

Writing a comprehensive 'site flora' with broad appeal: An experience from v.c. 41

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Over the last nine years, I've been intensively recording the flora of a 'rhôs pasture' SSSI close to where I live in South Wales. I was keen to document what I'd found in the form of a 'site flora' – but could I write something that was interesting to a wide audience while still being botanically thorough?

A relatively small but diverse site

Llantrisant Common and Pastures SSSI covers about **120 hectares** immediately north of Llantrisant, about 8 miles north-west of Cardiff. Although the site is not large, the flora is remarkably rich, thanks to its long history of horse/cattle grazing, and mixture of 'rhôs pasture' habitats (marshes and flushes, acid/neutral grassland, wet heath, streams, scrub and woodland).

Recording in detail

When I moved to Llantrisant in 2011, the number of records for the site was relatively small. So I set about recording the plants, and (to be honest) went a bit overboard with the GPS.

Since then, I've made nearly **11,800 records**, during a total of about 300 hours, spread over 378 days. I've mostly recorded in notebooks, with 69% of records at 10 m resolution or greater. I've also sampled over 40 quadrats.

What have I found?

In total, I've recorded over **408 taxa**, from vice-county rarities to little-recorded hybrids and naturalised garden escapes. In addition, the fact that I've been recording the site so intensely (and throughout the year) means that I've made numerous discoveries that I otherwise wouldn't have noticed.

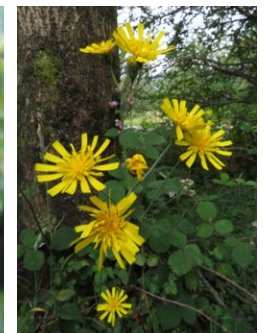
This was all nice of course, but I've come to realise that what I've gained is **so much more than a species list**. In particular, I've:

- Obtained insights into plant distributions.
- Got to know the habitats on the site intimately.
- Studied archive material and talked to local residents to uncover the fascinating history of the site.
- Taken lots of photos.
- ...and of course expanded my knowledge about plant identification (a slow process!).

Continued on next page



Looking across the central part of Llantrisant Common. I've spent many happy days botanising on this site – but how can I summarise what I've learnt?



Two of the more exciting finds I've made during the survey are: one of the very few records nationally for the willowherb hybrid *Epilobium obscurum* × *palustre* × *parviflorum*; and only the fifth extant site in Britain for Glamorganshire Hawkweed (*Hieracium adelphicum*).



This aerial photo taken in 1946 was just one of the fascinating pieces of archive data I uncovered during my research – helping me understand how the site (and its flora) has evolved over the years.

The idea... and a challenge

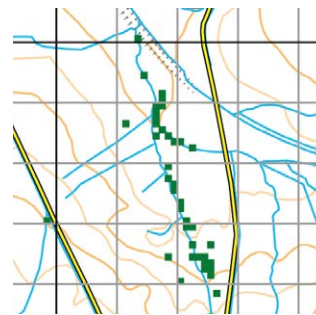
I decided that I couldn't let all this information languish on my computer. So I started to put together a 'site flora' that summarised what I'd found, but I set myself some challenging goals. In particular, I wanted it to:

- Have 'scientific value' – i.e. to be a comprehensive summary of what species were found and where.
- Be of use to current site managers and future botanists.
- Incorporate aspects of the site's history.
- Be readable by a general audience, and not too expensive.
- **Be visually attractive, and convey enthusiasm for the plants.**

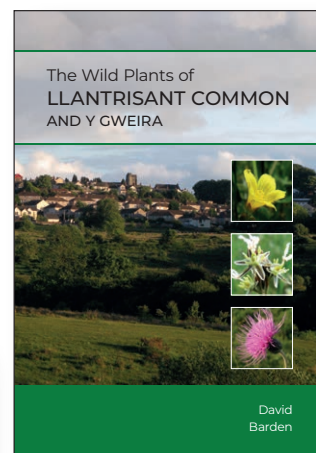
The result

The book has taken three years to research, write and typeset, but it's now finished! It's aimed mainly at wildlife enthusiasts in South Wales, but I hope it will also appeal to local residents with just a 'passing interest' in the site.

