

Biga's Meadow Mania

Background

Having spent a great deal of time in Old Hall Gardens during 2020, trying to keep on top of things during the various 'lockdowns', John and I had the chance to chat with the visitors to the Gardens. Many of these were elderly, quite a few living on their own, and they were using the space to relax and to ponder the world. They were sometimes happy just to sit and say nothing but at other times keen to have someone to talk to. We found that they were becoming increasingly aware of what was going on in the Gardens, to the point of noticing which areas had been weeded or edged from one day to the next! They were starting to ask questions about what we were doing, and the names of plants – which led John to start making some signs on slates.

People were no longer simply using the Gardens as a thoroughfare but more as a haven of peace and tranquillity. It was wonderful to get their feedback and, naturally, this led to discussions about gardening in general and the various areas within Old Hall Gardens.

The appreciation of our visitors spurred us on to approach the Gardens through their eyes:

- What do they see when they first enter?
- What draws them to venture to a further corner?
- What do they like to look at when sitting on a particular bench?

These discussions led me to consider how we could improve our Meadow area. The tall grasses in the summer months were swamping any flowers that were trying to grow, and it seemed to be getting worse as the years went by. So this year (2021) I decided to do some research into how this might be improved in order to make that area a visitor attraction and somewhere that would draw not only more people but hopefully also more butterflies and bees.

The starting point

Back in February this year, John and I signed up for an online Zoom webinar about 'Reviving Wild Flower Meadows' with speakers drawn from the National Botanic Gardens of Wales and the Centre for Alternative Technology. The meadow areas under their management are all on the scale of fields, and some were being actively farmed in the old traditions of Hay Meadows. This involves shutting off the field from about mid-March until September, and then reintroducing the cattle for the autumn and winter months. The meadows are cut from late July to early September, depending on the weather and on what flowers they are trying to encourage. Some will leave the mown meadow for a few days before gathering up the hay, in order for the seeds to drop. The cattle will then help to trample them into the ground, and thus the seeds make good contact with the soil for later germination. During the course of the year, there might be mole-hills or ant-hills appearing and these also create some bare patches of soil where seed can grow.

That webinar covered a lot of ground and it spurred me on to read more, and to go out and visit some of the meadows referred to. We have since visited the meadows at the National Botanic Gardens several times to see them at different stages.

National Botanic Gardens of Wales

The Hay Meadows at the NBGW cover a vast acreage. As well as these, there are also other areas of meadows with a large variety of flowers where the gardeners are clearly trying out different combinations of colours throughout the summer. The photographs here are all from the Hay Meadow in the main gardens, taken in June and July 2021.

The first thing we noticed was that there are no tall grasses obscuring the flowers – and this over a huge area, of which only a small part is shown here!



There is a predominance of wild flowers as far as the eye can see! As you walk along the paths, there are signposts to help identify the various flowers.



Eyebright is a useful meadow plant in that it is hemi-parasitic. It steals water and mineral nutrients from the roots of nearby grasses, so keeping their numbers down and allowing other wild flowers to colonise. “Where you find eyebright you usually find lots of other wild flowers” – *Bruce Langridge, NBGW*.

This is an annual, with very fine seeds that need to be sown in a balanced open sward without tall, coarse vigorous grasses. Prepare for sowing by cutting the grass very short (25mm) and scarify the ground to create some bare patches; this can be done by raking, and by digging out tough grasses and weeds.

Sowing must be done before December and the seeds will germinate the following spring after a period of cold.

We were puzzled by the bare patches of soil that had clearly been deliberately created. These were to encourage seed germination: when the flowers go to seed, they need good contact with the soil.



Waun Las

Waun Las was designated a National Nature Reserves of Wales in August 2008. The reserve occupies some 150 acres of countryside which has been managed as an organic farm. It forms part of the National Botanic Garden of Wales and is accessed from it.

The reserve is divided into several large fields and contains one particular Hay Meadow that has been designated a Site of Special Scientific Interest, and which is used as a showcase and research area. From this, wild flower seeds have been spread across some of the other fields and the whole reserve is a joy to walk through. Below is just one photograph taken on a 2-km walk around the reserve at the end of June 2021.



Note the preponderance of flowers and the absence of tall vigorous grasses, although there are plenty of the finer meadow grasses here. This whole area is actively farmed as a traditional Hay Meadow, with grazing cattle.

Pentwyn Farm, Penallt, Monmouthshire

This 30-acre traditional sheep and cattle farm is owned by Gwent Wildlife Trust and is a Site of Special Scientific Interest in recognition of its species-rich fieldscape. It is adjacent to a much larger area, Wyeswood Common (104 acres) that has been acquired by the Trust more recently and is being gradually transformed to restore a variety of habitats including grasslands, woodland, hedgerows and field margins.

