



# Welsh Bulletin

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**Editors: Richard Pryce, Sally Whyman & Katherine Slade**



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**Front cover, image 1** : *Verbascum densiflorum* (Dense-flowered Mullein) over-flown by Red Kite, St David's church, Capel Bangor, SN655801, Cardiganshire (v.c.46), July 2020. © S.P. Chambers. See article page 17.

**Page 2, image 2**: *Trioza centranthi* on *Centranthus ruber* at Penparcau. © Chloe Griffith. See article page 9.

**Image 3**: London Plane trees recently planted at the Eastgate development Llanelli, October 2020. © Ian Morgan. See article page 36.

**Image 4**: Mature London Plane trees in Alban Road, Llanelli, planted in the early 1900s. © Ian Morgan. See article page 36.

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Items for inclusion in the next Welsh Bulletin should be sent to Richard Pryce by **1 Dec 2021**. Editors: *Richard D. Pryce*, Trevethin, School Road, Pwll, Llanelli, Carmarthenshire, SA15 4AL PryceEco@aol.com. *Sally Whyman* (sally.whyman@museumwales.ac.uk) and *Katherine Slade* (katherine.slade@museumwales.ac.uk), Dept. Natural Sciences, Amgueddfa Cymru-National Museum Wales, Cathays Park, Cardiff, CF10 3NP.

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# Peter Michael Benoit March 1931 - January 2021, a personal memoir

SARAH STILLE

Peter was born in Birmingham but left there with his mother in the early years of the war, to live in Barmouth, where he spent the rest of his life. After unsuccessfully trying to fit into the local primary school he was tutored at home but was allowed to give up formal education in his teens: thereafter he concentrated so much on botany that when he met Mary Richards of Tynllidiart, Brithdir, in 1953, she was astonished to find him “*a very young man but with prodigious botanical knowledge, all self-taught.*” (Condry, 1998). He spent only a day in a “proper” job before deciding he didn’t like it and thereafter, any income he earned was from occasional contracts and commissions with The Countryside Council for Wales.

Peter’s lifetime of botanising in his own county of Merioneth and as a visiting expert in neighbouring Montgomeryshire resulted in quite remarkable achievements. He was Vice-county Recorder for almost 56 years, during which time he co-wrote a Contribution to a Flora of Merioneth with Mary Richards (although it has to be said that the actual compiling was done by him as she was by now mostly living in Africa). (Benoit and Richards, 1963). He became BSBI Referee for taxa including *Ulex* (Gorse) and *Circaea* (Enchanter’s Nightshade), and wrote many papers particularly on hybridization, as well as putting up many ‘firsts’ for Wales and the county including *Carex binervis* x *C. punctata* [Herb. NMW]. These achievements have been thoroughly documented in Arthur Chater’s obituary of Peter (Chater, in press).

My own meeting with Peter was almost by chance. In 1998, soon after I retired and moved to Llandrillo, I was walking down my lane when I bumped into Trefor Thompson, Denbighshire’s Tree Officer, who was busy photographing the fine *Populus nigra* subsp *betulifolia* (Black Poplar) trees growing in the field opposite. With their massive form, down-sweeping branches, and large bosses on the trunks, they were splendid examples of the species which I had hardly had time to notice since my move. I wrote to Peter Benoit, the Vice-county Recorder, and he came straight over on the bus to see what I had found! That was the first of very many journeys he made to Llandrillo. Like many other botanists, I became part of the Benoit support system which Peter relied on to travel to parts of the county not served by bus and train!

I must have shown interest in flowers from a very early age as my mother’s old

governess gave me my first flora, W.C. Johns' Flowers of the Field, when I was only five years old! But despite reading botany for my first degree in the 1950s, field botany had been at a very amateurish level all my life. Holidays had involved noticing and enjoying, but not at all systematically, the plants I saw on my travels. It was only when Emily Meilleur took me to Jean Green's field meetings in Denbighshire (v.c.50) that I became aware of the BSBI and the extensive recording of wild plants that was its chief function. I discovered 'Stace', which rather put my 1st Edition CTW in the shade, and eventually I was dragged by Jean, and Wendy McCarthy, to Harlech for the BSBI Welsh AGM in 1998 - unwillingly, because, like many others, I felt much too ignorant to aspire to a meeting of such an august society! That weekend I was taken under the wing of Ann Conolly, running small errands for her, helping her over stiles, and she involved me in a technical conversation on *Elytrigia* (Couch) with the eminent Arthur Chater! One of the leaders that rainy weekend was the Recorder for Merioneth, Peter Benoit, who had kindly stepped in at the last-minute and was forever after blamed for taking a largish party of botanists onto the national nature reserve (NNR) without permission!

