Newsletter 2025 no.60

WILTSHIRE BOTANICAL SOCIETY

Edited by Martin Buckland

EDITOR'S FIRST PAGE

Welcome to the latest edition of the WBS newsletter. As you see from the editor's corner picture I like Field Cow-wheat *Melampyrum arvense.* The front cover picture is not just to satisfy me but is a picture for hope that this species will survive and establish itself in the north of the county. It has been known in Wootton Bassett for many years however, the site is under threat from development and so with permission from Natural England, work by the Species Recovery Trust and Wiltshire Council allowing one of its verges to be a donor site, Field Cow-wheat seed was collected and sown onto a new verge. The photograph on the cover was taken in June of this year.

Since then, of course, we have endured drought conditions and many of our native and non-native plants have suffered. That hasn't stopped Dave Green and Fran Sinclair from recording in and around Bradford-on-Avon. Some samples of Dave's DG are Philadelphia Fleabane *Erigeron philadelphicus,* 2nd county record, a native of North America and only rarely grown in gardens; Thorow-wax *Bupleurum rotundifolium,* extinct in the wild but a known alien component in bird-seed, 2nd county record this century; White Mignonette *Reseda alba,* just the 5th county record this century; Purple Viper's-bugloss *Echium plantagineum,* grown in gardens as a pollinator plant, only the 2nd county record ever. And from Fran, Mediterranean Spurge *Euphorbia characias,* no doubt a garden escape but only the 14th county record; Johnson Grass *Sorghum halepense*, now often sown in gamebird crops, just the 2nd county record ever; Pale Yellow-eyed-grass *Sisyrinchium striatum,* another garden escape and only the 6th county record, all since 2015. The most stunning of all though must be the 1st for Wiltshire, Marvel-of-Peru *Mirabilis jalapa* (right). Well done, Fran.

Mirabilis jalapa © Fran Sinclair

Dave didn't stop there. In November 2024 he and Helena Crouch visited the area around an old, flooded brick pit in Westbury and came across a Loosestrife *Lythrum* species they didn't recognise. Dave returned in July this year only to discover that they had found a large and well-established population of Wand Loosestrife *Lythrum virgatum,* the first English record for this plant in the wild.

Newsletter: Our first article is from Steve Jackson who had inspiration about the soils of Wiltshire after his shed sprung a leak…! Following that I write about my holiday to Canada or more specifically to a desert at Osoyoos. (You didn't know Canada had a desert, did you?) Next, we have a more homely section with a series of reports from this year's meetings programme.

Obituary: Sadly, we have to report the passing of Malcolm Hardstaff, a founder member of the Wiltshire Botanical Society; we include a short obituary.

Let's get down and dirty!

The influence of Chalk, Cheese, and Catsbrain[1] on Wiltshire plants

Part 1. What soils do we have in Wiltshire?

Steve Jackson

I had to sort out my shed a while ago. It sprang a leak. Sorting through past 'stuff' I had stored in there was a lot of the work I had done on soil science. Those were happy days! Dissertation on soil changes under stands of Corsican Pine of different ages; a reconnaissance survey of gully erosion in Spain; a literature review on the soils of Derbyshire; a lab study of different methods of extracting plant nutrients from soils; my doctoral thesis on soil erosion in Bedfordshire – a bit of statistical and mathematical modelling of data extracted from aerial photos, lab simulations, and field measurements! What fun! And the textbooks of the day. As well as the final report of a project I was employed on looking at applying computer-based simulations of geotechnical aspects of soils in education. I was also keen to encourage more teaching on soil science.[2]

All this got me thinking – what about the soils of Wiltshire? How might they affect plant distribution and ecology? So, here we go! Researching this has been a real 'down the rabbit hole' experience leading to a whole range of fascinating material and a return to days gone by! By a long way!

There are two main questions that I'm going to look at:

1. What soils do we have in Wiltshire? and
2. Do Wiltshire soils and plants interact with each other?

1. What soils do we have in Wiltshire?

We usually consider soil to be the loose, unconsolidated material at the surface of the earth that has been influenced by several factors including climate, parent material, topography, organisms, and time,[3] to produce horizontal layers (known as horizons), the presence of different horizons leading to the classification of soils. These horizons tell us what type of soil it is, e.g., 'rendzina', 'brown earth', 'gley', i.e., how it is classified. We can also measure soil properties related to the chemical, physical, hydrological, and biological characteristics of the soil, e.g., soil acidity or alkalinity (pH), calcium content, carbon content, moisture content. One advantage of the latter is that the specific characteristics may be manipulated under experimental conditions to examine their influence on plant ecology.

So where do we get this type of information? At the national level, there are two websites worth exploring:

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[1] https://wshc.org.uk/blog/item/the-fascinating-history-of-field-names.html - rough clay mixed with stones.
[2] Jackson, SJ 1979 On the teaching of pedology and soil science. *Classroom Geographer* April 1979, 12-16. Jackson, SJ 1980 Plea for pedology. *Teaching Geography* 5(3), 111-113.
[3] Jenny, H. 1941 *Factors of soil formation: a system of quantitative pedology*.

1. LandIS: The Land Information System – "a substantial environmental information system operated by Cranfield University, UK, designed to contain soil and soil-related information for England and Wales including spatial mapping of soils at a variety of scales, as well as corresponding soil property and agro-climatological data" (Cranfield is where I did my PhD). The most useful part of the site is probably that showing soil associations and soil series. See, for example, this section which relates to the Chalk with a nice diagram of Salisbury Plain.

2. UK Soil Observatory – an online archive of data from nine research bodies, including the research councils, Centre for Ecology and Hydrology, British Society of Soil Science, Rothamsted Research, and the Forestry Commission. Possibly the most useful part of the site are the maps which show soil types based on the England and Wales classification and the World Reference Base for soils, and a wide range of soil properties from a variety of sources.

BUT! There seems to be little systematic, detailed study of the soils of Wiltshire, yet soils have an important role in plant distribution and ecology – and human character (we'll get to that shortly)!

Information about soils may be found in county floras – but is often of very variable quality, poorly related to the plants, and lacking reference to the wider body of soil science or specific research based in a county. The coverage in the three Wiltshire floras and two that have a more expansive consideration of soils is shown below.

Preston1888[4]	Very little on soils but six pages on the geology with a simple solid geology map.
Grose1957[5]	Nine-page introduction to the geology of Wiltshire with a simple solid geology map and another showing superficial deposits. Broad soil types are noted. Some mention of soils in the individual species accounts but greater emphasis on the relationship between soil types and plants in the chapter entitled 'The vegetation of Wiltshire', where soil pH values are given for sample plots alongside species lists giving frequency of occurrence.
Gillam1993[6]	Less than two pages of text on the geology and soils of Wiltshire accompanied by a geological map and a useful table with a listing of the soils for each geological formation. Brief mention of soils in the habitats chapter and species accounts.
Good nd[7]	Has a ten-page chapter on the soils of Dorset by K L Robinson with a soil map, and thirty-plus pages on the influence of soil factors on plant distribution.
Sinker *et al*. 1985[8]	11 pages devoted to the geology and soils of the area, with a geological map, some attention to soils in their analysis of the data for Shropshire, with soil moisture, nutrient and base status, and soil pH noted for most species when considering individual species accounts.

The information that **is** available on the soils of Wiltshire falls into a number of categories:

1. Web-based material – often interpolations from point sources, see earlier remarks about LandIS and UKSO. It is often difficult to extract detailed

[4] Preston, T A 1888 *The flowering plants of Wilts*. Wiltshire Archaeological and Natural History Society.
[5] Grose, D 1957 *The flora of Wiltshire*. Wiltshire Archaeological and Natural History Society, Devizes.
[6] Gillam, B 1993 *The flora of Wiltshire*. Pisces Publications, Newbury.
[7] Good, R *A geographical handbook of the Dorset flora*. Dorset Natural History and Archaeology Society, Dorchester.
[8] Sinker, C A *et al*. 1985 *Ecological flora of the Shropshire region*. Shropshire Trust for Nature Conservation, Shrewsbury.

information that might be used for further investigations. And for some data, charges are levied.

2. Soil maps and reports - three only for Wiltshire - Wilton[9], Devizes[10], Southern Cotswolds[11], produced by the old Soil Survey organisation. These are often difficult to source and may be expensive to buy for the amateur but might be found in county libraries.
3. Incidental material in other publications such as that in geology reports, landscape character assessments, academic journal articles, ecological and agricultural consultants' reports. Much of this is often behind a paywall or confidential in inaccessible reports. Increasingly, however, governments, academic and environmental organisations, and publishers of journal articles are making the data freely available under Open Government or Creative Commons licenses. Increasingly often this is a requirement for gaining research funding or publication.

Nevertheless, there is a quite serious issue in obtaining soil data. But...let's press on!

Early writings by John Aubrey (1626-1697)[12] drew the following conclusions about the nature of people in relation to the distinct geology and soils of Wiltshire (chalk and clay = chalk and cheese) and commented more specifically on the soils and plants, and agriculture, of the county.

In North Wiltshire, and like the vale of Gloucestershire (a dirty clayey country) the Indigense, or Aborigines, speake drawling; they are phlegmatique, skins pale and livid, slow and dull, heavy of spirit: hereabout is but little, tillage or hard labour, they only milk the cowes and make cheese; they feed chiefly on milke meates, which cooles their braines too much, and hurts their inventions. These circumstances make them melancholy, contemplative, and malicious; by consequence whereof come more law suites out of North Wilts, at least double to the Southern Parts. And by the same reason they are generally more apt to be fanatiques: their persons are generally plump and feggy: gallipot eies, and some black: but they are generally handsome enough. It is a woodsere country, abounding much with sowre and austere plants, as sorrel, &c. which makes their humours sowre, and fixes their spirits. In Malmesbury Hundred, &c. (ye wett clayy parts) there have ever been reputed witches.

On the downes, sc. the south part, where 'tis all upon tillage, and where the shepherds labour hard, their flesh is hard, their bodies strong: being weary after hard labour, they have not leisure to read and contemplate of religion, but goe to bed to their rest, to rise betime the next morning to their labour.