Pentwyn Farm is a jigsaw of irregular hay meadows with a huge diversity of flowering plants – over 80 species have been identified here! In springtime the cowslips and early-purple orchids provide a colourful display. By late spring, thousands of spikes of green-winged orchids start to appear in the meadows, joined by a variety of other orchids, including over ten thousand common spotted orchids.

We visited Pentwyn Farm in mid-July, by which time the orchids had finished flowering and the knapweed dominated the landscape. Again: note the absence of tall grasses.



We were fortunate in the timing of our visit as the Farm Manager, Joe, and some volunteers were just taking their lunch break and were happy to have a chat.

Joe very kindly took us to one of the fields and talked us through how we might improve our own meadow in Old Hall Gardens, of which I showed him some photographs. As it is only a comparatively small area, he agreed that hand-weeding was an option in order to speed up elimination of the tall grasses that are choking off the wild flowers.

Additionally, of course: yellow rattle and eyebright are a great help. He advised waiting for the wild flowers that we do have to set seed before we cut the meadow, even if that means waiting until early September. Then scarify and spread seeds of yellow rattle and eyebright if we can get them.

Cricklade North Meadow, Wiltshire

North Meadow National Nature Reserve (NNR) is an old, traditional hay meadow on the northern edge of Cricklade, covering an area of 108 acres – roughly the size of 60 football pitches. This NNR has a great variety of wild flowers and is of international importance as one of the finest examples of a lowland hay meadow in Europe. It is protected as a Special Area of Conservation (SAC) and a Site of Special Scientific interest (SSSI).

North Meadow is botanically very important. It is typical of the type of neutral hay meadow once common in the floodplain of the Thames valley. Over 250 species of higher plant occur on the meadow and surrounding ditches.

It is estimated that **80% of Britain's Snakeshead fritillaries** (*Fritillaria meleagris*) grow at North Meadow! So a visit during April would be ideal.



We walked around North Meadow towards the end of July, by which time much of the hay had been cut after the very hot, dry spell. However, there were areas that had been left for visitors to see.

At this time of year the predominant flowers were Great Burnet and Meadowsweet, both of which prefer damp conditions and so are commonly found on floodplain meadows, although we also saw them at the National Botanic Gardens. These made a pretty display among the meadow grasses.

North Meadow is managed as *Lammas land*, which describes a particular type of land tenure. Under this management regime, the owner, traditionally the lord of the manor in which the meadow lies, divides the meadow into parcels of land referred to as 'lots' or 'doles'. He then sells the rights to the hay crop to local farmers who are responsible for harvesting the hay in each allotment.

After the hay crop has been gathered, the meadow becomes common pasture and the livestock of certain commoners are entitled to graze the entire meadow. Traditionally, the commonable rights begin on 12 August, also known as *Lammas Day*, and end around *Candelmas* at the beginning of February when once again the meadow is laid up for hay.



As far as is known, this system of land management has survived relatively unchanged here for the past 800 years!

The meadow supports a large number of nectar-producing flowers which attract many butterflies: 23 species of butterfly have been recently recorded on North Meadow. A wide selection of day-flying moths and night-flying moth species are also found there, including the distinctive Five- and Six-spot Burnets and the Ruby Tiger and Scarlet Tiger.

Old Hall Gardens Meadow

It was interesting to explore various meadows that are being managed on a grand scale, and to see that throughout the summer they are all dominated by flowers which are growing amongst fine meadow grasses.

From talking to visitors in Old Hall Gardens it is clear that they are very appreciative of seeing a variety of wild flowers when they appear, but there have also been a lot of comments about there being too much grass obscuring them.

The vigorous tall grasses seemed to be increasing from year to year, so I looked back at some old photographs of the Meadow that I used when I set up our website. The picture below was taken in June 2012 – that's almost ten years ago (before my time). It was stunning!



Photograph of OHG Meadow in June 2012

Since then, tall vigorous grasses have crept in to the point where they are now the dominant feature. Even our friend the Yellow Rattle cannot keep up with it; we have just a few of them, mainly around the edge of our Meadow.



Yellow Rattle (*Rhinanthus minor*) is a semi-parasitic, grassland annual. As its roots develop underground, they seek out the roots of plants growing nearby, especially grasses. Once contact is made the yellow rattle draws water and nutrients from them, suppressing the growth of grasses by as much as 60%. In the resulting space, other flowers have room to grow.

The plant thrives in managed grassland that contains a balanced open sward of finer grasses, not dominated by coarse or vigorous grass such as ryegrass, cocksfoot, tall oat-grass or couch.