In 2000, Peter's mother died: I was impressed by Peter putting a large bunch of *Ulex europaeus* (Gorse), her favourite plant, on her grave. Peter now lies next to her in the beautiful churchyard of Llanaber overlooking Cardigan Bay with a view, on a clear day, as far as Ynys Enlli. At her funeral, I met Jackie Maynard for the first time. Peter and Jackie were working on a bryophyte flora of the Wildlife Trust woods, Coed Crafnant and Coed Dolbebin and I was soon drawn into their explorations: cake was an important ingredient of these excursions! I remember Peter looking up to the flank of the Rhinogau and pointing out the brighter green of the Ash in the stream beds marking where manganese had influenced the soil chemistry. On another occasion we visited the waterfalls at Pistyll Gain and Rhaeadr Mawddach and I was amazed to see this somewhat frail-looking and already rather bent man in his 60s nipping up and down the rocks behind and beside the waterfalls.

By then I had become enthused and went on several bryophyte courses taught by the indomitable Martha Newton. Sadly, although Peter gave me a great deal of encouragement and sent me many packets of interesting mosses through the post, I fear I am one of those that E.V. Watson thought didn't have "the exceptional eye or taxonomic flair" to become the competent bryologist he tried to encourage! One memory: from several yards away, Peter announced the presence of *Warnstorfia* (*Drepanocladus*) moss. I was astonished – "can you really see it well enough to identify from here?" I asked him, although I already knew

how excellent his eyesight was! He explained gently that he could identify the bryophyte community, so he well knew that he would find the moss there!

Peter did me an enormous service at an early stage; he produced a “Wants List” for ‘my’ hectad, SJ03, around Llandrillo. It was a meticulous list of plants recorded for the square, marked with those needing updates, as well as additional taxa which he thought should be there, but which had never been recorded. It was just what I needed to direct my field botany, giving me a focus for my nascent plant-hunting. It was a challenge indeed and I was very happy to become involved in recording for the New Atlas then in preparation. Some years later I used similar “Wants Lists” to challenge my local group when I became VCR.

The other project which engaged me in those early days was recording for Local Change in 2003-4. Peter was not prepared to spend much time on this project as he thought it was much too soon to follow the Monitoring Scheme of 1987 with any really significant changes. So, I rose to the challenge to cover the 7 designated tetrads in our v.c. and to visit each tetrad twice in the two years of the project. However, as we approached the end of the period, I still had only been to Tallyllyn Lake once and it was already September! I dragged myself unwillingly together and drove off the 25-odd miles to the site – so you can imagine my chagrin when I saw Peter approaching from the opposite end of the lake! Nevertheless, it was as ever, a stimulating and enjoyable day as I always finished those excursions having learned so much new.

Peter’s kindness and generosity on these occasions was unstinting and he clearly loved imparting his knowledge to other keen botanists. We roamed widely in the east of the county, the area he had known least well until then and where he had lacked chauffeurs to drive him around! Whenever Peter and I spent a day out in the field he would follow it up by letter, as he said, “emptying out his brain”. He produced meticulous handwritten lists of plants seen, with comments or symbols for the notable species, all carefully documented with date and place. I have a wonderful collection of such lists often with further observations which pay tribute to the depth of Peter’s erudition. For instance, I have one letter with a review of historical references to the occurrence of *Listera cordata* (Lesser Twayblade) in Merioneth with extensive quotes from William Pamplin which Peter had researched in depth.

Although reputedly not fit enough for regular employment, Peter was a prodigious walker with great staying power. Ending a day out in the field with Peter was, as someone said – “trying to get a child off the beach”! He was not a mountain man – again, rumour had it that he had a weak chest so his records from high places are few, but I remember a day walking onto the Berwyn summit

ridge from the Milltir Gerrig: it was so over-grazed it was like a billiard table. We were looking for *Carex bigelowii* (Stiff Sedge) and trying to re-find David Elias's *Andromeda polifolia* (Bog Rosemary) on the Merioneth side of the Monts/Merioneth border. That record has never been updated, but some years later I did find *C. bigelowii* as well as its hybrid with *C. nigra*, *C x decolorans*, on the Berwyn summit ridge, when the grazing on the SSSI had been much reduced and the sward had become really lush.

Peter's aversion to heights did not extend to steep declines. David Anning remembers him disappearing into the gorge of the Afon Cwm Mynach in Coed Garth Gell to re-visit the rare moss, *Sematophyllum demissum* in one of its very few sites. I once saw him vanish down into the depths of the Afon Caletwr near Llandderfel, perhaps hoping to find *Dryopteris aemula* (Hay-scented Buckler-fern), for which there is an early (misplaced?) record in a neighbouring monad. His most epic climb was on the steep flanks of Dduallt, trying, with Arthur Chater and Bill Condry, to re-find Derek Ratcliffe's *Orthilia secunda* (Serrated Wintergreen). It is the only record south of Scotland except for another anomalous record in Glamorganshire. Numerous botanists have put their lives at risk trying to update it, but it has never been refound.