The soile of Malmesbury hundred, which is stone-brash and clay, and the earth vitriolish, produces excellent okes, which seem to delight in a vitriolate soile, and where iron oare is. The clay and stones doe hinder the water from sinking down, whereby the surface of the earth becomes dropsicall, and beares mosse and herbs naturall to such moist ground. In the ploughed fields is plenty of yarrow; in the pasture grounds plenty of wood wax; and in many grounds plenty of centaury, wood sorrell, ladies' bed-straw, &c., sowre herbes.

At Burbidge the soile is an ash-coloured gray sand, and very naturall for the production of good turnips. They are the best that ever I did eate

In a little meadow called Mill-mead, belonging to the farme of Broad Chalke, is good peate, which in my father's time was digged and made use of

[9] Cope, DW 1976 *Soils in Wiltshire I. Sheet SU03 (Wilton)*. Rothamsted Experimental Station, Harpenden.
[10] Findlay, DC 1986 *Soils in Wiltshire II. Devizes*. Rothamsted Experimental Station, Harpenden.
[11] Findlay, DC 1976 *Soils of the Southern Cotswolds and surrounding country*. Rothamsted Experimental Station, Harpenden.
[12] Aubrey, J & Britton, J 1847 *The Natural History of Wiltshire*.

Modern soil taxonomy, like biological classifications, has a hierarchical structure suited to mapping at a variety of scales. At the top of the hierarchy are Major soil groups, going down through Soil groups, Soil subgroups, Soil series, and ending up with Variants and Phases. Table 1 shows this in relation to the Lithomorphic soils occurring in Wiltshire. For all but very detailed mapping and analysis, discussion is usually limited to Major soil groups and Soil groups. This sounds straightforward, but the classification has changed over time and numerous soils have been reclassified and had name changes. Sound familiar? To make matters worse, unlike scientific binomials, national soil classifications differ, and it is often very difficult to draw exact equivalents between soils in different countries. Even Scotland has a different soil classification to England & Wales!

Table 1. Example of the hierarchical structure of soil classification for England and Wales. Soils known to occur in Wiltshire are shown in bold.

Major soil group	Soil group	Soil subgroup	Series
3. Lithomorphic soils			Links to Soil Series on LandIS
These are shallow soils in which the only significant pedogenic process has been the formation of an organic or organic-enriched mineral surface horizon. They are formed over bed-rock, or little altered, soft unconsolidated material at or within 30 cm depth.	3.1 Rankers	3.11 to 3.15	
	3.2 Sand-rankers	3.21 to 3.23	
	3.3 Ranker-like alluvial soils	3.31 to 3.32	
	3.4 Rendzinas Soils that have chalk or limestone or extremely calcareous unconsolidated material immediately beneath the topsoil or starting within 30 cm depth	**3.41 Humic rendzina**	**Icknield, Marian**
		3.42 Grey rendzina	**Upton**
		3.43 Brown rendzina	**Andover, Sherborne, Wallop**
		3.44 Colluvial rendzina	**Gore**
		3.45 to 3.47	
	3.5 Pararendzinas	3.51 to 3.55	
	3.6 Sand-pararendzinas	3.61 to 3.62	
	3.7 Rendzina-like alluvial soils Soils that have recent calcareous alluvium immediately beneath the topsoil or starting within 30 cm depth	3.71	
		3.72 Gleyic rendzina-like alluvial soils	**Wylye**
		3.73	

In Wiltshire, the solid geology, overlying superficial deposits, and topography have important impacts on soil types. A comparison of a geological map and a soil map such as that on the UKSO shows obvious patterns to the occurrence of soils formed from solid geological materials, the overlying superficial deposits, and geomorphological processes. Various types of rendzinas occur on the limestone and Chalk, especially on the steeper slopes, with brown calcareous earths in other landscape positions, while the various clays such as the Gault, Kimmeridge, London and Oxford often support surface-water gleys. On the sandier geological formations there is a tendency towards podzolization, but very acid soils are limited in Wiltshire to small areas on the edge of the

New Forest in the south, around Alderbury to the south east of Salisbury, and to a lesser extent an area between Bromham and Derry Hill to the south west of Calne. These podzols have a horizon in which amorphous materials containing organic matter and aluminium, iron, or both, have accumulated. Most Wiltshire soils, however, are only slightly acid to alkaline in reaction.

Superficial deposits resulting from a variety of geomorphological processes have also affected the soils of Wiltshire. These include:

Head, frost-shattered material that moved downhill during warmer periods of recent glaciations. If it is derived from chalk, it is often referred to as *Coombe deposits* or *chalky Head*. *Colluvium* may also occur on the Chalk. This is thought to be soil erosion deposits from early agriculture.

River terrace deposits along the main valleys, often pebbly or stony in nature. *Alluvium* also occurs in the river valleys and may be clayey or chalky depending on the source rocks.

Clay-with-flints may also overlay the chalk, with usually a flinty upper layer and a lower layer with considerably fewer flints. It is unlikely that it is derived entirely from the Chalk.

In addition, wind-blown deposits known as *Loess* may occur, probably having blown in from North Sea glacial deposits when sea level was lower.

Peat also occurs in small patches, for example, in the Vale of Pewsey.

As might be expected, some soil types are very well represented in Wiltshire. Sherborne soils (Rendzinas) occupy c. 28% of the Southern Cotswold soil map, while three soil series alone (Andover, Upton, and Gore, all Rendzinas) cover c. 50% of the Wilton area soil map. Evesham soils (Calcareous pelosols) are the second most extensive in the Southern Cotswolds (c. 12%), while the second most extensive soil on the Wilton map is the Carstens soil series (c. 14%, Paleo-argillic brown earth). The main soil types for which there is quantitative data (derived from Soil Survey publications) are shown in Table 2a.

Although soils are classified according to the visible structure of the soil horizons, they may be very different in terms of their physical, chemical, biological, and hydrological properties (Table 2b). They vary in terms of multidimensional space along innumerable axes. For example, data from the 66 soil profiles published in the Soil Survey sources noted before, allows various comparisons to be made. Cation exchange capacity (CEC, a measure of the ability of the soil to hold and exchange nutrients) is statistically significantly related to loss on ignition and clay content. This is what we would expect as clay and organic matter provide sites for nutrient attachment. This could be envisaged as one dimension. So too could the statistically significant relationship between pH and $CaCO_3$. We might also expect this. These relationships are usually referred to as components or factors and a technique known as 'principal components analysis ordination' allows us to reduce all seven properties in Table 3 (plus evidence of gleying) to a few components and show them as a scatter plot (Figure 1). Don't worry, I'm not going into technical details! We're just interested in the principles!

Table 2a. Soils in Wiltshire for which quantitative data is available.

Major soil group	Soil group
Brown soils: brownish or reddish soils, subsurface horizons without any prominent gley features above 40 cm, mainly on permeable material below 300 m	**Argillic brown earth**: have a subsurface horizon showing clay enrichment
	Brown alluvial soil: have a non-calcareous subsurface horizon developed in alluvium
	Brown calcareous earth: have a weathered calcareous subsurface horizon
	Brown earth: non-alluvial, non-calcareous, without significant clay enrichment
	Brown sand: non-calcareous sandy soils
	Paleo-argillic brown earth: reddish or reddish mottled clay-enriched subsoil developed before the last glacial period
Ground-water gley soils: fluctuating groundwater levels produce prominently mottled or uniformly grey subsoils	**Alluvial gley**: developed in alluvium at least 30 cm thick
	Argillic gley: have a clay-enriched subsoil
Lithomorphic soils: shallow soils over bedrock with an organic or organic-enriched surface horizon	**Rendzina**: calcareous soils over chalk or limestone or unconsolidated calcareous material
	Rendzina-like alluvial soils: formed in little altered calcareous alluvium
Pelosols: clayey soils without prominent signs of gleying	**Calcareous pelosol**: have a calcareous subsurface and no evidence of clay enrichment
Surface-water gley soils: prominently mottled above 40 cm due to seasonal waterlogging	**Stagnogley**: have a distinct topsoil, formed on soft clay rocks

Table 2b. Means of selected soil properties for soils occurring in Wiltshire.

Soil type	Top horizon depth (cm)	Clay %	pH in water	Loss on ignition %	CaCO3 %	CEC me/100 g	Organic carbon %	n
Brown soils	**16.3**	**23.6**	**6.8**	**9.1**	**14.4**	**22.0**	**3.2**	**27**
Argillic brown earth	14.7	23.2	6.5	8.8	5.1	25.2	3.3	11
Brown alluvial soil	15.0	55.0	7.0	20.1	1.0	nd	nd	1
Brown calcareous earth	17.9	28.3	7.6	12.5	25.8	33.0	3.9	7
Brown earth	23.5	13.5	7.0	5.7	1.0	16.2	2.6	2
Brown sand	14.0	5.5	5.4	3.8	nd	8.7	nd	2
Paleo-argillic brown earth	15.5	22.8	6.8	8.2	1.0	20.3	2.9	4
Ground-water gley	**14.3**	**24.8**	**5.7**	**12.5**	**nd**	**14.4**	**6.9**	**4**
Alluvial gley	15.0	57.0	5.3	18.3	nd	5.0	6.9	1
Argillic gley	14.0	14.0	5.9	9.6	nd	23.8	nd	3
Lithomorphic soils	**17.7**	**32.6**	**7.7**	**15.2**	**31.6**	**40.6**	**6.1**	**21**
Rendzina	17.8	32.8	7.7	15.3	30.3	40.7	6.1	20
Rendzina-like alluvial soils	15.0	29.0	7.8	13.5	54.0	39.0	5.1	1
Pelosol	**19.0**	**43.5**	**7.3**	**12.1**	**2.5**	**39.3**	**nd**	**4**
Calcareous pelosol	19.0	43.5	7.3	12.1	2.5	39.3	nd	4
Surface-water gley soils	**18.4**	**31.1**	**6.0**	**12.4**	**1.0**	**26.0**	**3.3**	**9**
Stagnogley	18.4	31.1	6.0	12.4	1.0	26.0	3.3	9
Undetermined	**18.0**	**14.0**	**6.9**	**10.3**	**1.0**	**22.9**	**nd**	**1**
Undetermined	18.0	14.0	6.9	10.3	1.0	22.9	nd	1
Overall means/Total	17.1	28.6	6.9	12.0	20.9	29.8	5.0	66