Below are a couple of photos of half of our Meadow area taken in July of this year, 2021.



Clearly, the vigorous grasses are dominating here and they are out-competing all else. Indeed, they are now so tall (shoulder height!) and thick that they are taking away the light and air from the flowers that might have flourished. The “open sward” that meadow experts refer to has become choked. As it is, this area is not drawing visitors into the garden, and it would probably not attract too many moths and butterflies either.

But if you were to venture beyond the above area, along the path at the southern end to where the bench is, you would see this: an abundance of flowers enjoying some light and air.



As most of the OHGardeners will know, I embarked on an experiment this year: on one side of the path that runs through the meadow we left the area untended. However, the side of the path where the bench is has had some attention this year in an effort to free up the flowers that we wish to see and encourage, and to reduce the tall vigorous grasses.

My vision in doing so was to try and think about what someone would wish to see when sitting on the bench: would it be a wall of grass? Or would they enjoy the wild flowers?

Our entire Meadow is a comparatively small area (maybe half a tennis court) so it should be possible to improve this quite easily – if necessary, by some careful hand-weeding to pull out the coarse grasses. And this is exactly what we did on the bench side, starting around March as the Cowslips appeared and as leaves of the Common Spotted Orchid began to show themselves.

The results speak for themselves, and it is great to see the more delicate meadow grasses starting to appear amongst the flowers.

Crested Dog's Tail



Timothy



Meadow Brome



Quaking Grass



Next Steps

1. Mowing

Meadows are cut at varying times, depending on their stage of development and on which flowers are to be encouraged. Generally, an early mowing (in July) encourages spring flowers while a later mowing encourages the summer flowers. Our meadow has a mixture and this year, on the bench side of the meadow, we should wait until nearly all the flowers have set seed; that is likely to be late August/early September. Once mown, the cuttings should ideally be left a few days for the seeds to drop before being removed.

The other side of the meadow can be cut now and the cuttings removed straight away. Beverly is hoping to enlist the help of her brother, who has a petrol-strimmer; he might even be persuaded to join us on a more regular basis. This area would benefit from any tough grasses being pulled out – but it is quite a painstaking task! The meadow should be mown as short as possible, to about 25mm.

2. Scarifying

After mowing, we need to *scarify*. This can be done with a stiff rake to scratch some bare patches so that the seeds can come into contact with the soil; they will not germinate on grass. In a grazed meadow the animals' hooves will do this quite naturally, but in their absence we can stamp around so that any seeds will be trodden into the ground. Where we have managed to pull up some of the coarser grasses by their roots, this will also contribute towards exposing bare soil.

3. Seeding

I have collected some seeds of Cranesbill and Ox-Eye Daisies as they have matured elsewhere in the gardens; these can be carefully spread in the meadow after scarifying.

In particular though, I have ordered some seeds of **Yellow Rattle** and also collected a few of our own as they were seeding along the path – we don't want them all around the margin of the meadow! I am also trying to obtain some seeds of **Eyebright**. Both these need a period of cold in order to germinate, and they need to be spread as soon as possible after scarifying and certainly by November. The seeds need about four months of temperatures dipping below 5°C in order to germinate in the following spring.

4. Further Mowing

We should keep an eye on the grass and maybe mow again once or twice before the end of the year, and again in early February before the spring flowers start to appear. This would simulate grass being kept short by grazing animals and is recommended to help "keep the sward open". But it is important to look at what is happening – we obviously don't want to be chopping off the leaves of Cowslips before they start to flower in the spring, for instance!

5. Next Year and beyond: 2022–2023

If we want to get our meadow back to how it looked ten years ago it would be worth putting in some extra effort to keep an eye on tough grasses and pull these out when we can. Where we have done this during 2021, it has helped enormously in allowing the flowers to actually grow and bloom – and there are certainly plenty of them hiding in the long grass. We should aim to have our Meadow looking glorious by summer of 2023 – a place to draw the visitors, as well as the butterflies and moths.

References

I have learned a lot from careful observation, both in our own meadow area and in the meadows that we have visited this summer and which I have described here. Alongside this, I have read extensively on various websites; below are a few in case you are interested in reading more yourself.

<https://botanicgarden.wales>

<https://cat.org.uk>

<https://crickladecourtleet.org.uk/north-meadow/flora/>

<https://www.gwentwildlife.org/nature-reserves/pentwyn-farm-sssi>

<https://www.habitataid.co.uk>

<https://www.plantlife.org.uk>

<https://www.sarahraven.com>

<https://www.wildlifetrusts.org>

<https://wildseed.co.uk>

Biga John

August 2021