One of the walks Peter was particularly proud of was when he took the bus from Barmouth to Y Bala, to walk the old railway line to Trawsfynydd. It registers as 15.7 miles, but I am sure Peter would have added far more miles! The old railway line passes through a lowland river valley and farmland before it passes the village of Frongoch with its disused station and sidings. It then goes steeply up to about 400m passing the station and marshalling yard at Arenig and the abundant stand of *Dryopteris oreades* (Mountain Male-fern) which he once showed me there. The path then had to divert from the railway which was flooded by the waters of the Tryweryn reservoir, and now follows directly above Cwm Prysor towards Trawsfynydd, cutting through promising volcanic rocks on its way west and then down to the mineral-rich slopes of the western Migneint. A rich day's botanising indeed.

A timid man, Peter told me that he was much too frightened to get behind the wheel of a car – though he was happy to be driven by a wide circle of botanical friends, mostly ladies! Otherwise, his field excursions were made if not in the Barmouth locality, by public transport. He was lucky enough to be conveniently situated for both bus and train. Indeed, someone once said that his records if mapped would mirror the transport network of the county! He was also afraid of farmers; I was with him once when we spied a farmer coming our way and swiftly

had to retrace our steps. On another occasion we found a dying ewe with her newborn lamb, and I said we would have to take the lamb down to the farm: Peter was genuinely alarmed by that idea, so I went off on my own while he stayed safely with the ewe!

Peter was a perfectionist, and his reports are works of art with beautifully annotated sketch maps showing his great depth of botanical knowledge and authority. Coupled with his sharp eye this made him a leading botanist of his generation. He was, however, perhaps because of his lack of formal education, unable to realise that his work was destined to benefit science as a whole and was not just for his personal fulfilment. He went so far as to say that he didn't see why other people should benefit from the discoveries he personally had made. He also resisted the idea of forming a local group as he thought regular visits by larger numbers of botanists would mean that there would come a time when there were no more surprises. He also dreaded the power of the internet to disseminate his records and I believe that is one reason for his unwillingness to release his records at further precision. He once told me that if locations were published, botanists in London would get in their motorcars and come storming up to Wales to gather specimens and damage the habitats.

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Over last twenty years my life has been immeasurably enriched by my friendship with Peter: for ten years he was my much-admired and valued guide and mentor, expedition companion and a brilliant correspondent whose letters brought almost as much pleasure as his visits and excursions. I learned an intimate knowledge of the botany and ecology of Merioneth, such a beautiful county with incredible richness of habitat. Later, succeeding him as VCR was a humbling experience and his authoritative and well-researched reports, papers and records made me realise that I was indeed "standing on the shoulders of giants".

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# Fascinating Plant Pathogens in Penparcau

CHLOE GRIFFTHS

Plant galls are an interesting example of interaction between insects and plants, where eggs are laid into plant material, causing it to either increase the size of its cells and/or the number of them. This causes odd-looking plant growth, like the familiar Oak Galls and Robin's Pincushion. There are an enormous number of these galls, and we are enjoying this area of study in the village of Penparcau, near Aberystwyth, as part of our efforts to record as many species as possible across all taxonomic groups.

This is our second year of working on plant galls, and we were delighted when Arthur Chater shared an article from a 1926 copy of *The Aberystwyth Falconer*. This resulted in our re-discovering 7 gall records made nearly 100 years ago, in 1925, on the hill called Pen Dinas. Perhaps most intriguing is a reference to what was then known as "*Rhodites rosae*" (now *Diplolepis rosae*) (Robin's Pincushion) growing on "*wild rose*" at Pen Dinas. It so happens that Robin's Pincushion still appears on a wild rose near Spenser's Sheds on Pen Dinas, and we wonder if this could be the same plant with descendants of the same Gall Wasp galling it!

Other exciting finds were the galls caused by *Trioza centranthi* that turn the edges of the leaves of *Centranthus Ruber* (Red Valerian) bright pink (see image 2, page 2), a species that is spreading across the UK. However, we could find no other records for West Wales, until speaking to Arthur Chater, who had found it in January 2019 less than half a mile away in Tesco car park at Aberystwyth.

There was a chance to practice both entomology and botany when we located and identified the weevil *Rhinusa antirrhini* inside a gall on *Linaria vulgaris* (Common Toadflax) in 2020. It was particularly pleasing to record this gall because the insect was last recorded in the village by Adrian Fowles, very nearby, on 9 July 1991, nearly thirty years ago. *L. vulgaris* has increased its abundance along the paths of Pen Dinas in the last two years, thanks to path widening and scrub maintenance by Ceredigion County Council.