(Data sources: Cope 1976, Findlay 1976 & 1986. nd, no data)

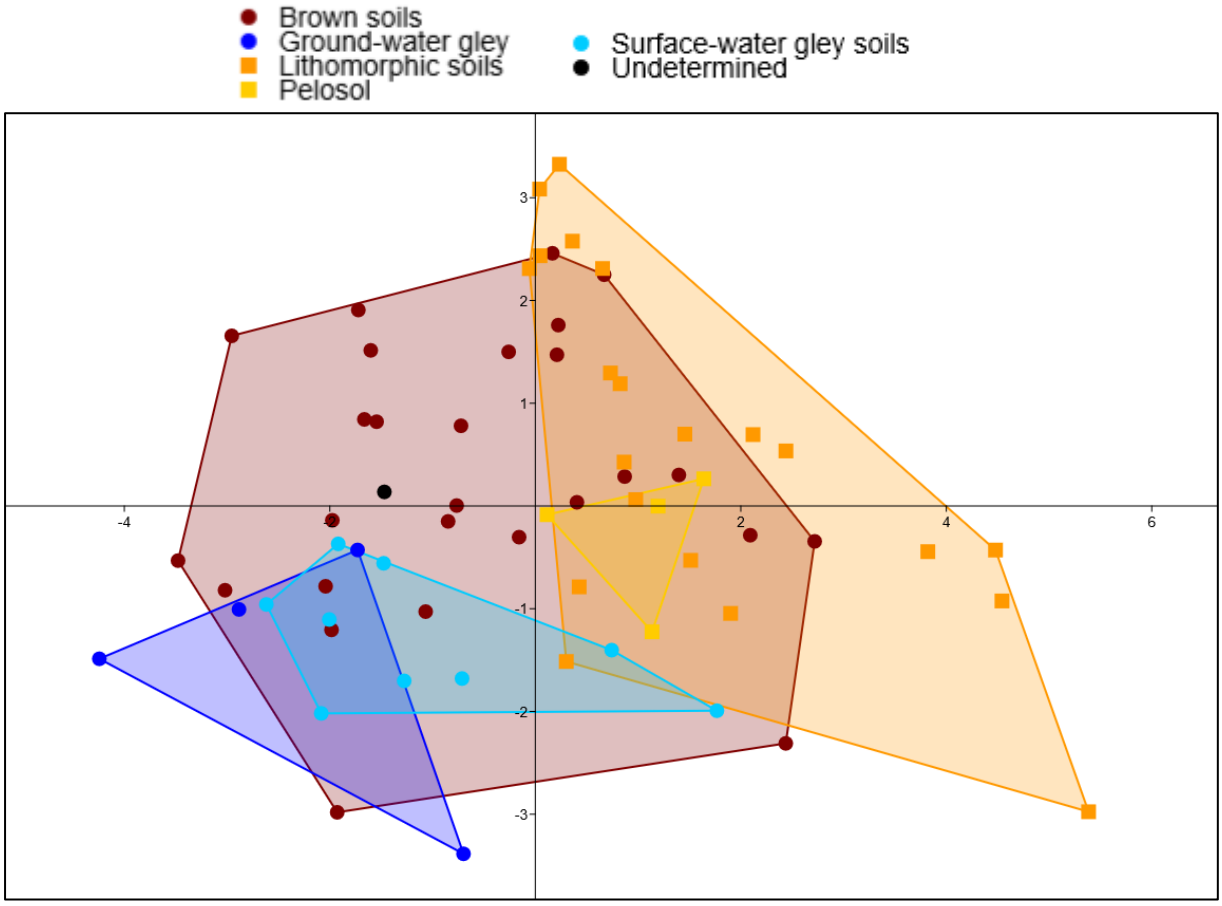


Figure 1. PCA ordination of data from 66 soil profiles.

Let's look at this diagram a little more closely. The horizontal (X) axis represents a component consisting of loss on ignition, CEC, and organic carbon, essentially representing the soil's ability to store and exchange various plant nutrients. The vertical (Y) axis represents a component consisting of $CaCO_3$ and pH, essentially a soil reaction component. These two components represent over 75% of all the variations in the soil properties that were used in the analysis. The symbols are the 66 soil profiles from the Major soil groups for which data was available. The numbers and exact position of the points are less important than the overall pattern. The most obvious conclusion is that there are very large overlaps between the soils. Based on measured soil properties rather than identifying particular soil horizons, it would be difficult to distinguish soil types. Brown soils encompass a very wide variation in soil properties as can be seen from Table 2a. Gleyed soils and Lithomorphic soils barely overlap, as we would expect, as the former are often low-lying sites where water accumulates, whereas the latter occur on the Chalk, often on steeper slopes, where water is likely to be lost. Pelosols appear to occupy a central position as they are clayey, but not gleyed, but may contain $CaCO_3$. From the data analysis, a third component may exist representing clay content, soil depth, and evidence of gleying. What these findings suggest is the idea that plants will respond to complex assemblages of soil (and indeed, other) properties in a multidimensional space (their niche). Also, it is probably a more realistic interpretation to consider plants responding to environmental gradients. This is for Part 2.

Osoyoos Desert, British Columbia, Canada

July 2025

It seemed improbable to me to discover that Canada had a desert and, not ever having set foot in one, I immediately added this to my places of interest to visit for my holiday.

I was not sure what to expect, I knew that there would be no cowboy film cactus here and just how sandy would it be? My journey took me to Osoyoos, a town at the southern end of the Okanagan Valley in British Columbia.

The truth is that the Osoyoos Desert is not really a desert at all but a semi-arid shrubland. It is characterized by low annual rainfall of less than 12 inches and has the country's warmest annual temperatures (average 26º C throughout the summer). However, it is the only site of its kind in Canada and the Canadians are immensely proud of that fact and stick to the name.

Osoyoos Desert therefore has a unique ecosystem (below left) with its habitat defined by the Antelope Brush *Purshia tridentata* (below right) and is one of Canada's rarest and most endangered habitats with less than 9% of the original area remaining. The land has been lost to extensive grapevines and orchards of cherries, apples, and peaches.

Antelope-brush

Arriving at the centre there was a garden with a selection of named desert species which helped a lot with the identification of the major plants; much better than flicking through books not knowing what to look for.

A 1.5 km boardwalk (below) ensured easy trekking across the landscape and although it appeared to dominate a little it was there to protect the environment and prevent visitors from walking around as they desired. (More on this in the final paragraph). It soon became clear that the habitat is primarily made up of three main species, Antelope Brush *Purshia tridendata*, Sagebrush *Artemisia tridentata* and Rabbitbrush *Ericameria nauseosa*. These are well adapted to the arid soil by growing extremely long and wide-spreading roots allowing them to both tap into the water-table and to avail themselves of any paltry rainfall that quickly percolates through the gravelly soil.


Sagebrush


Rabbitbrush

The Antelope Brush is one of the tallest plants in the ecosystem growing up to 3m tall and also probably one of the deepest rooting with roots recorded down to 5m. Surprisingly it relies on a rodent, the Great Basin Pocket Mouse to disperse its seed. The dry, sandy soil is ideal for burrowing rodents and many holes were observed close to bushes. The mice gather the seeds and store them in their burrows and over time any uneaten caches grow into new bushes.

The season for many of the grasses is early and so by the time of my visit in late June, most of the local grasses were already dead in appearance. As you would expect, these are also deep-rooted, and examples are Red Three-awn grass *Aristida longiseta a*nd Needle and Thread Grass *Stipa comata*. Both of these plants are threatened by the invasive Cheatgrass *Bromus tectorum* whose seed germinates in autumn, growing through the winter so that by the time the snow melts it is already a step ahead of the native grasses. Tussock or Bunchgrasses, for example Sand Dropseed *Sporobolus cryptandrus* tolerate the dry conditions differently. Their leaves contain dry support tissue so that in any weather conditions the leaves are held upright and do not wilt. When it does rain this is funnelled directly to their roots; in effect the grass only grows in spring and the autumn months.

Another nuisance grass is Crested Wheatgrass *Agropyron cristatum.* Originally introduced as a forage grass and for erosion control as it is very drought tolerant it established itself too well and now poses a threat to replace native grasses.

Flowering plants were frequent but not abundant. One of the showiest was the Sagebrush Mariposa Lily *Calochortus macrocarpus* whose pink to purple flowers simply declined to wilt in the heat (28^{o}C). Another, a non-native, was welcomed because of its long-flowering season as an important pollinator. Its name? Common Yarrow *Achillea millefolium,* this just seemed so weird to see in such a place.

Showy Milkweed *Asclepias speciosa* was abundant in places and is one of the favoured species of the Monarch Butterfly, but no luck was had in spotting one. A robust thistle found at the entrance and occasionally around the reserve was the Wavy-leaved Thistle *Cirsium undulatum* with the leaves and stems covered with tomentose hairs giving an overall whitish-grey appearance. The large pinkish-purple flowers are undoubtedly a valuable source of pollen and nectar with many bees and beetles alighting upon them.


Sagebrush Mariposa Lily


Showy Milkweed


Wavy-leaved Thistle

Traversing the ground and up onto the occasional shrub was a Clematis much like our Old-man's-beard *Clematis vitalba* but this was to be White Clematis *Clematis ligusticifolia*. Large dandelion-clocks appeared sporadically, reminiscent of Goat's-beard *Tragopogon pratensis,* but this was the similar and equally non-native Yellow Salsify *T. dubius*, a widespread species but nearly always in small numbers. Another yellow daisy-flowered species well-tuned to this environment, with its hairy stems and leaves that protect it from drought, was the aptly named Hairy Golden-aster *Heterotheca villosa.* Further, a species that wouldn't look out of place in an English garden was the Blanket Flower *Gaillardia aristata.* I could only wonder how it survived the heat and the dry without withering.


