sunday 12 May

Please note that the date (and day of week) for this has also been moved to SUNDAY 12 MAY. Usual venue of Preston Montford Field Centre

Please note this date in your diary – title to be announced at the Winter meeting and also in the Spring Newsletter.

Botanical Society Field Meetings

Early Notice Of 2 Meetings For 2019

Saturday 28th September, Brown Moss bryophytes, with Martin Godfrey.

Contact MartinandRosie@aol.com

Saturday 29th June, Stretton Westwood Quarry, Wenlock Edge with Andrew Perry. andypassport@gmail.com Further details will be posted in the Spring newsletter.

Other news:

By popular demand we'll be putting together Ian Trueman's grasses articles and Sarah's key from past newsletters. We will keep you updated on the progress of this collation of in future newsletters.

Short courses in Spring 2019 at Preston Montford Field Centre

Identifying Broadleaf Trees	Tuesday 22nd January	Mark Duffell	£45 per person
Soil Mesofauna Intermediate Level	Friday 26th April – Monday 29th April	Matthew Shepherd Felicity Crotty and Peter Shaw	£455 Single Occupancy, £400 Shared and £335 Non Resident
Wildflowers and Ferns of Limestone Woodland Intermediate	Saturday 11th May	Fiona Gomersall	£45 per person
Plant Identification for Field Surveyors Open to All	Tuesday 14th May	Mark Duffell	£45 per person
Woodland Plant Identification Intermediate	Wednesday 15th May	Mark Duffell	£45 per person
Plant ID Phase 1 Habitat Surveys Grasslands Open To All	Thursday 16th May	Mark Duffell	£45 per person
Identification of Grasses Open to All	Tuesday 21st May	Mark Duffell	£45 per person

Plant records in 2018

Alex Lockton & Sarah Whild

We have received some 1,300 records so far for 2018 – a very low total, if it reflects the level of recording. Please do send in your records soon. Our preferred method of recording is to make a list for a monad (1 km square) with detailed grid references for rarities. A fun project is to record the square around your home, and we can supply people with a list of what has already been recorded there, for you to improve.

This year the database has grown by 13,000 records, from 557,353 to 570,300, largely by the incorporation of data from recent years and historical periods. An ongoing task is Hamilton's unpublished Flora of 1909. We have also started to write an account giving brief details of all the botanists who have recorded in Shropshire. The county has such a good history of biography, stretching back to the 16th century, that we feel it is important to continue it into the modern period. If anyone would like to contribute to, or check, some of these accounts, please get in touch.

You can see all our data on the NBN Atlas website, and copies of our database are held by Shropshire Council, Shropshire Wildlife Trust and Natural England. Members can also access the entire database online, and the public can download a slightly simplified version from the Shropshire Ecological Data Network website. We hope therefore that our information will always be used for planning and nature conservation purposes.

The electronic version of the Flora of Shropshire is also continuously updated and freely available online. The species accounts are amended whenever significant new information comes to light. The major edits so far in 2018 have been as follows:

- Jan. 2018: *Taraxacum acutifrons*, *T. excellens* and *T. lucidum* added.
- Mar. *Eryngium planum* added. *Centunculus minimus*, *Osmunda regalis* and *Phragmites australis* accounts and maps updated.
- Apr. *Saxifraga cymbalaria* account updated.
- Jun. *Polemonium caeruleum* account and

map updated.

- Jul. *Euphrasia anglica* promoted to species level. *Gymnadenia conopsea* account updated. *Dactylorhiza x transiens* added. *Centaurea calcitrapa* and *Medicago polymorpha* added.
- Aug. *Astrantia major* account updated.
- Sept. *Salix x rubens* reinstated. *Lemna turionifera* added.

Recorders

We are grateful to the following for submitting records so far in 2017–2018

Aspey, Mr N.	8
Bell, Mr K.K.	1
Bingham, Mr J.	240
Blunt, Mr A.G.	3
Carty, Mrs H.	69
Clark, R.	1
Clayfield, Mr J.	1
Clayfield, Mr J., Cousins, Mrs M. & Wysome, Mrs P.	164
Cousins, Mrs M.	189
Cousins, Mrs M. & Wallace, Ms H.	74
Cousins, Mrs M., Handley, Mr J.	212
Dawes, Mr A.P., Dawes, Mrs R.A.	1
Dawes, Mrs R.A.	8
Day, Mr P.	1
Duffell, Mr M. & Duffell, Mrs J.	255
Duffell, Mr M.S.	129
Edwards, Ms S.	1
Gardner, Ms S., Gillard, Ms R. & Pearson, Ms T.	135
Golding, Mr P.	5
Gomersall, Mrs F.J.	88
Griffiths, Mr J.	1
Gulliver, Mr R.	2
Handley, Mr J.	143
Higson, Mrs P., Dawes, Mrs R.A.	1
Hughes, Mr L.	1
Hume, Ms A.	1
Ison, Mr J.J. & Townsend, Mrs S.	179
Latham, M.	1
Leach, Mr M.	4
Liebscher, Mr K.	35
Lyden, Mr J.	2
Marlow, Mr A.	1
Maskew, Mr R.	59
McCullagh, Mrs F.	113
McCullagh, Mrs F. & Jefferson, Mr R.	3
McCullagh, Mrs F., Wrench, Mr D.H.	1
Merrick, Mr D.	1
Mileto, Mr R.	17
Mitchell, Mr P. & Mrs J.	3
Morgan, S.	7
O'Donnell, Dr S.	1