In summer 2020 we made a collection of some vacated *Andricus kollari* (Marble Galls) which grow on *Quercus robur* (Pedunculate Oak). It appears that this gall was introduced in to the UK in 1832 "*....for its high concentrations of tannins, which were used for tanning leather and for ink-making*" (Redfern & Higginbottom, 2020, p.64). To test this, the Project Officer made ink with the pulverised, empty marbles and managed to produce a pleasing golden colour!

Following up on our interest in species which have an effect on plants, we noted two smuts in the village. We found *Enylooma ficariae* on *Ficaria verna* (Lesser Celandine) which is “*probably the commonest smut in Wales, with some 175 records.... from Ceredigion alone*” (Woods, et al, 2018). Our second smut was also common in the county, with forty records, *Antherospora hortensis*, found on *Muscari armeniacum* (Grape Hyacinth) in the author’s garden. It is interesting to note that “*the smut was overlooked until 2010, when material from Aberystwyth was sent by Arthur Chater to Marcin Piażek and Matthias Lutz who confirmed it as a new species (Piażek et al. 2013). The holotype is from the Llanbadarn campus of the University of Aberystwyth, Cardiganshire.*” (Woods, et al, 2018).

Finally, we found the common rust, *Puccinia umbilici* on *Umbilicus rupestris* (Navelwort) which Arthur Chater commented on: “*It is very abundant this spring [2020] (at least I saw it most places I went until the lockdown!) as it is most years, but interestingly last spring it was virtually non-existent and I saw it only a handful of times, in very small numbers. I suppose something to do with weather or climate.*”

I can recommend anyone wishing to pursue smuts and rusts in greater detail, both very interesting fields of study, to download the excellent open access “*Smuts of Wales*” and “*Rusts of Wales*” books (Woods, et al, 2015 and 2018).

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# Carmarthenshire Flora Progress 2020

*Fewer records but some noteworthy discoveries*

KATH & RICHARD PRYCE

The Covid-19 lock-down started just as the dandelion collecting season would have got underway and travel restrictions or a pre-inoculation fear of contracting the virus hampered recording for the remainder of the year.

The spring drought was probably responsible for the *Botrychium lunaria* (Moonwort) not showing on the Garn Ganol part of the Capel Dyddgen SSSI, Crwbin (SN4612). However, although visits to the site were limited by the lock-down, we were lucky to see a single Marsh Fritillary butterfly on 29 May and several Silver-washed Fritillaries and three Marbled Whites on 1 July, the latter not seen on the SSSI since the 1970s! At the end of August, the single plant of *Serratula tinctoria* (Saw-wort) discovered in 2019 was well in flower in the *Molinia caerulea* (Purple Moor-grass)-dominated field and the pond that we constructed in 2019 in the Waun Ganol field had been colonized by the first plants of *Potamogeton natans* (Broad-leaved Pondweed) and *P. berchtoldii* (Small Pondweed), the latter being the first record for the SN41 10km square.

In June, we had an email from Andrew and Helen Martin who have a smallholding near Cwrt Henry (SN550231) reporting a single *Anacamptis pyramidalis* (Pyramidal Orchid) not, as might have been expected, growing in their meadows where they have *Dactylorhiza praetermissa* (Southern Marsh-orchid) and *D. fuchsii* (Common Spotted-orchid) but on the bank of their entrance drive, just opposite the house. This is only the third county record away from the coast and the first record for the SN52 10km square.

In July, Kath (KAP) and I (RDP) watched the weeds starting to take-hold (intentionally!) on a small area of newly top-soiled ground in our garden here in Pwll (SN477012). The first colonizers included a rapidly-grown sward of pungent-smelling *Lepidium coronopus* (Lesser Swinecress) – it certainly perks-up a salad, although many people are repelled by it! Then a single plant of a white-flowered crucifer came to our notice, but it wasn't until a couple of weeks later when the first flowers had started to produce their distinctive fruits, that we could confirm that it was *Thlaspe arvense* (Field Penny-cress). Although this species occasionally turns up on disturbed ground along the coast in the Llanelli area (rarely inland), this is the first record we've had in the garden and is only the second Carmarthen record in the last ten years. Other species that have appeared in the new patch are a few plants of *Fumaria bastardii* (Tall Ramping Fumitory) and a single *F.*

*officinalis* (Common Fumitory), this actually being the least common of the four species regularly found in the county. Other 'weeds' included many plants of *Solanum nigrum* (Black Nightshade) and five volunteer *Viola x wittrockiana* (Garden Pansy) seedlings – we've never grown pansies in the garden – but, unexpectedly prolific, was the pink flowered form of *Lysimachia* (*Anagallis*) *arvensis* (Scarlet Pimpernel), *L. arvensis* ssp. *arvensis* f. *carnea*, this being only the fourth recorded site in the county although, of course, there are many populations of the usual red flowered form *L. arvensis* ssp. *arvensis* f. *arvensis*.