Hairy Golden-aster


Blanket Flower

The boardwalk obviously creates a niche of its own, giving some shade from the wind and the sun and shielding against moisture loss. Some of the local shrubs took full advantage of this for what I perceived as a better fruit crop than those plants seen elsewhere, with Saskatoon *Amelanchier alnifolia* and Wax Currant *Ribes cernuum* resplendent with fruit. Unfortunately, this also afforded protection to a few non-natives; Woolly Mullein (Great Mullein) *Verbascum thapsus,* White Sweet-clover (White Melilot) *Melilotus albus* and Prickly Lettuce *Lactuca serriola* were a surprise to see but I did not record them anywhere else on this reserve or at a similar desert site nearby so they were obviously quite isolated.


Wax Currant


Saskatoon


Smooth Sumac

A shrubby-tree that was surviving the heat but in a more boulder-like setting was the Smooth Sumac *Rhus glabra* perhaps benefitting from moisture trapped under the rock. The most surprising shrub had to be the Tall Oregon-grape *Mahonia aquifolium*. In this country we typically see it as a shrub of woodland edges, and clearings but here it was, not quite living up to its 'tall' name doing quite nicely in a barren soil.

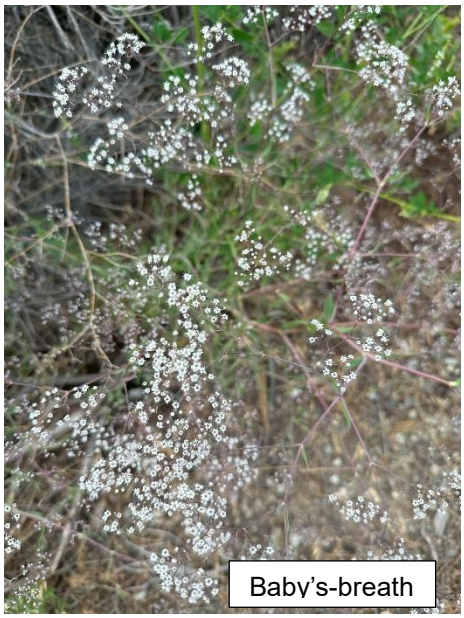
So, what about the cactus? Well yes it does exist, the Brittle Prickly-pear Cactus *Opuntia fragilis* is the region's only native cactus. It grows to around 20cm tall with individual pads up to 5cm long and forms prostrate mats. The pads have long sharp spines that help prevent moisture loss and protect it from predators. Any animal or person brushing by can break off an individual pad with the spines attaching to hair, fur or clothing carrying it off to drop elsewhere and form new colonies. The cactus is a winter-hardy perennial and can survive temperatures as low as minus 10^{o}C and a winter average of 5.5 cm of snow.


Brittle Prickly-pear Cactus

What else was around? You know the saying about botanists never being able to leave a car park because of all the weeds? Well, I left that part of my visit to walk around the welcome block and parking area until last and I was rewarded with many extra species. In a gravel paved area, a plantain was clearly different from what I'm used to, it had tall candle-like flowering stems and was Woolly Plantain *Plantago patagonica* and as it turned out practically the only native plant I observed. A very familiar *Erodium* caught my eye. Could it really be a Common Stork's-bill? Well indeed it could although it is known here as Red-stem Crane's-bill *Erodium cicutarium.* Nearby, another English plant made me smile. Here they call it Canada Thistle, I don't know why because they hate it and go around herbiciding it. You would have thought that they would at least called it the 'Nuisance' Thistle or the English Thistle because it was *Cirsium arvense* Creeping Thistle! A large 'balloon' of tiny white flowers confused me for a second. Having only seen it before in a flower garden or as a spray in a bouquet I was looking at Baby's-breath or *Gypsophila paniculata.*


Woolly Plantain


Dalmatian Toadflax


Baby's-breath

Lastly, there were three yellow-flowered, invasive, non-native species present that all needed controlling on the reserve to prevent incursion and staff were observed hand-pulling all these plants to prevent spread. The first was a beautiful herbaceous plant around 1.2m tall and named Dalmatian Toadflax *Linaria dalmatica.* It would look very fine in my garden but unfortunately it is treated as a scourge across British Columbia and is removed. Another tall species, Tall Tumble-mustard *Sisymbrium altissimum* grows to around 1.5m tall and another mustard, Loesel's Tumble-mustard *Sisymbrium loeselii* that grows to 1.2m are both equally abhorred. Why are they called Tumble-mustards? Any of you that are old enough to have watched Cowboy films on Sunday afternoon TV will be familiar with the wind blowing through a ghost town and 'tumbleweed' blowing through. When these tumble-mustard plants desiccate they become weakly anchored and as the wind blows, they 'tumble off' spreading seed as they go.

Was it sandy? Well not of the widespread dune kind. The area is well covered with plants but in the spaces between the sandy surface is carpeted with a biotic crust. This is made up of a layer comprised of mosses, lichens, algae, and bacteria called the cryptogamic crust. It is very fragile and easily broken but is critical to the health of the desert by preventing weeds from invading, acting as a fertilizer, stabilising the soil surface and retaining moisture. This was difficult to photograph successfully but just imagine a soil surface giving the impression of an incredibly old gravestone covered in various lichens and you'll be somewhere near.

No cowboy hat required.

Martin Buckland

West Wilts Trading Estate

23rd March 2025

Leader: Kat Newbert

For the first of the 2025 Field Meetings nine members gathered in the unarguably scuzzy West Wilts Trading Estate for the day's identification of plant rosettes. Rosemary Duckett was only with us for the first half hour, but it was a great pleasure to see her at the meeting. We began with Kat comparing and contrasting Common Whitlowgrass *Erophila verna* and Thale Cress *Arabidopsis thaliana* and soon found a (not so hairy) Hairy Bitter-cress *Cardamine hirsuta*, the third of the paving crack crew. Kat was delighted to be able to show the group Sticky Groundsel *Senecio viscosus*, which she had noticed on her recce of the site. It didn't really count as a rosette as it was in flower. Making our way along the edges of light industrial buildings and occasional grassed patches on Engineer Road we amassed a total of seven Speedwells *Veronica* species or eight if you count the two Ivy-leaved Speedwell subspecies separately (*V. hederifolia* ssp. *hederifolia* and *V.h.*ssp. *lucoram*). The others were Grey Field-speedwell *V. polita*, Common Field-speedwell, *V. persica,* Thyme-leaved Speedwell *V. serpyllifolia*, Slender Speedwell *V. filiformis* (in a lovely long swathe), Germander Speedwell *V. chamaedrys*, and Wall Speedwell *V. arvensis*.

Large rosettes of Hoary Mustard *Hirschfeldia incana* gave rise to unseemly banter about rude plant nicknames but enough of that and so getting back to serious botany, the find of the day belonged to Sam Braine who identified Glabrous Whitlowgrass *Erophila glabrescens* with one of Wiltshire's vice-county recorders, Kat, conveniently standing by to verify the plants.

There was also some challenging necro botany. A 'head-scratcher' was eventually sorted with the aid of the Flora Incognito app with Sarah announcing that the plants were Purple Toadflax *Linaria purpurea.* 'Oh, of course it is!' we chorused. We were able to compare Bulbous Buttercup *Ranunculus bulbosus* with Meadow Buttercup *R. acris,* but we had to hunt to find Creeping Buttercup *Ranunculus repens*, a reversal of the usual situation perhaps. In an old, raised bed we found the distinctive leaves of Wall Lettuce *Mycelis muralis* and, around a drain cover, some initially puzzling rosettes that we identified as Knotted Hedge-parsley *Torilis nodosa*, helped by knowing that Sharon had recorded it at this site some years ago! Sam and Sarah also pointed out a single Pyramidal Orchid *Anacamptis pyramidalis* rosette.

As Dorothy later remarked, "Who knew a trading estate could be such fun?"

Fran Sinclair

Erophila glabrescens, left and centre showing sub-glabrous leaves, compared to the hairy leaves of *E.verna, right.*

Worth Matravers, Dorset
12th April 2025
Leader: Dave Green

The day's target was Early Spider-orchid *Orchis sphegodes,* but we started just a short way from the car park with a treat of a line of flowering Wild Clary *Salvia verbenaca* at the edge of a grass road embankment. In addition, in the short vegetation of the road verges much Knotted Hedge-parsley *Torilis nodosa* was found.

We had a long walk across a couple of Ryegrass 'desert' fields before entering the National Trust Open Access Land. The first thought for some of us who had not been to this area for some years was that it had been allowed to scrub up perhaps through reduced grazing. The grassland was very tufted, and the banks of Tor-grass *Brachypodium rupestre* were very obvious.

On the track a single plant of Fiddle Dock *Rumex pulcher* was discovered - why do they seem to like trampled areas? We passed many rosettes and the odd flowering plant of Hound's-tongue *Cynoglossum officinale*, said to smell of mouse urine! The first Early Spider-orchid was spotted at the edge of the track, and this spurred us on to discover more.


Ophrys sphegodes © Martin Buckland

Entering the next field also appeared to be another disappointment. It was very rough and improved in places with occasional floral patches, however, we realized that this was not a site in decline but rather a formal arable field that had been reverted to meadow. On some bare soil Small-leaved Buttercup *Ranunculus parviflorus* was discovered to the delight of many present, with Sea Mouse-ear *Cerastium diffusum* also found nearby.


Ranunculus parviflorus © Martin Buckland


Cerastium diffusum © Martin Buckland

Crossing the next boundary took us down a slope toward the coastline and our target species were actually easy to find. Unfortunately, the recent hot weather had desiccated many of them (as well as all other vegetation) and many plants near tracks and desire lines had been trampled, indeed there were so many evident that it was difficult not to stand on them ourselves in places but nevertheless we all managed some reasonable photographs. The slopes supported little else in flower save a few Chalk Milkwort *Polygala calcarea* and Horseshoe Vetch *Hippocrepis comosa.*

Cutting through some brambles and scrub, Dave pointed out a sub-species of Lords-and-Ladies *Arum italicum* ssp. *neglectum.* Along the cliff path, probably the most interesting and not unattractive plant was Wild Cabbage *Brassica oleracea.* Reaching some flat rocks at the coast

edge we came across hundreds of dried out and red-leaved Buck's-horn Plantain *Plantago coronopus* that crisped under our feet. Stopping by a boulder a small clump of healthy Danish Scurvy-grass *Cochlearia danica* must have obtained moisture from below the stone but just how a Greater Sea-spurrey *Spergularia media* survived its reign on top of the rock was anyone's guess.