What's it got in it? As much as I could squeeze into 192 pages! Importantly, because I was only dealing with 408 taxa, it was possible to include all of them without skimping on the detail, or making the book too long.



Consistently recording rare species using GPS allowed me to plot detailed 10 m distribution maps – as here for Cornish Moneywort (*Sibthorpia europaea*).



I've written and typeset the book myself, which admittedly has been a lot of work! It wasn't easy to fit everything into 192 pages, but it was worth doing to help keep the sale price (£12.50) reasonable.

Copies will be available from early December 2020.

Coverage of all the species and hybrids, including variants

Distribution maps

Site history and habitat summaries

Lots of photos (not just of 'conventionally photogenic' species)

Id tips for selected groups



Supporting BSBI objectives?

In the late stages of writing the book, I saw Lynne Farrell's summary of the three BSBI objectives (BSBI News, September 2020, p.4).

Although I didn't write my book with these objectives in mind, it strikes me that, if carefully constructed, site floras could help to achieve objectives 1 and 3, and perhaps also objective 2.

For more information (or to order a copy!):

- See the samples on the following pages
- Visit www.facebook.com/llantrisantplants
- Email me: dbarden77@yahoo.co.uk

BSBI objective

1. Building a more diverse community of botanists

2. Providing high-quality, impartial data

3. Disseminating information to drive a passion for plants

Can site floras help by...

- Appealing to those interested in the plants that can be found near them?

- Being relatively affordable, because of their inherently limited scope?

- Providing comprehensive species coverage, and detail on abundance and distribution?

- Providing identification tips while avoiding too many botanical terms?

- Demonstrating enthusiasm for the plants, and using plenty of colourful photos?

Introduction

LOCATION AND OWNERSHIP

The area covered by the survey described in this book includes the whole of Llantrisant Common and Y Gweira, which are both part of the ‘Llantrisant Common and Pastures’ Site of Special Scientific Interest (SSSI).



Above: The location of Llantrisant in the old county of Glamorgan, South Wales. Right: The area surrounding Llantrisant Common and Y Gweira.

Llantrisant Common

The area owned by the Llantrisant Freeman occupies 253 acres (102 hectares), and responsibility for managing it was originally the remit of the town corporation. When this was dissolved in 1889, Llantrisant Town Trust was created to take over the task, as well as look after other landmarks including Y Graig, the local landmark Billy Wynt, and the Guildhall (refurbished in 2019 as a museum and events venue).¹



Looking east across the central part of Llantrisant Common, with Y Gweira visible towards the top left.

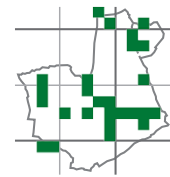
The plants

Salix aurita

Eared Willow

» LC, YG. Native, tree or shrub, occasional in the region

Generously scattered in wet, open ground, especially the railway ditches (0482.8435–0491.8431) and the railway infill (0531.8422). Also thinly scattered in the S part of Y Gweira. Photo ③

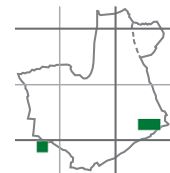


Salix aurita × cinerea = S. × multinervis

A hybrid willow

» LC. Native, tree or shrub, otherwise absent from the region

Reasonably convincing specimens have been found by the SW boundary (0436.8398), by a ditch close to the SE corner (0538.8415), and S of White Bridge (0524.8418).