During consultancy work at the end of July, Kath and I came across a large population of *Brassica nigra* (Black Mustard) consisting of several groups of plants on the Carms bank and inside-meander gravel shoal of the Afon Teifi at Gelligatti, about 2km downstream of Newcastle Emlyn (SN286414). I originally thought it was this species but then many plants of *Rorippa palustris* Marsh (Yellow-cress) and a few of *R. sylvestris* (Creeping Yellow-cress) clouded my judgement so I emailed a photo to Tim Rich, the BSBI's crucifer referee, who confirmed my original conclusion. Not a particularly outstanding find you may think but this is only the fifteenth post-2000 record in Carms, almost all previous records having been made by visiting botanists (mainly during Glynhir recording weeks, the 2020 meeting, regrettably, had to be cancelled) - so the excuse for my uncertainty was that I couldn't consciously recall having seen it recently! Also on the gravel shoals, we had first 10km square records for Carms of *Hirschfeldia incana* (Hoary Mustard), *Atriplex prostrata* (Spear-leaved Orache), *Papaver cambricum* (Welsh Poppy), *Vulpia bromoides* (Squirreltail Fescue) and the bramble *Rubus silurum*.

Also in July, Lizzie Wilberforce and Rob Parry send us photos of a flowering *Epipactis helleborine* (Broad-leaved Helleborine) they had found on the roadside bank of Bryncethin Road, Garnant, at SN691116 and the following month Lizzie recorded ten plants by the public footpath on the northern edge of the Garnant golf-course between SN686129 and SN685130. This species seems to be particularly widespread in the upper Aman valley between Glanamman and Brynamman but is never abundant. Typically, populations comprise of single or just a few plants, the first record having been made here by RDP in the mid-1970s near the bank of the river in what is now the Council's Ynys Dawela Local Nature Reserve. Lizzie and Rob also reported *Lysichiton americanus* (American Skunk Cabbage) growing in wet woodland at Pont Berach, Cwmaman (SN677150), the third record of escaped plants of this species established in the wild in the county.

Returning to *Epipactis helleborine*, in September, RDP found a group of three plants and another singleton, all in seed, at the edge of secondary woodland at the Llanelli Gate, Dafen, industrial estate (SN532020) whilst on a consultancy job.

This was the first record for the SN50 10km square since R.F. May's pre-1967 record from the Morlais valley, Llangennech (SN5503) and Annie-Mary Pell's from south of Cross Hands (SN564094) of 1982. Nearby on the same site in the damp base of a flood-alleviation swale amongst several plants of *Carex otrubae* (False Fox-sedge), was a single plant of the hybrid between it and *C. remota* (Remote Sedge), *C. x pseudoaxillaris*, only the third county record and the first for the 10km square. In June, not far away, Ian Morgan (IKM) had revisited the site (c.SN536021) where he had found *Mentha pulegium* (Pennyroyal) growing in profusion in 2003. The area had been prepared as a development plateau by the then Welsh Development Agency and the resulting compacted, poorly drained substrate was sown with a 'sacrificial' seed mix from where it is presumed the *M. pulegium* had been introduced. Its non-native origin was revealed by its upright habit, a characteristic of introduced American plants, in contrast to the prostrate British plants which have only been previously recorded in Carmarthen on the southern slopes of Mynydd Du in the upper Aman valley area (SN71). Although in reduced abundance, Ian's visit proved that the plant was still present at the corner of the site where it had not yet been developed, although much of the remainder is now occupied by the Technium Centre and the Air Ambulance base. (See image 5, page 71).

IKM's daily lock-down walks took him around the urban streets and back-lanes in Llanelli giving him the opportunity to record weeds and alien plants. In addition to finding self-sown plants of *Cordyline australis* (Cabbage Palm) growing at numerous new sites in pavements and on old walls, a species for which Llanelli seems to have become notable. (See images 6 & 7, page 71). He found two self-sown *Passiflora caerulea* (Passion-flower) plants, the first as a pavement weed off Denham Avenue (SN496012) and the second, mature enough to be in flower in the back lane of King George Avenue, SN514000. He also found one self-sown in Burry Port Park (SN448009). Back in Llanelli, he also recorded *Jasminum beesianum* (Red Jasmine) escaped into the back-lane of Margam Place (SS510997) and *Echium rosulatum* (Lax Viper's Bugloss) in a neglected planting area at Stradey (SN498009). These species were all first county records of self-established plants.