Arum italicum ssp. *neglectum* © Martin Buckland.

Spergularia media © Martin Buckland

Brassica oleracea © Martin Buckland

The group had had enough of the hot dry weather by early afternoon, and we retired to a café not totally despondent and not before the sharp eyes of Karen picked out Ivy Broomrape *Orobanche hederae* growing at the side of the footpath.

Orobanche hederae © Karen Andrews

Martin Buckland

Black Dog Wood

April 26th 2025

Leader: Fran Sinclair

This was an unhurried meeting for eleven of us and to begin with we walked west along the bridle path at the edge of Black Dog Wood. Dave Green decided to take on the recording, occasionally rummaging in a ditch or boggy bit to pick up a few extra species for us to see.

The bank between us and the wood proper had a large population of Goldilocks Buttercup *Ranunculus auricomus* and just over the other side the top was soon fringed with delicate fountains of Wood Millet *Milium effusum*. Another lovely plant was Scaly Male-fern *Dryopteris affinis*, enjoying the north-facing side of the bank.

Lathyrus linifolius © Martin Buckland

As the path widened Bitter Vetch *Lathyrus linifolius*, with one plant in flower, was discovered in a glade. Diverting briefly in the hope of finding Lesser Spearwort *Ranunculus flammula* we found nothing and gave up looking but then Richard returned from one of his characteristic disappearances having found it – but just over the border into the next monad. After admiring a good stand of Wood Spurge *Euphorbia amygdaloides* we paused for lunch around an old campfire site.

Joining the southerly track, one of our target species, Field Horsetail *Equisetum arvense*, was found in a soggy area, vindicating the feeling that there must be an *Equisetum* somewhere in the monad! Another target was Thin-spiked Wood-sedge *Carex strigosa*, which was found early on with other sedges following: Pendulous Sedge *Carex pendula,* Wood Sedge *C. sylvatica*, Remote Sedge *C. remota* and False Fox-sedge *C.otrubae* that were all flowering very attractively, too.

Fran made the mistake of pointing out a very tiny Tare, so out came the books from Sarah's and Richard's bags but after a good ten-minute deliberation over stipules and branching or otherwise of tendrils, they agreed it was too small to identify. While waiting for them, the main group confidently found Heath Speedwell *Veronica officinalis*.

On the southern side of the wood the path was slightly muddier but very flowery, with Bluebells *Hyacinthoides non-scripta*, Wood Anemone *Anemone nemorosa*, and Wood Melick *Melica uniflora* which Maddy spotted. Wych Elm *Ulmus glabra* gave Dave the opportunity to tell us about the importing of Elm saplings in the late 1700s in the rush to enclose land.

We had kept our eyes out for Moschatel *Adoxa moschatellina* throughout the walk, but it was only after the majority had left that a small population was seen.

The previous plant count for the 1km square (monad) was 134 but our efforts raised that to 214, an extremely useful exercise.

Fran Sinclair

Great Chalfield Farm

May 10th 2025

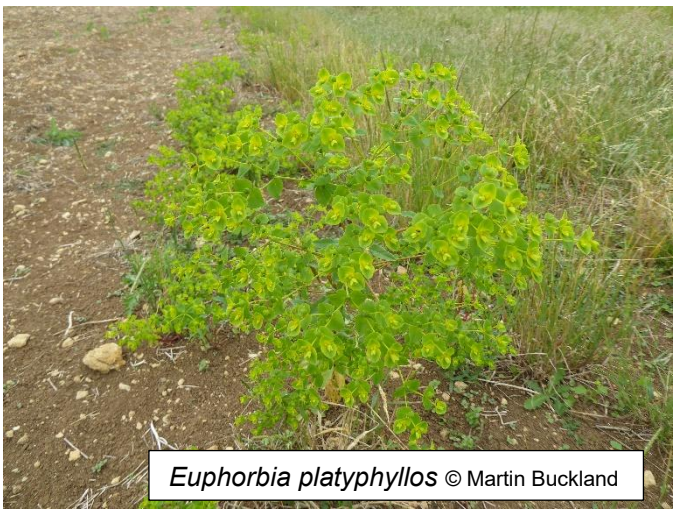
Leader: Jane Kinney and Nick Self

Wiltshire Botanical Society accepted an invitation from Wiltshire Wildlife Trust (WWT) to visit their latest reserve which, in association with the National Trust and the Great Western Community Forest, they have taken on as a regenerative farming project at Great Chalfield near Bradford-on-Avon. We were fifteen members who were guided around a proportion of the site on a glorious hot and cloud-free Saturday by Jane Kinney, the Trust's Project Ecologist, who explained the ethos of this project and the proposed long-term management goals and who was joined by Nick Self from WWT

We first visited a newly tree-planted, ex-arable field, which has been under sown with a wildflower/cornfield mix. This plunged the group immediately into identifying these annuals, many not in flower yet. Much discussion was had on a Chamomile *Cota* species, which was much in evidence. There were concerns that it may have been a closely related foreign species such as Austrian Chamomile *Cota austriaca* rather than a native, sadly a practice that is not too uncommon amongst some seed companies offering so-called native seed mixtures. However, as it was not possible to absolutely define to species until the plant is in seed, we moved on quickly.

We crossed into a sloping field with a deep leat at one edge which contained a number of aquatic species. The field can in places be quite damp as the leat has a history of leaking into the pasture. This site was much admired as it was fronted along one edge by mature trees along a stream indicating lots of potential as well as existing diversity. The next field was Little Sleight, a semi-improved sloping pasture which had been grazed by horses, even so, it showed a good assemblage of common meadow species including Ox-eye Daisy *Leucanthemum vulgare*, Meadow Buttercup *Ranunculus acris*, etc.

Through a very thick hedge we came on a completely different habitat, a huge arable field, of which we followed one edge round to the road. There was a marked difference in habitats and species here, including the very localised Broad-leaved Spurge *Euphorbia platyphyllos*.



Euphorbia platyphyllos © Martin Buckland

A complete surprise was a number of newly emerged Marsh Fritillary butterflies seen by some members of the group.

On reaching the road, the ancient hedges here were in places dominated by Bath Asparagus *Ornithogalum pyrenaicum*, the majority of the population showing their budded stems up to 45 cm. As it was approaching lunch, we moved across another horse paddock very similar to the first in plant composition and stopped adjacent to Ladies Coppice in the shade.

Fortified by lunch and cooled by the shade we made our way into the coppice. The path was edged with Goldilocks Buttercup *Ranunculus auricomus* for much of our route and there was also plenty more Bath Asparagus. Noticeable absentees, though, were Woodruff *Galium odoratum* and

Moschatel *Adoxa moschatellina.* Towards the end of the route through the wood we came upon a sizeable population of Wood Speedwell *Veronica montana.*

Emerging into a sloping field with sheep and desiccated anthills half of the group members decided to call it a day and followed the lane to their cars. The remaining half entered Timberfield, hoping that the thick hedge and overgrown strip of Timberfield East would prove interesting. Alas no, and as there was no exit from this second field, we walked back following the hedge, that was adorned with the webs of Spindle Ermine Moth *Yponomeuta cagnagella*, complete with stripy caterpillars, below left.

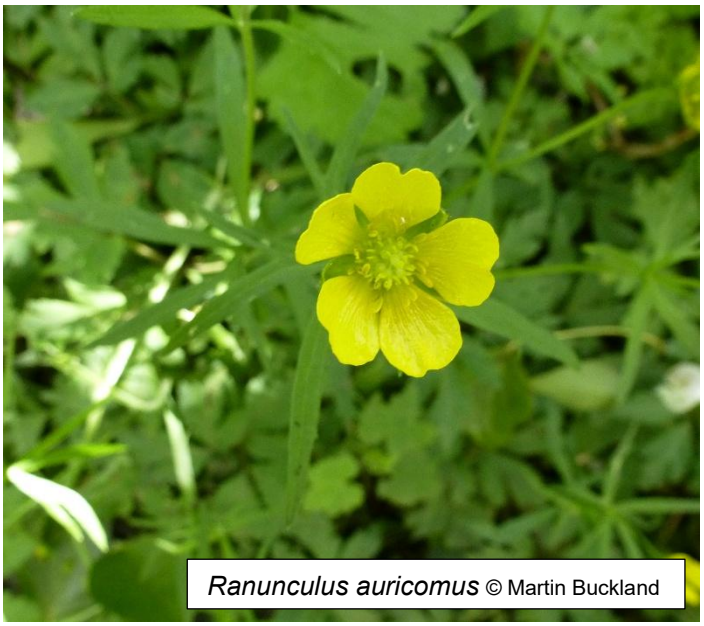
© Fran Sinclair

'Leat' field © Fran Sinclair

As we reached the sheep field known as Watgrove we paused to decide on our route and, after some interesting information about the restoration of an old streamline in the field and a lengthy discussion about Biodiversity Net Gain, we decided to head back to the cars, passing some lovely old Oaks at the end of the field.

A fascinating meeting and a site to revisit in the future to see the progress.

Fran Sinclair and Dave Green



Ranunculus auricomus © Martin Buckland

Ornithogalum pyrenaicum © M.Buckland

WBS Weekend to Suffolk

May 2025

Nine WBS members travelled to Suffolk for a plant-filled weekend in mid-May. Our unofficial guide through most of the visit was Alex Prendergast, who had also helped with advice in the planning stages and who generously shared his extensive botanical and local knowledge with us.

Both Alex and Martin Sanford, Suffolk County Recorder, met us at Thelnetham Fen on the afternoon of our arrival and were very good company for our relaxed stroll around this small but beautiful fen. We were all impressed by the numbers and size of the Marsh Lousewort *Pedicularis palustris,* poetically but accurately described by Richard as “resplendent, like little trees”. Another favourite at this site was, for Sarah at least, Whorl-grass *Catabrosa aquatica*.