O'Donnell, Dr S., O'Donnell, Mrs E.	1	Thorne, Dr A.K.	626
Pearson, Ms T., Gillard, Ms R.	59	Thorne, Dr A.K., Thorne, Mr R.G.	60
Perry, Mr A.	80	Thornes, Mrs R.	2
Pickles, Mr A.	1	Townsend, Mrs S. & Godfrey, Mr M.	100
Powell, J.	1	Townsend, Ms S., Cousins, Mrs M., Higson, Mrs P.	170
Price, C.	2	Walker, Mr C.	354
Rich, Dr T.C.G., Duffell, Mr M.S.	136	Walker, Mr C., Singleton, Mrs K.	88
Rich, Dr T.C.G., Houston, Ms L.	2	Wallace, Mr I.D.	2
Rich, Dr T.C.G., McVeigh, Mr A.	13	Ward, Ms L.	25
Rowe, Mr R.	1	Whild, Dr S.J.	43
Rowe, Mr R., Small, Mr R.	177	Whild, Dr S.J., Leel, Mr G.	20
Sams, Ms P.	1	Williams, Ms P.	52
Shanklin, Dr J.D.	3294	Wrench, Mr D.H.	727
Singleton, Mrs K.	83	Wrench, Mr D.H., Bingham, Mr J., Clayfield, Mr J.	53
Singleton, Mrs K., Carter, Mr M.	56	Wrench, Mr D.H., Townsend, Mrs S. & Vernon, Ms J.	103
Stokes, Mr R.M.	3	Wrench, Mr D.H., Townsend, Ms S., Tearu, Ms T.	167
Stone, Ms N.	3	Wysome, Mrs P. & Bickerstaff, Ms C.	45
Sutton, Mr M.	1	Wysome, Mrs P.J.	51
Swindells, Mrs S.	8		

New guidelines on how to record for the Shropshire Flora

Alex Lockton

If you routinely submit records of the flora you should join the Shropshire Flora Dropbox group. This will give you access to several documents:

- Flora Database Excel file. This contains all the botanical records for Shropshire, ever, in full detail. This is for you to read only – don't attempt to edit or add to this file.
- Shropshire Recorders Excel file. This contains a list of everyone who has recorded plants in the county. We use the "Full Name" column for identifying people in the database.
- Flora of Shropshire Word Document. This is an up-to-date list of species accounts based on the ones in the published Flora.
- Recording Card Excel file. This is for you to put your new records into.

Using the Recording Card

The card has a simple list of species in the first column. The second column is blank. To make a species list for a site, simply put a 1 in the appropriate rows on the second column. (If you want, you can then sort by column 2 and all the species you have recorded will appear at the top of the page.)

Then add in the top row the site name, grid reference, date and recorder. You don't need to

duplicate them in every row – just add them once, that will be fine.

Then save the file with a new name and send it to one of the county recorders or pop it back into the Dropbox folder. It would be sensible to use a name like "Joe Bloggs Clun Forest 2018.xls" so we know what is in there.

Using the Flora Database file

The easiest way to use the main database is to sort the records by Monad and then Species and Year. This is how it will normally be when you open it.

If you are surveying a site which is in the square SJ4333, highlight the Monad column and search for (ctrl+f) "SJ4333". This will take you to the first recorded species in that square. By scrolling down from there, you can see what has been recorded in the past.

If you are sending in a new list, please make sure that you have recorded some species that have not already been found there in the current decade.

Contact: alex.lockton@gmail.com or sarah.whild@bsbi.org

The Carrot Family in Shropshire



John Handley

The Apiacea, formerly known as the Umbelliferae, or umbellifers because of their distinctive inflorescences. The Apiaceae are one of the largest families of flowering plants in Britain composed of 85 species, and 10 subspecies, though mercifully only 3 hybrids. The repetitive patterns, similar growth forms, and occasional requirement for both flowers and fruit for positive identification leads this to being one of the more challenging families of the flowering plants. Add to this: confusing terminology and restricted distribution and one can start to feel a little overwhelmed. However, this is also one of the most rewarding groups to study; members of this family are delicious additions to the store cupboard, providing valuable and exotic flavours and fragrances. Whilst some are

notoriously deadly poisonous making it worth spending some time developing our ability to correctly identify members of the group.

Within Shropshire only 34 out of a national total of 85 species have been recorded within the last 50 years. These 34 species are within 27 distinct genera therefore it is helpful to understand what is being conveyed within the general key to genus.

This is the first of two articles, and is focused on identifying members of this family from their leaves. A subsequent article will look at the flowers and fruits. A key to the genera of species that occur within Shropshire has been adapted from John Poland's Vegetative Key to the British Flora below. A short glossary will help explain terms commonly used within this key:

Simple leaves	A single leaf blade
Compound leaves	Leaf blade divided into leaflets (see 1-pinnate and 2-3-pinnate below)
1-pinnate -divided once	2-3-pinnate -divided 2-3 times
	
<p>Latex</p> <p>Latex is simply a coloured juice which exudes from broken canals or lactifers within the plant tissues. Latex is usually white (at least initially) and is often present only in the young tissues of a plant. A cross-section of young petioles is a good means of locating latex although it can be sparse and easily overlooked, thus confirmation often requires a good hand lens.</p>	