In Llangennech, Ian discovered two plants of *Carex comans* (New Zealand Hair Sedge) growing from cracks in the surface of a car-parking area in Maes Road (SN562017), whilst, back home in his garden in Llanelli (SN496012) there were several plants (up to 1m tall) of *Siegsbeckia serrata* (Western St. Paul's Wort) growing amongst his runner beans, the bristly seeds presumably having 'hitch-hiked' from plants he had grown in the garden of his former house! Another two first records for the county!

More Llanelli aliens found by IKM included the second county record of *Capsicum annuum* (Sweet Pepper), a self-sown escape on the cycle track to the rear of Chapman Street in Furnace (SN499010), whilst first 10km square records included *Nicandra physalodes* (Apple-of-Peru) at the corner of Northumberland Road (SS506988), *Allium roseum* (Rosy Garlic) from the boundary fence of Coronation Road allotments (SS513998), *Helianthus tuberosus* (Jerusalem Artichoke) from the back lane south of Sandy Road (SN496005) and *Valerianella carinata* (Keeled-fruited Cornsalad) from North Dock garage (SS498998). He also recorded a plethora of additional non-native species in verge and roadside plantings, originating from council-sown 'wildflower' and 'pollinator' seed mixes, although some of these may have persisted or self-sown from previous years' introductions.

Neither did planted street trees escape Ian's attention. He catalogued 107 *Platanus x hispanica* (London Plane) trees in the town during the autumn of 2020 as well as recording numerous other tree and shrub plantings such as the varieties of *Acer campestre* var. *leiocarpum* and var. *campestre* (Field Maple), *Crataegus rhipidophylla* or the hybrid *C. x pseudospherica* (hawthorns) and *Cornus koenigii* (Dogwood) as well as numerous self-sown shrubs originating from landscape plantings including *Berberis darwinii* (Darwin's Barberry), *Eleagnus x submacrophylla*, *Cotoneaster bullatus* (Hollyberry Cotoneaster), *C. horizontalis*, *C. lacteus* (Late Cotoneaster) and *C. sternianus* (Stern's Cotoneaster).

Regarding native species, Ian discovered a small but robust colony of *Orobanche minor* (Common Broomrape) growing close to the level-crossing at the east end of Llanelli railway station SS5099; this species has declined considerably as the brownfield sites on which it seemed to have found a stronghold in the town, have been steadily redeveloped over the past couple of decades. He also came across a single robust plant of *Polystichum x bicknellii* (a hybrid shield-fern) on the side of the lane though a wooded cwm south of Cwmpengraig (SN349359) where it was growing adjacent to one of its parents, *P. setiferum* (Soft Shield-fern). This proved to be the first record from the SN33 10km square.

An additional back-lane plant found in the last months of 2020 by IKM was a large non-flowering stand of *Salvia hispanica* (Chia) growing at the base of a boundary wall near the Station Road Home Bargains store (SN507994). He took a cutting and grew it on until, in December, it flowered, and photographs emailed to several BSBI experts resulted in David Pearman identifying it. It had recently been found as a casual in Cornwall and Ian's is seemingly the first Welsh Record. However, due to the recent increase in the use of Chia seeds in cooking, its escape into the 'wild' is likely to become more frequent and is a species to look out for.

Theresa Greenaway also did some valuable recording in her home district near Felingwm (SN52), an area visited by relatively few botanists. Included among the numerous species she recorded from her land was *Hypericum x desetangsii* (a hybrid St. John's-wort), the first 10km square record since 1993. She also sent a species list from a hitherto unrecorded rhôs-pasture site near Horeb (SN5127) which included the first recent localized tetrad records of *Trocdaris verticillata* (Whorled Caraway), *Lythrum tenella* (Bog Pimpernel) and *Hydrocotyle vulgaris* (Marsh Pennywort). Whilst doing habitat management work at Lan Farm, Gwyddgrûg (SN4634), Matt Sutton recorded *Carex lepidocarpa* (Long-stalked Yellow-sedge) and *Veronica anagallis-aquatica* (Blue Water-speedwell) in a small wet *Molinia*-dominated area, both first 10km square records, whilst, elsewhere on the farm, two common species of disturbed ground, *Melilotus altissimus* (Tall Melilot) and *Buddleja davidii* (Butterfly-bush), were also first records for the 10km square.

George Hutchinson has continued to do back-room work during the year, including abstracting significant records from various publications and making improvements to the draft text of the slowly progressing *Flora of Carmarthenshire*. He also continued to work on his *Prodromus of the Carmarthenshire Hieracia* (Hawkweeds) which he finally completed after several years' work and sent me the hand-written tome last month. This followed the re-emergence of Jim Bevan who undertook much work in connection with the BSBI *Hieracium* Study Group back in the 1990s and who has now deposited much of his valuable herbarium material at the University of Oxford. Carmarthenshire *Hieracia* are now well documented by George but there remain significant problems with the nomenclature and the varying opinions of the referees.