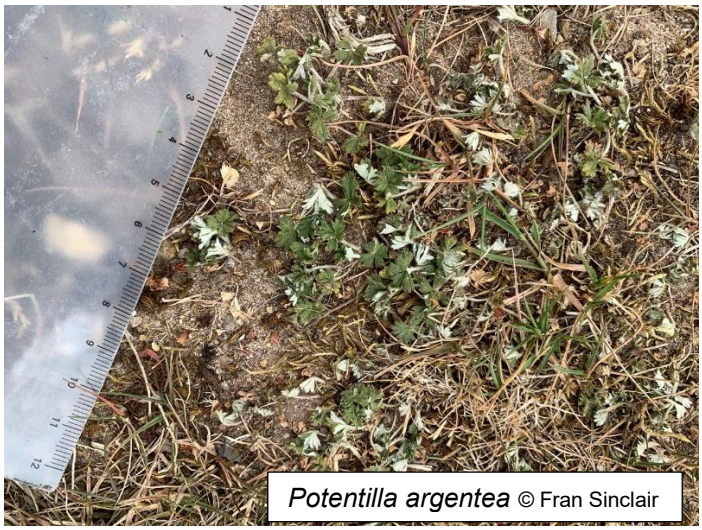
Pedicularis palustris © C & M Storey

Catabrosa aquatica © Kat Newbert

Amsinckia micrantha © Fran Sinclair

Our first full day began at SWT Knettishall Heath, which has a fascinating car park, botanically speaking, with Fiddleneck *Amsinckia micrantha (*just the first of many during the trip), Sheep’s Sorrel *Rumex acetosella*, Annual Knawel *Scleranthus annua* (Alex showed us this one), tiny, pretty Dandelions *Taraxacum* spp. (did I just type that? Help!) and then Shepherd’s Cress *Teesdalia nudicaulis* and Smooth Cat’s-ear *Hypochaeris glabra* a hop and a skip away. The assistant warden, David Stansfeld, took time out from his maintenance work to give us an admirably concise, informative brief on the site before he had to get back to his chainsaw. Following the route he suggested we saw Climbing Corydalis *Ceratocapnos claviculata*, but not just the one or two precious specimens I was expecting: it was astonishing in its luxuriance, billowing round the tree trunks in a bright green cloud.

Scleranthus annua © Fran Sinclair



Potentilla argentea © Fran Sinclair

Note: the stones are in fact pea-shingle at < 1cm. To thank them both for their presence, Martin surrendered his valuable drinking water and quenched their thirst.

Ceratoapnos claviculata © Martin Buckland

C.claviculata Climbing corydalis cloud © Fran Sinclair

There was much hands and knees botanising but, as almost-local Jo Parmenter (Secretary to the BSBI Science and Data Committee) had warned us in a pre-visit communication, much of the vegetation had been crisped by the dry spring – see the photo of Hoary Cinquefoil *Potentilla argentea* (above). So, although we had enjoyed seeing a few small patches of Purple Milk-vetch *Astragalus danicus* and plenty of Field Mouse-ear *Cerastium arvense,* after our picnic lunch we moved on to Market Weston Fen where Jo met us: another excellent botanist to help us out with unfamiliar species. We were all delighted to see so many Common Butterwort *Pinguicula vulgaris* in flower together; one of Karen's favourite sights of the trip. This site also delighted Sharon, who exclaimed "I'm really chuffed to see that fabulous Flat-sedge *Blysmus compressus*" – a carpet of it on the path. Kat waded in to a marshy patch to look at the vast array of sedges including Lesser Tussock-sedge *Carex diandra,* Long-stalked Yellow-sedge *Carex lepidocarpa* and Carnation sedge *Carex panicea.*

Carex panicea © Kat Newbert

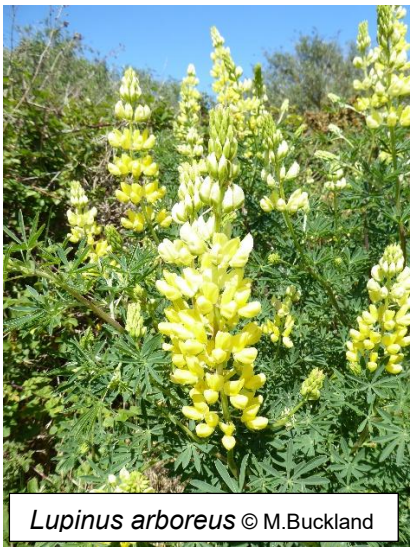
On Saturday we headed east to NT Dunwich Heath & Beach. Another absorbing car park, with a lot of Springbeauty *Claytonia perfoliata* round the edges, but as we ventured on to the heath, stepping a metre or so off the path to examine a plant, we were accosted by an officious volunteer telling us to stay strictly to the path. Amidst much indignant grumbling we decided to head the other way, down to the beach. We were rewarded, again in Sharon's words, with "the wondrous vegetated shingle community of Sea Kale *Crambe maritima*, Yellow Horned-poppy *Glaucium flavum* and Sea Pea *Lathyrus japonicus*, [which] takes some beating. As well as being stunning at this time of year it is a rare and threatened maritime community that has its own National Vegetation Classification code – SD1."

Crambe maritima and *Lathyrus japonica* © Fran Sinclair

Glaucium flavum © Martin Buckland

We were not so thrilled to see a patch of New Zealand Piri-piri Burr *Acaena novae-zelandiae*. Martin reported this to the information desk, to be met with some reluctance to pass the information on to the warden. It became apparent that in other parts of the reserve there is so much Piri-piri Burr that the Trust has had to abandon grazing due to the animals' coats picking up the seedheads.

Acaena novae-zelandiae © Martin Buckland



Lupinus arboreus © M.Buckland

We ventured further up the coast to Walberswick after lunch, where we followed the path through woods and out into coconut-scented sunshine with Gorse *Ulex europaeus*, Broom *Cytisus scoparius* and Tree Lupin *Lupinus arboreus* edging the path. We came out into a large reedbed system where we could wander along a boardwalk admiring more coastal species such as Wild Celery *Apium graveolens* and Sea Club-rush *Bolboschoenus maritimus.*

After a hot day at the seaside we diverted to Dickleburgh to meet Alex and be introduced to his friend, Ben Potterton, a trustee of The Otter Trust, who guided us enthusiastically round their fen restoration project. This was a heartening experience and a treat – a forest of tall Celery-leaved Buttercup *Ranunculus sceleratus*, Fine-leaved Water-dropwort *Oenanthe aquatica,* Nodding Bur-marigold *Bidens cernua* seedlings carpeting the ground, and the star turn of Marsh Fleawort *Tephroseris palustris* at its re-introduction site. Wonderful. On the walk around Alex and Kat spotted a new species for this location, Slender Marsh Bedstraw *Galium constrictum.* Everyone agreed this was a fantastic way to end the day.

Tephroseris palustris © Fran Sinclair

We visited another soggy site on Sunday morning: Redgrave & Lopham Fen, where we admired the beautiful colour and movement of Purple Small-reed *Calamagrostis canescens* in the breeze. While pottering about 'off-piste' looking for interesting bryophytes, Sharon found Marsh Stitchwort *Stellaria palustris*: an elegant plant and Alex said it was new to the reserve. Christine was taken aback by Great Fen-sedge (Saw-sedge) *Cladium mariscus* – "how on earth does anyone thatch with it!" The sheer numbers of the pretty Water Violet *Hottonia palustris* (a member of the Primrose family, despite its common name) and Lesser Water-parsnip *Berula erecta* was impressive, though it may have been only Martin and me exclaiming at the latter.

As a bonus for those who couldn't resist the offer, Alex showed us several sites on the first leg of our journey home. These included the Breckland Birthwort *Aristolochia hirta*, with its astonishing flowers, the Suffolk population of Military Orchid *Orchis militaris,* and of course a site to see a new sedge for Kat: Rare Spring-sedge *Carex ericetorum,* which thankfully didn't have any protected birds nesting around them!

Aristolochia hirta © Kat Newbert

Orchis militaris © Martin Buckland

Carex ericetorum © Martin Buckland

An all round fantastic, exhausting few days!

Fran Sinclair

WWT Morningside Meadows and Chaddington Lane PRV

June 1st 2025

Leader: Nick Self

Rather than the usual walkaround we took a decision on the day to change the meeting into a recording session. We were joined by a guest from natural England's Field Unit, Mr Alex Prendergast who not only has a vast knowledge of the British flora but has a deeper interest in Dandelions *Taraxacum* spp*,* Sedges *Carex* spp*,* Brambles *Rubus* spp*.* and Elms *Ulmus* spp*.*

We started with Chaddington Lane PRV. This is owned by the Wiltshire Wildlife Trust and is listed under Wiltshire Council's Protected Road Verge scheme. The area is approximately 500m long and up to 10m wide on each side of the road. The aim of the day was to find and record as many species as we could but in particular to refind Adder's-tongue *Ophioglossum vulgatum* that had not been seen since June 2010.

Alex, along with Kat Newbert our Wiltshire recorder, took up the challenge of bravely searching along the brambly ditch while the sensible ones enjoyed the grassy verge. Their search was rewarded however with two new species for the verge of Lesser Water-parsnip *Berula erecta* and Square-stalked St John's Wort *Hypericum tetragonum.* Alex's love of Rubus paid off as he found a new species for Wiltshire, *Rubus hindii* plus another species only recorded for the seventh time ever, *Rubus eboracensis.*

On the verge we found the occasional Pepper-saxifrage *Silaum silaus* which had managed to flower despite the dry weather but a few plants of Sneezewort *Achillea ptarmica* proved to be another new species for the PRV. Sarah Grinsted has a keen interest in grasses and her good eye spied out a grass that had the look of Annual Meadow-grass *Poa annua,* but this turned out to be its cousin, Spreading Meadow-grass *Poa humilis.* A rose caught everyone's attention, not least Alex and Kat. To all intents it appeared to be an oversized Field Rose *Rosa arvensis,* but close examination proved it to be the hybrid *Rosa* x *irregularis* that is the cross between Field Rose and Dog Rose *Rosa canina;* just the sixth record for Wiltshire.