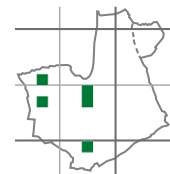


Salix caprea

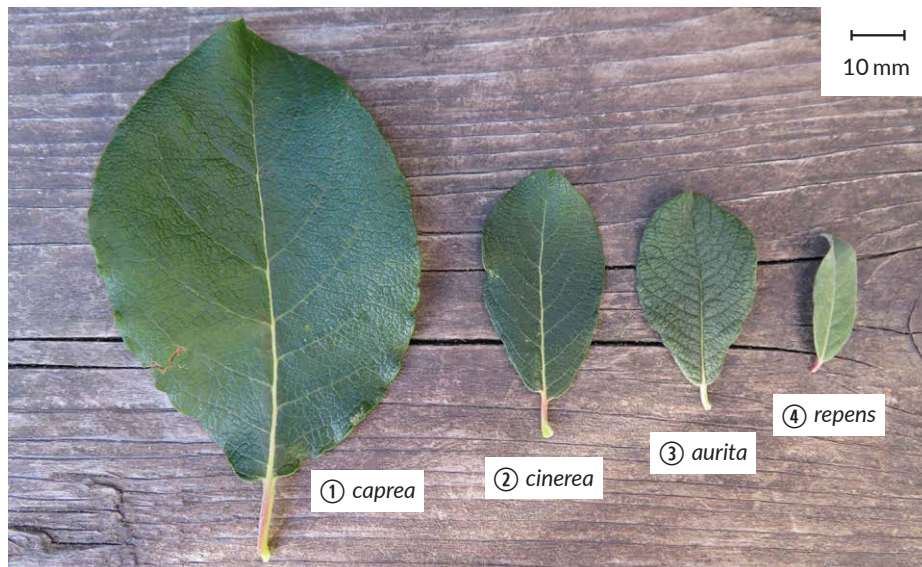
Goat Willow

» LC. Native, tree, common in the region

Only two of the seven plants found are ‘good’ examples of this species: (a) an exceptionally large, multi-stemmed tree on the ramparts of Black Bridge (0476.8435), with a girth of over 3 m near the base; (b) a smaller tree by the central stream outflow (0473.8398). Photo ① 🌸 Four of the remaining plants are ‘tainted’ to a degree by hybridisation with *S. cinerea*, and the other plant, which is by Glanmychudd Road (0432.8455), is untypical, having leaves only 30 mm wide by 35 mm long.



Photographic guide to willows (*Salix*)



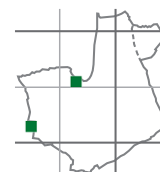
Willows are most easily identified when the leaves are mature, although natural variability and the presence of hybrids results in some being difficult to assign. When untainted by hybridisation, Goat Willow ① has large, roundish leaves that are very hairy below, and with ‘crimping’ around the edges. Grey Willow ② has lance-shaped leaves that are much smaller, and scarcely hairy below. Eared Willow ③ has leaves with a greyish look due to the plentiful hairs, and have strongly indented veins on the top surface. Creeping Willow ④ is distinct from these three, growing up to only 60 cm high, and having small, silky-hairy leaves.

Stellaria media

Common Chickweed

» LC. Native, annual, frequent in the region

Only in thinly-vegetated ground on the railway embankment (0462.8455), where it was abundant in 2018, and by Skipperovic Gate, where one plant was found in 2019. Given its preference for disturbed, nutrient-enriched ground, it's surprising that I've not found it at Northgate.

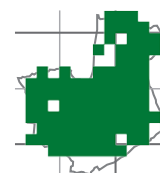


Succisa pratensis

Devil's-bit Scabious

» LC, YG. Native, perennial, frequent in the region

Abundant over large areas, with habitats ranging from short turf to marshy grassland, but with flowers only plentiful where grazing is light or moderate. 🌸 Flowers are normally mid-purple, but pink ones are found regularly, white occasionally ①, and very pale purple rarely. These colour forms are usually found as singletons, but plants with pink flowers are frequent in the S marshes (049.841) and in the E part of the N railway marshes (0505.8441). One plant seen at the NE corner (0507.8515) in 2018 had white petals with a purple tinge, and purple stamens ②. In 2019, I found a remarkable plant in the SE marshes (0523.8405) that had two flowering stems, with 14/19 heads of pink flowers arising from the base of the 'true' flower ③.