Key to Apiaceae recorded in Shropshire since 1980

1	Leaves simple, leaf margin lobed	2
1	Leaves compound	3
2	Plant with latex, petiole with 12 vascular bundles around the margin of a large hollow	Astrantia major
2	Plant without latex, petiole with 3 vascular bundles	Sanicula europeae
3	Leaves 1-pinnate	4
3	Leaves 2-3-pinnate	14
4	Leaflets hairy	5
4	Leaflets hairless (or with scattered hairs) above	8
5	Leaves with lowest pair of leaflets stalked	6
5	Leaves with all leaflets sessile, parsnip scented	Pastinaca sativa
6	Leaflets 1-2 pairs	7
6	Leaflets 3 pairs, 2-5(10) x 3cm; hairy or hairless above (see couplet 11)	Pimpinella major
7	Leaves up to 2.5m; leaflets to 50cm, stems to 5.5m, softly hairy	Heracleum mantegazzianum
7	Leaves to 30cm; leaflets 6-10cm, stems to 2 (3)m, hispid	Heracleum sphondyleum
8	Plant usually in dry habitats	9
8	Plant usually in wet habitats	12
9	Petiole solid	10
9	Petiole usually hollow, tufted perennial	11
10	Rhizomatous, leaflets 2 pairs (see couplet 27)	Aegopodium podagraria
10	Biennial, leaflets 2-5 pairs	Sison amomum
11	Basal leaves 1(2) pinnate; leaflets 3 pairs, 2-5(10)cm, lowest pair shortly stalked (see couplet 6)	Pimpinella major
11	Basal leaves 1-2 pinnate; leaflets (2) 4-5 pairs, 2.5cm, (\pm) sessile (see couplet 23)	Pimpinella saxifraga
12	Petiole with pale ring-mark some way below lowest pair of leaflets; 5-9(14) pairs of leaflets	Berula erecta
12	Petiole without ring-mark	13
13	Stems rooting at least at lower nodes, usually prostrate; with (1)2-4(6) pairs of leaflets	Apium nodiflorum
13	Stems not rooting at lower nodes, erect (see couplet 40)	Oenanthe fistulosa
14	Leaflets hairy, at least below	15
14	Leaflets hairless	24
15	Petiole and stems without latex (extremely rare in Shropshire, last recorded in 1994) (see couplet 30)	Scandix pecten-veneris
15	Petiole and stems with latex, often sparse and confined to young growth	16
16	Petiole and stems soon hollow	17
16	Petiole and stems solid	20
17	Leaflets and petiole strongly aniseed-scented	Myrrhis odorata
17	Leaflets with sour parsley odour or odourless	18
18	Annual; dry, sandy habitats	Anthriscus caucalis
18	Perennial	19
19	Leaflets often purplish, 3-9cm (see couplet 34)	Angelica sylvestris
19	Leaflets green, 1-4cm	Anthriscus sylvestris
20	Leaflets roughly antrorsely adpressed-hairy	21
20	Leaflets not roughly hairy or, if so, the hairs not adpressed	22
21	Tall annual >50cm when mature, with 1 erect main stem	Torilis japonica
21	Low annual <30cm, with several stems	Torilis nodosa
22	Stems purple blotched, swollen below nodes, \pm retrorsely hairy	Chaerophyllum temulum

22	Stems not purple blotched (may have purple ridges), not swollen below nodes	23
23	Carrot-scented biennial; leaflets bristle topped (see couplet 28)	Daucus carota
23	Odourless perennial; leaflets apiculate but not bristle topped (see couplet 11)	Pimpinella saxifraga
24	Petiole channelled above, or triangular in transverse section	25
24	Petiole not channelled above, round or laterally flattened	36
25	Petiole solid	26
25	Petiole hollow	32
26	Petiole with sparse white latex	27
26	Latex absent	29
27	Leaflets >15mm wide, lanceolate-ovate (see couplet 10)	Aegopodium podagraria
27	Leaflets <15mm, linear/lanceolate	28
28	Biennial, petiole with ciliate sheathing base (see couplet 23)	Daucus carota
28	Perennial, petiole with hairless sheathing base	Silaum silaus
29	Tufted biennial, perennial; leaflets parsley-scented, usually strongly crisped (see couplet 35)	Petroselinum crispum
29	Annual	30
30	Petiole with ciliate sheathing base (see couplet 15)	Scandix pecten-veneris
30	Petiole without ciliate sheathing base	31
31	All leaves 2-3 pinnate, with stomata below only	Aethusa cynapium
31	Basal leaves 1-2 pinnate, stem leaves usually 2 pinnate, stomata both sides (see couplet 35)	Ammi majus
32	Plant with white latex, often sparse	33
32	Plant without latex, may have clear sap	35
33	Basal leaves arising from single tuber, without sheathing base; stem leaves sheathing	Conopodium majus
33	Basal leaves not arising singly from tuber; all leaves with sheathing base	34
34	Leaves with purple pinna junctions and hairs in leaf axils; leaflets 3 pairs (see couplet 19)	Angelica sylvestris
34	Leaves not purplish; leaflets 3-6 pairs	Anthriscus sylvestris
35	Leaflets usually strongly crisped, parsley-scented (see couplet 29)	Petroselinum crispum
35	Leaflets not crisped, odourless (see couplet 31)	Ammi majus
36	Petiole solid; annual; 1-3 pinnate	Corriandrum sativum
36	Petiole hollow	37
37	Aquatic to damp habitats	38
37	Dry habitats	42
38	Plant with latex (occasionally very sparse) AND/OR with tuberous roots	39
38	Plant without latex or tuberous roots	41
39	Leaves strongly parsley-scented. Petiole without latex. Tubers slender whilst young, disappear at maturity; leaves 2-4 pinnate	Oenanthe aquatica
39	Leaves weakly parsley- or celery-scented (occasionally fetid); Petiole with white latex	40
40	Petiole solid, with latex drying orange-brown; tubers 3-5 6-10cm, spindle shaped	Oenanthe crocata
40	Petiole hollow, with latex not drying orange-brown; tubers small (see couplet 13)	Oenanthe fistulosa
41	Stems usually >20cm tall, stems erect; leaves 2-3 pinnate	Cicuta virosa
41	Stems usually <15cm tall, (±) prostrate	Apium inundatum
42	Petiole with white latex; white protruding hydathodes; celery scented; with minute hairs in leaf axils	Smyrniolum olusatrum

42	Petiole without latex, totally hairless	43
43	Petiole and stems purple-spotted; plant fetid	Conium maculatum
43	Petiole and stems not purple-spotted; aniseed scented	Foeniculum vulgare

Eighteen of the eighty five species that are found within Britain are nationally scarce or rare, though only one, *Cicuta virosa*, Cow Bane is found within Shropshire.