Finally, we were forced to neglect dandelion studies in 2020 as the first lockdown coincided with the collecting season, so resulting in the preparation of only seven specimens compared to between 150 and 200 annually in recent years. However, four collections that we made in 2018 were determined by Prof. John Richards (AJR) as the relatively frequently found heteromorph of *Taraxacum nordstedtii* (Nordstedt's Dandelion) often given the working name 'frugale'. Following isoenzyme studies of the *nordstedtii* aggregate in the Netherlands by the late Piet Oosterveld, this form is now considered sufficiently distinct to warrant formal description. Material collected by Kath and me from a laneside bank at Pentrefelin, Llandeilo (SN595239) during the Wildlife Trust's *Orchis mascula* (Early-purple Orchid) monitoring meeting on 21 April 2018 was selected as the Type Specimen for the new species *T. chlorofrugale* P. Oosterv. ex A.J. Richards **sp.nov.** which had its validated diagnosis published by AJR in *British and Irish*

*Botany* (Richards, 2019). In addition to the four 2018 records, over the years, we have collected material that provide a further six records in Carmarthenshire of the 'frugale' form which can now be formally referred to as *T. chlorofrugale*, the earliest of which was collected by me in 1992 from Glynhebog near Pontyberem (SN514123). A correction to be made to Prof. Richards' paper in *British and Irish Botany* is that figure 5 is miscaptioned, crediting the illustration of the involucre and ligules of the species to Cardiganshire rather than Carmarthenshire: the correct location is Pant-y-Llyn Farm, near Blaen-y-coed, Carmarthen (SN347257), the specimen having been collected on 12 May 2018. The Llanelli Naturalists visited Pant-y-Llyn in 2017 from where RDP had collected *T. aesculosum* the previous year (Pryce & Pryce, 2017, p.29), another new species that AJR was, at the time, describing.

We continue to work on the Flora, in particular, now having started to write individual species accounts and prepare base maps depicting various features such as topography, relief, geology and rivers on which we will plot the species distribution maps using an appropriate background to demonstrate particular distributional traits, e.g., the concentration of species such as *Asplenium viride* (Green Spleenwort) along the Carboniferous Limestone outcrop. Although seemingly resulting in frequent interruptions to the production of the Flora, continuing consultancy work remains a regular source of new records, even during the lockdown, when we would not otherwise have been able to legitimately leave home.

Our thanks to all contributors and referees, particularly IKM for his numerous new non-native and other excellent records, many supported by photographs, a small number of which illustrate this article.

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# Botanical Recording in Cardiganshire (v.c.46) in 2020

STEVE CHAMBERS

Despite the negative impact of a questionably alive microbe on the permissible activities of an unquestionably problem primate, the year produced a fair number of interesting plant finds. If the cloud of Covid-19 could be said to have had a silver lining then it prompted exploration of local footpaths and bridleways in the Rheidol valley area, shamefully unvisited before in over two decades of residency.

Steve Chambers (SPC) and Helen Clow (HFC), stopping off on a journey down the coast to New Quay on 16<sup>th</sup> February to see whether the roadside *Crassula tillaea* (Mossy Stonecrop) at Llanrhystud was showing, could find no trace at all of it but, on 23 March, several seedlings with stems barely 6-8 mm long were visible, the young greenish leaves making this usually, when mature, brightly-coloured species strangely inconspicuous at this early developmental stage. Its seeds must presumably germinate between mid-February and mid-March.

Checking up on the Rheidol valley's colonies of *Stellaria neglecta* (Greater Chickweed) SPC found the one east of Rhiwarthen-uchaf had disappeared on account of it being swamped by brambles in a now fenced-off wood from which grazing had been removed under agri-environment scheme prescription. One was extant and a third, a new population, was found at SN665783 close to the latter historical site. Investigating the varietal characters involved they seemed to have 'switched over' going by the information given in the species' account in *Flora of Cardiganshire* (Chater, 2010; p.521). This would have been as inexplicable as interesting from a genetic perspective, until it was realised the characters in that flora are inadvertently given the wrong way round, thus explaining the apparent reversal. Sell & Murrell Vol. I (p444) have them the right way, i.e. glandular-hairy pedicels and sepals in var. *neglecta*.