An Elm in a hedgerow looked a little different; definitely not English Elm *Ulmus pumila* and not Wych Elm *U. glabra* either. Alex to the rescue with a nonchalant, Oh that's *Ulmus* x *vegeta*.' Or Huntingdon Elm which is a hybrid between *U. glabra* and *U. minor.* Did Alex find any Dandelions to quote? I wrote down just one, False Hook-lobed Dandelion *Taraxacum pseudohamatum.*

And the Adder's-tongue? Scouting ahead, Sam Braine called out to us and as we gathered there in an area of depressed ground were many plants, slightly diminished by the dry weather but a few still managed to poke their tongues out.

Having spent much of our time on the road verges, after lunch we took a much leisurely approach to the meadows. These were not looking their best because of the drought but there were still plants of interest. Oval Sedge *Carex leporina* was exceptionally noticeable, presumably because it was able to outgrow and rise above the other vegetation that was clearly suffering. Common Sedge *Carex nigra* also stood out. It is rhizomatous normally and flowering plants are found spread out but here we were greeted in several spots with dense tussocks, a form it takes when conditions are stagnant. Dyer's Greenweed *Genista tinctoria* had just begun to flower and is always a joy to see as were the flowers of Grass-vetchling *Lathyrus nissolia.* Finally, a little puzzle of a 5m dense patch of white flowers in a near dry ditch. Looking like Water-cress *Nasturtium* spp. a check of the seed pods proved it to be Narrow-fruited Water-cress *Nasturtium microphyllum,* a new plant for the reserve.

Thanks go to Nick for the informative chat, to Alex for everything and to the excellent company.

Martin Buckland

Top row l to r: Pepper Saxifrage *Silaum silaus,* Adder's-tongue *Ophioglossum vulgatum,* Huntingdon Elm *Ulmus* x *vegeta.*

Middle row l to r: Dyer's Greenweed *Genista tinctoria,* Grass-vetchling *Lathyrus nissolia*

Bottom: Narrow-fruited Water-cress *Nasturtium microphyllum*

Figsbury Rings and Clarendon Park
June 8th 2025
Leader: Alex Rose

Figsbury: This Iron Age fort has lovely ramparts which enclose a (possibly) Neolithic site, and the short grassland supports a wide range of chalk-loving species – hence our visit. We met with Alex Rose, the National Trust's site manager, who told us about the work that is done to maintain the site. Cattle graze during the summer months but, sadly, a search to find an owner who is willing to put sheep on the site is proving very difficult. The reason for this is the popularity of the site, particularly with dog walkers who are loathe to keep their pets on a lead. We were treated to several examples of this problem and realise how much more demanding it must be to manage the visitors than the wildlife!
Alex came armed with a list of past records from the site and was keen to relocate several of them. Sharp eyes quickly spotted quite a few including, on a very good area of the ramparts with closely cropped turf, a nice population of Bastard-toadflax *Thesium humifusum*.

Do look at the BSBI Plant Atlas 2020 (www.plantatlas2020.org) to appreciate how important Wiltshire is for this species. The rather sickly green foliage stands out, once the eye is attuned, and the small white flowers are a bonus. We were less fortunate in our quest for Frog Orchid *Coeloglossum viride* although Julie Marshall could assure us that they were present last year. Perhaps we were a little early, especially in this very dry season.

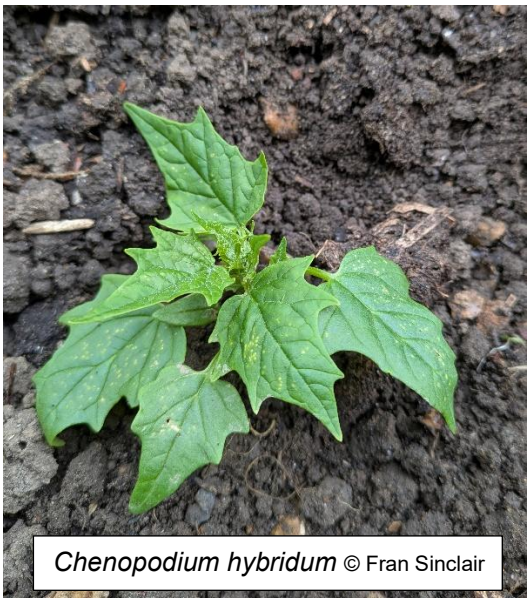

Thesium humifusum © Pat Woodruffe


Dactylorhiza x *grandis* © K. Newbert

An interesting find by Julie and Kat was a hybrid orchid *Dactylorhiza x grandis* the hybrid between Common Spotted-orchid *D. fuchsii* and Southern Marsh-orchid *D. praetermissa.* This is a fertile hybrid which is also well known for being pollinated by one of the parents (back-crossing) so that the scope for variation of its characteristics as well as its distribution, often well away from one of the parents, is enormous. Alex was able to confirm that this hybrid had been recorded on the site previously by Leif Bersweden. Leif was a member of WBS during his school days in Salisbury and those who have read his book 'Where the Wild Flowers Grow' will recall just how complimentary he was about the role The Society played in making him feel that is was okay to love plants, even at the age of 17.

These are just a few of the highlights of the morning which was topped off by several swallows doing low-level flypasts as we ate our lunch!

Clarendon Park: It has been difficult to obtain permission to record on this estate for the past 20 or so years but we were able to gain access on this particular afternoon to record two 1 km squares for which there were no post 2000 records. Eight of us split up to cover as much as we could of the area in a couple of hours. It was mainly arable land with some old hedges and woodland strips as well as some estate tracks and farm buildings. The opportunities were rather limited, but we managed respectable totals of around 150 species for each square. Highlights included Rough Poppy *Roemeria hispida* (previously *Papaver hybridum*), both Sharp-leaved and Round-leaved Fluellen *Kickxia elatine* and *K. spuria* and Dwarf Spurge *Euphorbia exigua*. Another interesting find was Maple-leaved Goosefoot *Chenopodium hybridum* which, in Wiltshire, is found mainly on the southern edge of Salisbury Plain.



Chenopodium hybridum © Fran Sinclair

Astragalus glycyphyllos © Pat Woodruffe

To conclude a long day a group of us went in search of Wild Liquorice *Astragalus glycyphyllos.* I had last seen it on this estate some 20 years ago when the previous owner had granted permission to record a monad for a BSBI initiative. Despite early reservations that the track on which it had been found was now shaded by hedges and very grassy, no sooner had we reached the known grid reference than the shout went up 'Got it!' Not only did we find it, but there was far more than had been previously noted. How often can we report that an old record has not only been re-found but that the plant has increased. We ended up with seven different grid references along a stretch of the track and narrowly missed being able to record it in a second square.

A great end to a very good day.

Pat Woodruffe

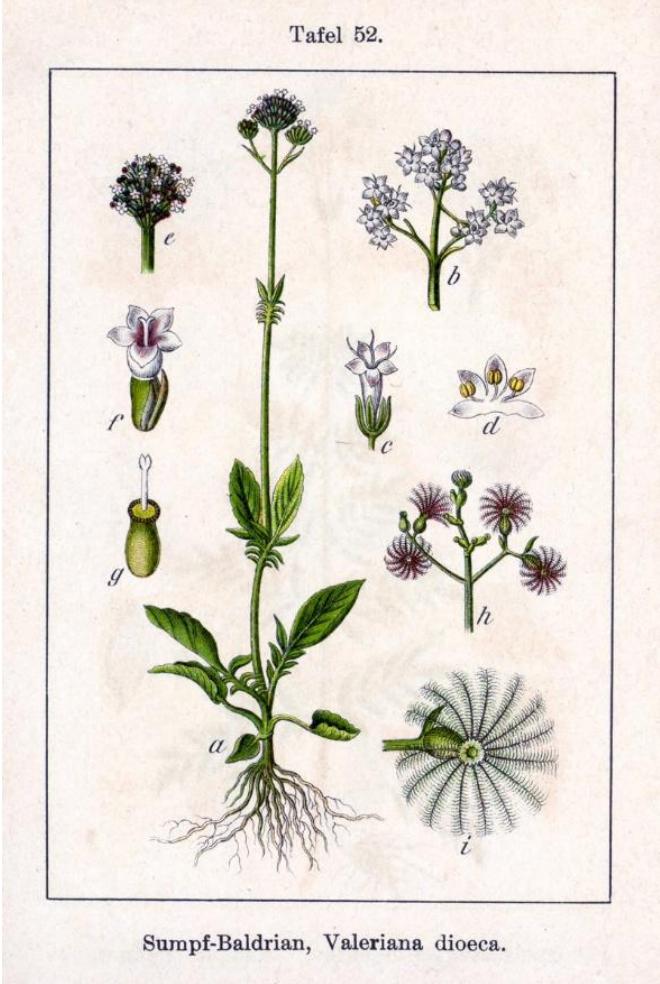
Roemeria hispida © Martin Buckland

A.glycyphyllos seedpods © Martin Buckland

WWT Jones's Mill
June 14th 2025
Leader: Jane Brown

Jane Brown led this meeting but quite often this was in dialogue with Caroline Longley (Wiltshire Wildlife Trust Conservation Lead South Wiltshire) which enriched the visit for all of us. As we walked through the top meadow (sown with seed from Clattinger Farm SSSI some years ago), and a sea of Rough Hawkbit *Leontodon hispidus* in the lower meadow, we were told how the management of the reserve has changed over the past few years, especially the fen areas. Due to difficulties with grazing with the beloved Belted Galloways, for several reasons, the fen vegetation had become coarse and unpalatable to them. Eventually, last year, fen cutting machines were brought in to cut and clear the main areas. Following this, there was an unusual flowering of Bogbean *Menyanthes trifoliata* in November! It is planned to resume grazing gradually, some of which had already begun with a new grazier as sadly the long-term grazier who knew the site well, died last year.