Taxon	Common name	Nativity	Distribution	Population
<i>Aegopodium podagraria</i>	Ground Elder	Archaeophyte	Widespread	Stable
<i>Aethusa cynapium</i>	Fools Parsley	Native	Widespread	Stable
<i>Ammi majus</i>	Bullwort	Neophyte	Rare	
<i>Angelica sylvestris</i>	Wild Angelica	Native	Widespread	Stable
<i>Anthriscus caucalis</i>	Bur Parsley	Native	Local	Stable
<i>Anthriscus sylvestris</i>	Cow Parsley	Native	Widespread	Stable
<i>Apium inundatum</i>	Lesser Marshwort	Native	Local	Stable
<i>Apium nodiflorum</i>	Fool's Watercress	Native	Widespread	Stable
<i>Astrantia major</i>	Astrantia	Possibly Native	Rare	Stable
<i>Berula erecta</i>	Lesser Water-parsnip	Native	Local	Stable
<i>Chaerophyllum temulum</i>	Rough Chervil	Native	Widespread	Stable
<i>Cicuta virosa</i>	Cow Bane	Native	Local	Stable
<i>Conium maculatum</i>	Hemlock	Archaeophyte	Local	Increasing
<i>Conopodium majus</i>	Pignut	Native	Widespread	Stable
<i>Coriandrum sativum</i>	Coriander	Alien	Rare	
<i>Daucus carota</i>	Wild Carrot	Native	Local	Stable
<i>Foeniculum vulgare</i>	Fennel	Archaeophyte	Scattered	Increasing
<i>Heracleum mantegazzianum</i>	Giant Hogweed	Neophyte	Scarce	Increasing
<i>Heracleum sphondylium</i>	Hogweed	Native	Widespread	Stable
<i>Myrrhis odorata</i>	Sweet Cicely	Neophyte	Local	Stable
<i>Oenanthe aquatica</i>	Fine-leaved Water-dropwort	Native	Local	Declining
<i>Oenanthe crocata</i>	Hemlock Water-dropwort	Native	Local	Stable
<i>Oenanthe fistulosa</i>	Tubular Water-dropwort	Native	Rare	Declining
<i>Pastinaca sativa</i>	Wild Parsnip	Native	Scarce	Stable
<i>Petroselinum crispum</i>	Garden Parsley	Archaeophyte	Rare	Stable
<i>Pimpinella major</i>	Greater Burnet-saxifrage	Native	Rare	Stable
<i>Pimpinella saxifraga</i>	Burnet-saxifrage	Native	Local	Declining
<i>Sanicula europaea</i>	Sanicle	Native	Local	Stable
<i>Scandix pecten-veneris</i>	Shepherd's-needle	Archaeophyte	Rare	
<i>Silaum silaus</i>	Pepper-saxifrage	Native	Local	Declining
<i>Sison amomum</i>	Stone Parsley	Native	Rare	Declining
<i>Smyrniolum olusatrum</i>	Alexanders	Archaeophyte	Scarce	Stable
<i>Torilis japonica</i>	Upright Hedge-parsley	Native	Widespread	Stable
<i>Torilis nodosa</i>	Knotted Hedge-parsley	Native	Rare	Declining

The image opposite is of pressed specimens displayed from left to right of the following species:

- | | | | |
|--------------------------------|------------------------------------|---|--------------------------------|
| 1 <i>Aegopodium podagraria</i> | 9 <i>Berula erecta</i> | 17 <i>Heracleum sphondylium</i> | 25 <i>Sanicula europaea</i> |
| 2 <i>Aethusa cynapium</i> | 10 <i>Chaerophyllum temulum</i> | 18 <i>Myrrhis odorata</i> | 26 <i>Silaum silaus</i> |
| 3 <i>Ammi majus</i> | 11 <i>Cicuta virosa</i> | 19 <i>Oenanthe aquatica</i> | 27 <i>Sison amomum</i> |
| 4 <i>Angelica sylvestris</i> | 12 <i>Conium maculatum</i> | 20 <i>Oenanthe crocata</i> | 28 <i>Smyrniolum olusatrum</i> |
| 5 <i>Anthriscus caucalis</i> | 13 <i>Conopodium majus</i> | 21 <i>Oenanthe fistulosa</i> | 29 <i>Torilis japonica</i> |
| 6 <i>Anthriscus sylvestris</i> | 14 <i>Daucus carota</i> | 22 <i>Pastinaca sativa</i> subsp. <i>sylvestris</i> | |
| 7 <i>Apium nodiflorum</i> | 15 <i>Foeniculum vulgare</i> | 23 <i>Pimpinella major</i> | |
| 8 <i>Astrantia major</i> | 16 <i>Heracleum mantegazzianum</i> | 24 <i>Pimpinella saxifraga</i> | |

John is happy to supply an electronic version of the image upon request: john.checology@gmail.com



A Memorial Meadow

Mike Ashton

Francesca's meadow was established at Preston Montford Field Studies Centre (FSC) to celebrate the life of local ecologist Francesca Griffith, who died in January 2014. My aim was to turn an area of semi-improved grassland into a traditionally managed wild flower-rich hay meadow. It measures about 90 by 45 metres but, despite its small size, has great potential. FSC had already earmarked the site to be developed in to a meadow but I gave them the nudge they needed, as well as financial assistance from the very kind donations received at Francesca's funeral.

I wanted this to be a meadow for the community, a useful educational resource and to help nature conservation but also as a fitting and lasting memorial to Francesca. She had a life-long passion for the environment, working all over UK, including reserves officer for Shropshire Wildlife Trust and later as reserves manager at Herefordshire Wildlife Trust.