Devil's-bit Scabious is normally purple (left) but can show a variety of colour forms (right, see notes ①-③ in text).

Habitat studies

Dry grassland

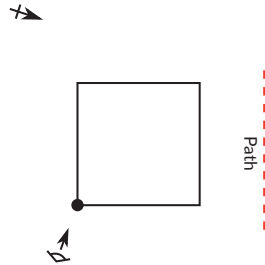
Where not overtaken by Brambles or Bracken, the (relatively) dry grassland found on our sites has a reasonable species mix, varying in character from mildly acidic to neutral:

Top Path

05204.84063 21 June 2019 Q40

Heavy grazing
5° NE, 100%, 5 cm

With abundant *Potentilla erecta* and *Hypochaeris radicata*, this area of slightly acidic grassland is typical of many well-grazed areas on Llantrisant Common.



Abundant

Hypochaeris radicata
Potentilla erecta

Frequent

Achillea millefolium
Agrostis capillaris
Anthoxanthum odoratum
Danthonia decumbens

Euphrasia sp.

Festuca rubra
Galium saxatile

Luzula campestris
Pilosella officinarum

Occasional

Cynosurus cristatus
Holcus lanatus
Lotus corniculatus
Prunella vulgaris
Pteridium aquilinum
Trifolium repens

Rare

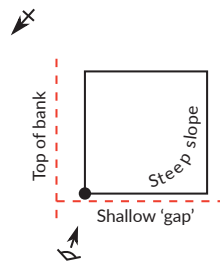
Bellis perennis
Cirsium palustre
Ranunculus bulbosus
Scorzonerooides autumnalis
Taraxacum agg.
Veronica officinalis

The Railway Embankment

04678.84482 23 May 2018 Q11

Light-moderate grazing
0-45° SW, 90%, 5-10 cm

In the most well-drained spots, *Lotus corniculatus* and *Pilosella officinarum* become prominent, supplemented here by *Aira praecox* and *Rumex acetosella*.



Abundant

Lotus corniculatus (L)

Frequent

Achillea millefolium
Aira praecox (L)

Danthonia decumbens

Festuca ovina

Hypochaeris radicata
Luzula campestris
Pilosella officinarum

Plantago lanceolata

Occasional

Anthoxanthum odoratum
Galium saxatile
Rumex acetosella

Scorzonerooides autumnalis

Rare

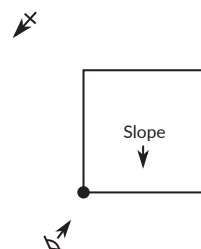
Poa annua

S of Bottom Gate

04282.84489 23 June 2019 Q46

Heavy grazing
15° NW, 100%, 5 cm

On some slopes, a more neutral character is apparent, here indicated by *Betonica officinalis*, *Lotus corniculatus* and *Carex caryophylla*.



Abundant

Danthonia decumbens
Pilosella officinarum

Frequent

Achillea millefolium
Agrostis capillaris
Anthoxanthum odoratum

Betonica officinalis
Euphrasia sp.
Prunella vulgaris

Occasional

Carex caryophylla
Carex pilulifera
Hypochaeris radicata

Luzula campestris
Polygala serpyllifolia
Potentilla erecta
Trifolium repens

Rare

Cirsium palustre
Lotus corniculatus

Plantago lanceolata
Scorzonerooides autumnalis
Succisa pratensis
Taraxacum agg.

Old photographs

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The road junction at Northgate (August 1962), showing on the left the Horse Chestnut that still stands today.

© Mary Gillham Archive Project



Looking across the central marshes from a point just west of the Castellau Road (ca. 1965), showing a similar level of coarse grasses and rushes to today. The photographer pictured is the naturalist Mary Gillham.

© The Francis Frith Collection



A view towards the Royal Mint and Bottom Gate (ca. 1965), before demolition of Glanmychydd Fawr farmhouse (in the centre of the photo) and the growth of the industrial estate. A major difference today is the height of trees along the hedges (as well as on the Common itself).