In the meantime, this summer brought extra displays of the usual Marsh Valerian *Valeriana dioica,* the male flowers of which Jane encouraged us to view with a hand lens to see the beautiful arrangement of anthers, as in the illustration (right). There was also plenty of Ragged Robin *Lychnis flos-cuculi,* Bogbean and Southern Marsh Orchid *Dactylorhiza praetermissa* (including some unidentified hybrids) amongst many others. Some of the rarer plants seem to have spread, such as Common Cotton-grass *Eriophorum angustifolium*, Marsh Arrow-grass *Triglochin palustre*, Flea Sedge *Carex pulicaris* – cue a demonstration of jumping 'fleas' - and Bottle Sedge *Carex rostrata*. There were also lovely patches of Bog Pimpernel *Lysimachia tenella.*



Valeriana dioica pic: https://commons.wikimedia.org/w/index.php?curid=780002

You could hardly imagine a more idyllic picnic spot than our lunch stop sitting in sunshine along the boardwalk in the larger fen, with stonking great hybrid orchids in front of us and with both Marsh and Water Horsetail *Equisetum palustre* and *E. fluviatile* within hands' reach.

Jane Brown & Fran Sinclair

Lysimachia tenella © Fran Sinclair

Dactylorhiza hybrid © Fran Sinclair

Carex pulicaris © Martin Buckland

Wylye Down
June 21st 2025

It was forecast to be a very hot day and consequently only five members attended. In the event most of the day was overcast, pleasantly breezy and even with a brief light shower. There was plenty of interest along the track to Cow Down Bottom but the standout plant along here – indeed, of the whole visit - was a form of Knapweed Broomrape *Orobanche elatior forma citrina*. A spectacular plant, which, as you'd expect, was a vivid yellow. There were several large specimens, with more just visible in the scrape uphill on the other side of the fence.

We investigated the west-facing slope first, enjoying Fragrant Orchid *Gymnadenia conopsea*, one tiny Frog Orchid *Dactylorhiza viridis*, a few Clustered Bellflower *Campanula glomerata* and Dropwort *Filipendula vulgaris,* along with plenty of Squinancywort *Asperula cynanchica*, Bastard-toadflax *Thesium humifusum*, and carpets of Dwarf Sedge *Carex humilis.* As well as some of the above species the eastern facing slope had much Dyer's Greenweed *Genista tinctoria* as well as Gorse *Ulex europaeus.* The anthills which had been such a feature of the 2024 visit were mostly completely desiccated.

As we began the walk back to the cars the clouds cleared and the sun beat down, and once we were off the downs and on the track we lost the breeze as well, so it was a punishingly hot trudge.

Orobanche elatior forma citrina © Kat Newbert

Priddy Mineries SSSI, Somerset

July 5th 2025

Leader: Karen Andrews

Arriving in drizzle, we donned waterproofs and browsed the wild raspberries while waiting for everyone else. We decided that 15 minutes was long enough and so just the two of us set off into the unpromising landscape, but which turned into a floral wonderland within moments. The spoil mounds were like giant anthill gardens with Wild Thyme *Thymus polytrichus* and Bird's-foot-trefoil *Lotus corniculatus* dominating but Eyebright *Euphrasia* spp. and Sea Campion *Silene uniflora* were almost as conspicuous. We were just in time for Spring Sandwort *Minuartia verna*, though we only saw one small population. Down in the dips, with Purple Moor Grass *Molinia caerulea*, we found a group of Adder's-tongue *Ophioglossum vulgare*, well past their best. Continuing along the path, which was edged almost all the way by Eyebright *Euphrasia* spp, we noticed ferns that looked interesting but annoyingly were out of reach. As the rain and wind increased we had to stick to main paths as the side ones were completely hidden by the undergrowth and overgrowth weighed down by raindrops.

As it was getting a little bit twelve o'clockish and we too not a little peckish we hastily admired Water Soldier *Stratiotes aloides* as we passed the lake and made our sodden way through tall reeds – Karen repeatedly mentioning how warm and sunny and butterfly-filled it had all been the day before. Fortunately, the rain paused and there was a hint of watery sunshine as we reached 'Helena's Wall' for lunch. (Helena Crouch BSBI Somerset Recorder) There were four Asplenium species growing out of it; notably quite a lot of Black Spleenwort *Asplenium adiantum-nigrum* but also Hart's Tongue *A. scolopendrium*, Wall Rue *A. ruta-muraria* and Maidenhair Spleenwort *A. trichomanes*. After heading back to the main path, we made one more diversion on a more close-cropped track and on one mound found Alpine Penny-cress *Noccaea caerulescens*, in fruit rather than flower but then that is possibly the best way to see it for identification. This path led to an overgrown pond with more unidentified ferns (you can tell that we need October's fern ID day at Whiteparish Common and Bentley Wood!) and both Marsh and Water Horsetail, *Equisetum palustre* and *E. fluviatile*. We then followed the main track to some serious slag heaps where it was interesting to see the pioneer species in what looked a very hostile environment. Thyme was making inroads with purple carpets down the sides, but the more surprising species were isolated plants further down of Hairy Rock-cress *Arabis hirsuta* and deceptively delicate Harebells *Campanula rotundifolia*, their pale bells perfectly set off against the black slag.

Fran Sinclair

Noccaea caerulescens (left), *Campanula rotundifolia* (right). Both photographs © Karen Andrews.

Helen Browning's Organic Farm, Bishopstone

September 6th 2025

Leader: Richard Aisbitt

Sadly, this was another meeting with just a few attending members. However, with only six of us we could take all four cars up to the convenient parking spot. We had clear instructions from Helen and there were also information boards, including one with a map on it. Despite the map being a clear diagrammatic version of the landscape directly in front of us, there was much apparent confusion and criticism of it being upside down with no north indicated! Fortunately, no-one had a red felt-tip pen with them!

A view from the farm © F. Sinclair

The first field's spring wheat crop had been harvested fairly recently, leaving the 'poor undersowing of herbal ley,' as Helen put it, but it was full of curiosities. At first, we had trouble identifying the stumps of Chicory *Cichorium intybus* until a few ground level flowers, looking like blue anemones, gave the game away. Prostrate, odd-looking Fat-hen *Chenopodium album* had us scratching our heads for a short while, and there were several perplexingly different knotweeds spread-eagled across the ground, though only Equal-leaved Knotgrass *Polygonum arenastrum* made it to the list. However, among these and the plentiful Black Bindweed *Fallopia convolvulus* we found a couple of more interesting plants*:* Scented Mayweed *Matricaria chamomilla* and Rat's-tail Fescue *Vulpia myuros*

Field two began in a similar vein but before too long we found a scattering of Rye Brome *Bromus secalinus,* plenty of Field Pansy *Viola arvensis* and single specimens of Yellow-juiced Poppy *Papaver lecoqii*, and the more desirable arable 'weeds' – Dwarf Spurge *Euphorbia exigua*, Bugloss *Anchusa arvensis,* Small Toadflax *Chaenorhinum minus*. We had hardly dared hope to find Night-flowering Catchfly *Silene noctiflora* but there it was, a single plant flowering but found in a different location to 2013's record further south. It would have been an easy one to miss.

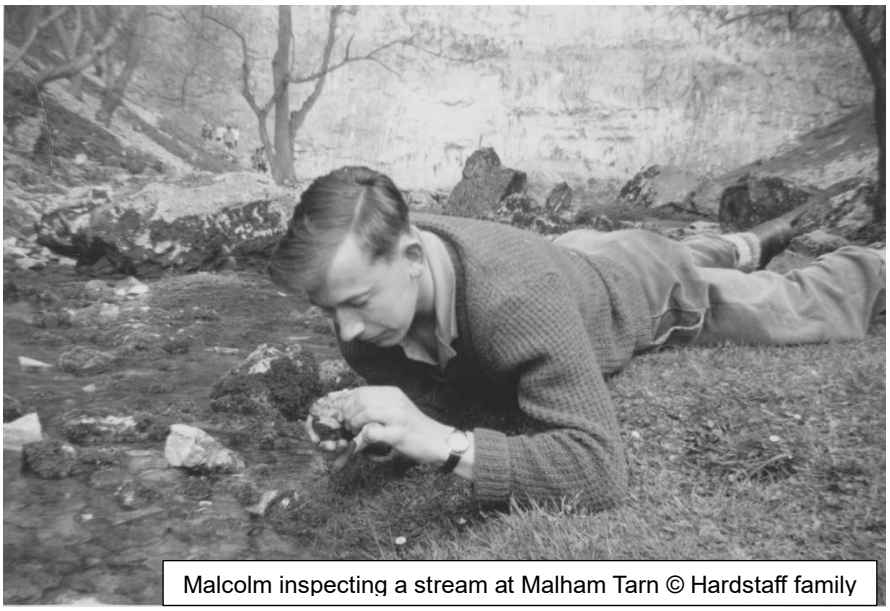
Silene noctiflora © S. Pilkington

After lunching under a Buckthorn *Rhamnus cathartica* hedge, (formerly Purging Buckthorn) complete with Richard's engaging description of monks in the past making use of the purging qualities, leading to downstream populations of the plant (!), Paul and Jane then departed but the only 'good plant' they missed in the third field was Hen-bit Deadnettle *Lamium amplexicaule* – there were very many plants, all afflicted with a Powdery Mildew, which I understand is likely to be *Neoerysiphe galeopsidis.*

Fran Sinclair

Obituary – Malcolm Hardstaff

We have only lately been advised and are sad to announce the passing of Malcolm Hardstaff. Malcolm died on the 9th of March 2024 at the age of 90. He left behind his wife Jean and two children Peter and Jane.



Malcolm inspecting a stream at Malham Tarn © Hardstaff family

Malcolm had a career in biology and was a natural teacher, which led him to becoming head of department at Marlborough College.
He was a thorough and meticulous botanist, who joined the Wiltshire Flora Mapping Group towards the end of its recording project in the late 1980s and early 1990s. He went on to become a founder member of the Wiltshire Botanical Society and sat on the steering group committee. Malcolm held the roles of keeper of records for the society, and took meeting minutes until his retirement in 2001. An active recorder, he added at least two significant plants to the Wiltshire flora, re-finding in Savernake Dwarf Gorse *Ulex minor* the only known VC7 record at that time, and also the only 20th century record in the county for Bristly Hawk's-beard *Crepis setosa.*
During his years as a member of the society, and due to his position as a head of the biology department at Marlborough College, we were able to use laboratories there for meetings over a number of years.

Condolences have been sent to his family.

Sadly, we have just heard the news of the passing of the Society's good friend Rosemary Duckett. An obituary will appear in the coming spring edition of the newsletter.