The first step in turning the field in to a meadow was to mow and rake the grass. It was then divided in to six plots, three of which were sprayed out and three left untreated. This was done as an experiment to see which method works best. I think the results

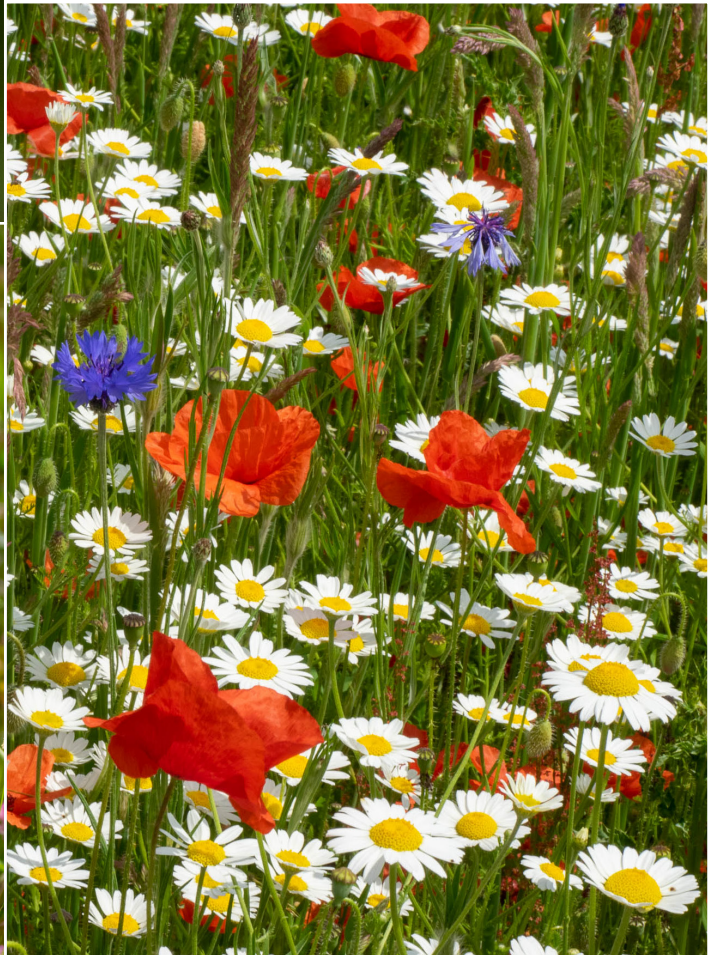
are still inconclusive! The second stage was to spread green hay over the area. This was kindly donated by Severn Gorge Countryside Trust (SGCT). The hay had been cut from The Wilderness and Ropewalk meadows in Coalbrookdale and transported over to our meadow. 30 or so volunteers help strew the hay which was great fun. A few weeks later, when the seeds had fallen from the hay, we raked up the hay so that it wouldn't rot down and add nutrients to the site. The following year we cut most of the meadow with scythes. Not particularly efficient but lots of people got to have a go and learn the craft. We also baled the hay using a hand-made wooden baler. The original plans were downloaded from the internet but reworked and re-engineered by local craftsman Neill Mapes. Neill was also responsible for the fantastic oak frame for the Interpretative board.

Once the meadow has been cut at the end of summer, the local farmer bales the hay and uses it as haylage. He then puts a small number of sheep on there for aftermath grazing. Ongoing management is overseen by FSC and works are carried out by their staff, by a local farmer and by Orchard Field Ecological Consultants.





Above: Dave, Jane and Allan making hay bales
Left: Thick-thighed beetle
Below left: Perennial meadow
Below: Border sown with annuals



As well as the perennial meadow, we have also planted an annual border along the driveway up to the Field Studies Centre. This consists of a corn flower mix: corn cockle, corn flower, corn marigold, poppy and camomile. It's fantastic for bees and hoverflies with dozens of species being recored.

In 2016 we entered Plantlife's national Magnificent Meadows competition as a community-oriented wildlife area. I'm very pleased to say we were chosen as runner-up and received a plaque. You can see this mounted on to the interpretative board at the entrance to the meadow.

Our initial survey of the field showed about 15 plant species. In May 2017 we found snakes head fritillary and betony. We also found a couple of common spotted orchids and the numbers increased to 50 or so plants in 2018, which is very encouraging.

For the last few years we have held a Magnificent Meadows Day at the beginning of July. There have been talks and guided walks, childrens' games and activities, live music and, of course, plenty of beer!

The meadow is playing a key role in education. Masters degree students from Manchester Metropolitan University have used the meadow as the site for their dissertation projects. A-level students have learned about meadow management and botanical surveying using the meadow as a site and source of inspiration.

There is an active group which meets at the meadow occasionally, for wildflower identification, bug hunts, hay meadow management talks; to scythe the hay and make hay bales with our hand-built, manual hay-baler. There have been visits by



local photography clubs for macro photography workshops and all of our activities involve a picnic and maybe a beer or two.

Many experts and organisations have kindly donated their expertise, materials and time. Professor Ian Trueman advised on establishing the meadow with replicated plots for future study. Ian Cheeseborough advised on management for invertebrates. Sian and Pete Edwards from Orchard Field Ecology have done much of the management work. Adrian Pickles at FSC facilitates the ongoing management of the meadow. Russell Rowley from SGCT advised and provided project management and training, as well as the green hay. Dan Wrench, County Ecologist compiled the species list and also added plenty of advice and expertise.

Francesca's Meadow is a very special place for me; a place for contemplation and for meeting friends of Francesca, a place for learning and a haven for wildlife. Most importantly, it's a legacy of which I'm sure Fran would approve.

More information and ongoing events news can be found at Francesca's Meadow Facebook site <https://www.facebook.com/groups/FranMeadow/>

A quick look around many Botanical Societies or field expeditions reveals the presence of a considerable number of individuals who are defying their years to continue botanising. It may be that the botanising helps in this process but I have certainly become aware that I have to now think about my botanical activities rather more than in my carefree indestructible days. I resent this but feel it is inevitable that some compromises may have to be made to avoid having to summon an air ambulance or have to be rescued ignominiously from some inhospitable habitat I have had the audacity to tackle. The ever upwards rise of the Risk Assessment just reinforces the fact that what in my youth I regarded as adventure is now perceived by a self protecting and litigious world as hazardous.

I have a personal checklist of my various capacities and failings and am glad to say that up till now I am not seriously incommoded. There are though some minor peeves which are giving me a glimpse of what might be to come. Eyesight to begin with. There are two aspects here, one is negotiating uneven terrain with vari-focals. I have to concentrate really hard on tussocky moorlands where it is almost impossible to judge how far down a foot is going to descend. Wem Moss is also a challenge and I spend some time falling over, and so far getting up unaided. Fortunately the lumpiest ground is often quite soft, but there could be a day when decreasing bone density is inversely proportional to perception of depth and I really come a cropper. Quarry sides, especially loose substrate ones like Jones' Rough are becoming a bit tricky as I find that perception of depth when coupled to a reduced ability to balance makes the "trips and falls" category of a risk assessment rather more real than I like.

Having negotiated Jones' Rough in company with other botanists with similar bone density and balance levels did make us wonder if in a year or two we might need a stair lift or at least a block and tackle to get to the top or perhaps more perilously get down again.

Having found our plant the next game is to be able to see it. Some mosses in particular defy normal spectacles so I end up with adding reading glasses and lenses to my kit as well as the vari-focals in order to identify what I can find. Once upon a time I just needed a lens!

Some aspects of brain function seem to be just about holding up, though I can be challenged by navigating to new sites and trying to reconcile the nonsense from my satnav with my old fashioned understanding of an OS map. Memory for plant names needs a bit of watching and some prompts from time to time. I had hoped that learning names would act like learning a language and keep Alzheimers at bay, only time will tell on that one. Over winter I can lose a few names, bit like school children slipping backwards over the summer holidays. First outings in May call for a bit of a refresher course, or taking a travelling library of keys out with me.

That gets me to the overall issue of stamina. Carrying extra kit to help with vision and identification as well as spare layers, food and First Aid kit could reach a critical mass one of these days, if my skeleton lets me down. Yomping in full kit over hill and dale in company with people much younger than me shows this up starkly. I have noticed that certain types of botanist move slower and over shorter distances e.g. bryophyte specialists so I considered learning more about mosses, until I realised I couldn't see half the diagnostic features. So it's back to yomping, a bit more slowly and carefully and heading for a cup of tea earlier in the afternoon than previously so fatigue doesn't lead to disaster.

The positives of botanising, especially with like minded enthusiasts, far outweigh these minor inconveniences. The compulsion to go out and spend time in lovely places with interesting floras will, I hope, keep me and all our other intrepid botanists carrying on regardless.

From Oswestry's Wall of Women

“To commemorate the centenary of 40% of British women getting the vote, Oswestry is celebrating their Women of Influence, Women of Power, by creating a ‘Wall of Women’ featuring 101 women with a connection to Oswestry in the Memorial Hall from 6th to 16th September 2018.”

Mary Hignett

Mary Hignett was born in Oswestry on 16th May 1912.

She was a respected teacher who taught for 27 years at Welshpool High School and reached the position of Senior Mistress.

She came from a family that moved to the Oswestry area in the 1600s from Churton Heath near Chester where they were Yeomans and appear to have been granted lands in Hordley and Bagley.

Her main interest was natural history and she became founder member, Chairman and then President of both the Montgomeryshire Field Society and the Border Field Club. She also served on the steering committee to form the Shropshire Wildlife Trust in 1961, and also served on the Executive Committee for the Council for the Protection of Rural Wales.

Whilst she was President of the school Conservation Club, they won the Prince of Wales Countryside Award in 1970 and the Coca-Cola National Environment Competition in 1973.

She always held her native Oswestry close to her heart and was a member of the Oswestry and District Committee of the Civic Society. And she also lectured on the town's history and the wealth of local wildlife to many organisations.

For almost 20 years she contributed a weekly article to the Border Counties Advertiser. She was also a local writer who penned books on her childhood

in Oswestry and about some of the walks in the surrounding countryside.

She lived for many years with her sister, Ruth, on Castle Street and passed away in November 2005, aged 93.

On her death she left half her substantial estate to the Rotary Club of Oswestry, which now administers a trust fund in her name.

A road in Oswestry, Hignett Place, was named in her honour in 2015.

Footnote from Ruth Dawes. Mary's father, James Hignett, was a well-respected entomologist, who left a wealth of records from 1928 to 1949.



Brown Moss SSSI, SAC are we getting somewhere?

Mags Cousins

The last update on the Shropshire Top Ten Target sites was just two years ago in the Autumn 2015 Shropshire Botanical Society newsletter (Cousins, 2015). This article focuses only on Brown Moss, a botanically rich and diverse site, important for a complex of pools (see Fig. 1) where several axiophytes especially those of open, low nutrient wetlands (Whild Assocs., 2003, Lockton, 2016, McCullagh, 2016) have not been observed for a number of years.

A large amount of money, time and effort has been devoted to Brown Moss, by Shropshire Council (SC) staff who own and manage the site with advice from Natural England (NE), contractors, volunteers and other partners. Essentially the challenge was to get the site “fenced and grazed, bring in the diggers and cut down the trees”. A full report of everything that has occurred at the site would take too long, but these tasks have all been done to varying degrees. The tree clearance from a 5–10m margin around the pools, agreed between SC and the protective local community in the Management Plan 2007–2012 has

mostly been delivered, with Pools 2, 3a, 3b,4,5,7,8,9 and parts of 6 all having been done.

The fencing went up a few years prior to finally sourcing grazing animals. The seminal moment was October 2016 when 14 Hereford cows, one cob mare and her youngster were released onto the Common, after an absence of livestock of more than 60 years!. They were fed haylage brought by the farmer as grazing was poor at this early stage in the recovery of the site and at the start of winter. Concerns and complaints from locals eventually quietened down until the cows starting calving early in 2017 which exacerbated their worries and the cows were removed by the farmer in Feb/Mar 2017. The ponies remained for another few weeks, but were then also removed as locals started interfering in their management and threatened calls to the RSPCA even though the owner considered them in good health.

So the question is, has anything made any difference yet? An encouraging early response presumably to disturbance and increased light, on the edge of



Fig 1 Aerial view 2004 before the most recent tree clearance around pool margins, photo from Shropshire Council.



Fig. 2. *Oenanthe fistulosa*, Tubular Water-dropwort, inset fruits, photo by Mags Cousins, 2017.

Pool 5 was the reappearance of *Oenanthe fistulosa*, Tubular Water-dropwort (Fig. 2) after an absence of nine years, when in 2007, there was plenty of it. There were half a dozen flowering plants in 2016, the summer following clearance, which rose to over 30 plants in 2017 and back to half a dozen plants in 2018. The digger and forwarder used to fell trees in this contract churned up the ground a fair bit as conditions became increasing wet into winter 2015/16, but perhaps this was just what was required to expose the buried seed.

The *Oenanthe fistulosa* coexisted quite happily with the grazing and although the area around the feeders (edge of Pool 4) was becoming quite poached, enriched and rutted elsewhere the beneficial effects of the animals were evident – light poaching of the drawdown zones, with the soft rush and scrub being grazed. The same farmer brought 12 young beef cattle back to the site in summer 2017 and initially all was well but then one died, possibly as a result of a dog attack (witnessed a few weeks earlier) so the farmer removed the animals in mid Nov 2017. The larger beasts did not have any problems with dogs and were probably much happier here, warm in the shelter of the birch woodland, than they would have been in a draughty rye grass field or cooped up in a shed. The Herefords have been grounded due to bTB, so late this summer, three Dexter cattle were released onto the site which came from a different farm. There is plenty of natural vegetation for them to eat at the moment with the mild conditions perpetuating growth at the site.

Adjacent to Pool 2 where scrub was cleared was a good population of *Hypericum elodes*, Marsh St John's-wort, not recorded since 2007. It could

have been present, hanging on under the scrub but overlooked, likewise the *O. fistulosa*. Unfortunately accompanying these axiophytes was ample *Crassula helmsii* which, judging by its abundance at Pools 2 and 5 must have been well established already.

Crassula appeared as new small, patches at Pools 3b and 4, which is no surprise as the spread followed the substantial disturbance from tree felling and cattle grazing and a dry period with an extensive period of time with exposed mud. A *Crassula* monitoring project with Freshwater Habitats Trust found it in good time and since the patches were very small and discrete they were treated repeatedly with Glyphosate until no more could be found in late summer 2017. Previous reports (Lockton and Whild, 2003) have indicated that *Crassula* at Brown Moss is probably not a major factor affecting the presence, absence or abundance of the important wetland axiophytes, and of course spraying is also detrimental to non target species, such as *Lythrum portula*, Water Purslane and *Carex viridula* ssp. *viridula*, Small-fruited Yellow-sedge. These axiophytes occupy a similar niche on the drawdown zone of pools. It is possible that spraying beside Pool 6 knocked out the last population of the sedge at Brown Moss as it has not reappeared since. This time the *Crassula* plots were surveyed carefully beforehand so as to ensure no important plants were in the firing line (Handley and Cousins, 2016). The spraying in this case was about seeing if its spread to new pools in the immediate aftermath of clearance work could be slowed down sufficiently to give native plants more of a chance of occupying the niche first. This is not looking likely as a survey this summer 2018, once again found a small amount of *Crassula* at Pool 3b. It won't be sprayed again but the spread will be monitored.

The rapid response of wetland plants to being released from deep shade is astonishing with an abundance of *Hottonia palustris*, Water-violet and *Menyanthes trifoliata*, Bogbean at Pool 3a this year. However no nationally rare wetland axiophytes have reappeared despite the remarkable finding of two seeds of *Luronium natans*, Floating Water-plantain (see Fig. 3) sieved from silt cores taken from the edge of Pool 6. The cores were taken near to where it was last recorded flowering in 2006, a year or two after silt scraping was done for *Crassula* control, and possibly as a direct result of this disturbance. This painstaking work was carried out by Richard Lansdown (2016) who described it as “the most boring work” he had ever done! The seeds were sent to Kew who found them to be non-viable, ie not possessing any



Fig. 3. *Luronium natans* Floating Water-plantain at Pool 6, photo taken 2006.



Fig. 4. Trial silt scraping plots at Pool 6, photo by Mick Smith, Wildbanks Conservation, 2017



Fig. 5. *Isolepis setacea*, Bristle Club-rush at Pool 6, photo by Mags Cousins, 2017

living tissue. Reliably securing the population at Brown Moss is a major priority as the decline of this Annex II species across Europe is the main reason for the designation of the site as a Special Area of Conservation.

Finding the *Luronium* seeds was an added incentive to trial silt scraping and excluding wildfowl to see if any other extant seeds could be stimulated to

germinate and whether protection from wildfowl will make any difference. Three replicates, silt scraped off each plot and three exclosures on each to exclude wildfowl and livestock, were constructed to provide comparisons between cattle/wildfowl-unsampled; cattle/wildfowl-sampled; and no cattle/wildfowl-sampled (see Fig.4). The organic rich sediment was removed with a small digger down to 'clean' sands and gravels and deposited on the island near to where previous material was left in 2004/5. Any silt scraping and dumping has to proceed with care as unfortunately in 1975, it is thought that the silt spread after dredging Pool 6 to save stranded fish, was placed on top of the last population of *Pilularia pilulifera*, Pillwort, sadly resulting in county extinction. This time all the scraping plots and the deposition area were surveyed beforehand but no important or rare species were detected, the nicest find being the diminutive *Isolepis setacea*, Bristle Club-rush (see Fig.5). *I. setacea* has been regularly recorded at Brown Moss but in any case this particular find was in an untouched part of the experimental area.

Another major concern of silt removal is the potential detriment to the nationally rare liverwort *Riccia canaliculata*, Channelled Crystalwort as the bare mud of the drawdown zone is its favoured habitat too and Brown Moss is the only remaining site in England. Sharon Pilkington (2016) found *R. canaliculata* in this locality albeit at low abundance compared to other margins of Pool 6 so it was considered a low risk location for the silt scraping trials. A detailed survey beforehand recorded no *R. canaliculata* prior to silt scraping in 2017 (Cousins, 2018). I resurveyed the plots three times this year with the help of various sharp eyed botanists including Dan Wrench and Hilary Wallace, and on each successive occasion

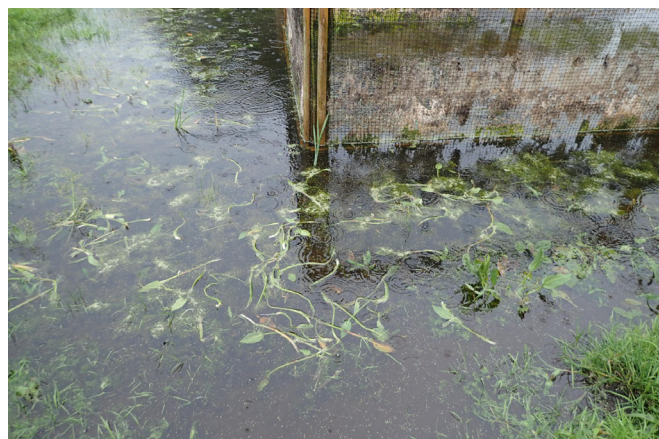


Fig. 6. *Alisma plantago-aquatica* uprooted outside trial silt scraping plot, photo by Mags Cousins, 2018

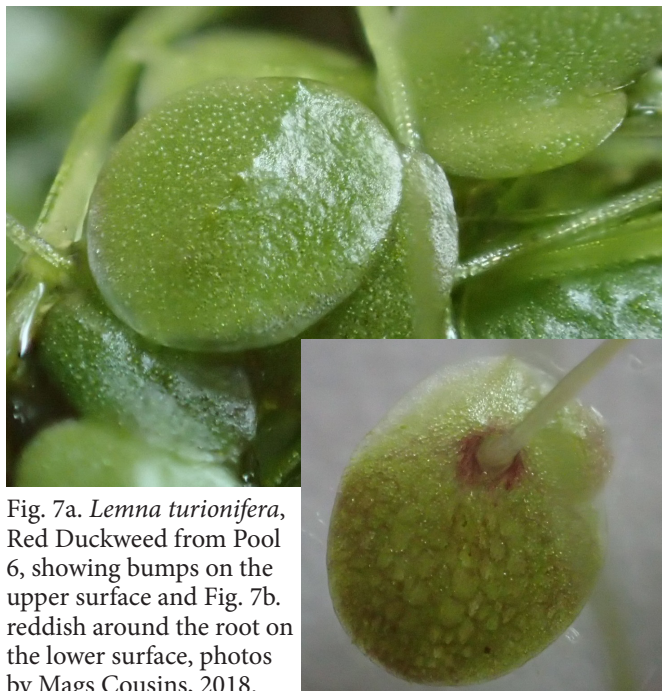


Fig. 7a. *Lemna turionifera*, Red Duckweed from Pool 6, showing bumps on the upper surface and Fig. 7b. reddish around the root on the lower surface, photos by Mags Cousins, 2018.

the plots looked more dismal, finally culminating in a thick gloop of filamentous algae with only *Crassula*, *Azolla filiculoides*, Water Fern and *Lemna* sp. remaining frequent. Some stalwart *Alopecurus aequalis*, Orange Foxtail and *Alisma plantago-aquatica*, Water-plantain managed to poke through (see Fig. 6) the green slime and outside the fencing these were uprooted by waterfowl. The plots had netting 'roofs' to prevent waterfowl getting in but which are now covered in guano from resting birds!

On a more positive note, some of the *Lemna* turned out to be *L. turionifera*, Red Duckweed (see Fig. 7), confirmed by Richard Lansdown. This is the first official county record in Shropshire, but only because Richard did not submit his own earlier sightings at Brown Moss to the County Recorder!! Records of *L. turionifera* are increasing across the UK, which is either genuine spread or more recognition, of what Richard considers to be an under-recorded native, rather than as previously thought, a naturalised introduced species.

The sediment cores threw up some other interesting finds, including seeds of species for which there are no records of the living plants from the site eg *Carex acutiformis*, Lesser Pond-sedge although this identification requires confirmation. *Nitella*, oospores and *Potamogeton berchtoldii* Small Pondweed and *P.natans* Broad-leaved Pondweed seeds were also frequent, the latter two have not been recorded from Pool 6 since 2007.

Although some of the intractable problems of Brown Moss have finally been overcome eg fencing

the Common, achieving acceptance with locals for felling a 10m margin of trees around wetlands and establishing grazing, keeping these essentials going is far from easy. Also due to the continued maturation of the remaining secondary woodland, the 10m margin to be felled around pools must surely have to be extended in the long term to halt the shading, drying and altering soil conditions that have contributed to loss of the wetland axiophytes. All the while these effects are exacerbated by the continuing enrichment from other catchment sources, both surface and ground water, atmospheric inputs, wildfowl and dogs. Hopefully, as the work progresses, we will be rewarded and spurred on by more rediscoveries of the plants and animals that make Brown Moss so special.

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