Also in the Rheidol valley, SPC spent time in May exploring the Atlantic rainforest around the Nant y Fawnog side-ravine in Coed Rheidol NNR, acquiring updated records for various vice-county-notables first recorded there in the 1970s. These included *Drymochloa sylvatica* (Wood Fescue), *Geum rivale* (Wood Avens), *Gymnocarpium robertianum* (Oak Fern), *Papaver cambricum* (Welsh Poppy) and *Tilia cordata* (Small-leaved Lime) and, in the process he found a new colony of *Circaea x intermedia* (Upland Enchanter's-nightshade). The atmosphere of these western oakwoods in springtime is special and there is perhaps no better habitat to experience at that time of year.

In May, Arthur Chater (AOC) received photos of an *Anthriscus* sent by Ewan Parry growing at the edge of his garden near Llanafan in 2019. This was identified as *A. caucalis* (Bur Chervil), only the second certain vice-county record and the first for fifteen years. The plant appeared by a place where chickens were fed wheat-seed and the chervil seed was almost certainly in the feed. Although of explained origin and garden context, the occurrence of unusual species like this outside the countryside are difficult for recorders to treat and equally to ignore, since they reflect cultural behaviours no different in many respects from those causing plants to appear in semi-natural habitats from intentionally sown 'wildflower seed'.

Following Justin Lyons' (JPL) tremendous discovery of *Spiranthes romanzoffiana* (Irish Lady's-tresses) on the Dyfi NNR the previous year, he initiated a scientific monitoring programme for the plant in 2020. Its leaves and young inflorescences were already visible by late-March in what is remarkably early development for such a relatively late-flowering orchid.

JPL was also busy elsewhere on the Dyfi NNR through the summer and reported updates for several stonewort taxa not surveyed since 1996/7. This included *Tolypella glomerata* (Clustered Stonewort), practically all of the vice-county notable plants on the national nature reserve and also around four plants of *Drosera x obovata* (Obovate Sundew) (*D. rotundifolia* x *D. anglica*) on a part of Cors Fochno where it had not been seen before. He also found two plants of *Serratula tinctoria* (Saw-wort) in one of the NNR compartments, a species never before recorded from the Dyfi estuary area in the vice-county, and a new hectad record for SN69. Good places just keep on giving and the Dyfi NNR is no exception.

In the south of the county, Howard Williams provided detailed size, count and 10-figure grid reference population updates for all the roadside verge colonies of *Ranunculus auricomus* (Goldilocks Buttercup) in the Llechryd area.

One of the year's objectives was to accept the '*Molinia* challenge' of the uplands around Llyn Gwngu above Cwmystwyth in order to update records for vice-county scarce plants in that area. Thanks to the modern technological miracle of GPS it was mission accomplished, with successful relocations of the small populations of *Carex dioica* (Dioecious Sedge), *C. lasiocarpa* (Slender Sedge) and *Galium uliginosum* (Fen Bedstraw). The real miracle, however, was how such tiny, remote populations, some literally floating on the sea of *Molinia*, were found in the first place and I was left with a feeling of admiration for those who had gone before and made the finds initially. Wearily creaking back down, cryptically half-camouflaged from the waist down by a coat of peaty sludge, for one cannot avoid

all the moor-grass traps, the Cardi in my head asked, why do people pay for gym subscriptions when the Cambrian Mountains are available for free? Gyms do not even provide challenging vegetation as part of the package.

An amble down the road to St David's church in Capel Bangor on 2 July produced the only, as yet confirmed, first Vice-county Record for the year in the stately form of a sky-scraping yellow-flowered *Verbascum* (Mullein) growing by the corner of a burial plot in the northern-part of the graveyard, SN655801 (see image 1, front cover). A break to the mowing regime caused by the viral pandemic meant the grassland in the yard had not been cut and the mullein had responded magnificently. Looking *thapsus*-like but somehow different with enormous basal leaves (to 75 x 28 cm, length x breadth) and a multi-branched stem (at least ten around the main stem) a close-up inspection of the styles revealed the spatulate-decurrent stigmas of *V. densiflorum* (Dense-flowered Mullein), later confirmed by AOC and John Poland (JPP) by emailed close-up digital photographs. The plant survived to set seed, so hopefully the species will persist. *V. thapsus* has capitate stigmas but the best character as rated by JPP to distinguish the two species is the branched inflorescence stem of *V. densiflorum*.

*Spergularia marina* (Lesser Sea-spurrey) has crept progressively farther away from maritime places since 2017, when it was first noticed inland in the vice-county only 0.5km from the sea on the edge of the A487(T) between Llanrhystud and Llan-non (SPC), and 2018, when it was spotted by the Morrisons' roundabout outside Aberystwyth, 1.5km inland (CG). In 2019 it was found 5.25km inland by the Lovesgrove roundabout on the A44(T) east of Aberystwyth by Matt Sutton (MDS). In 2020 it was found 3.75km inland on the eastern verge of the A4159 near Plas Gogerddan, SN626837 (AOC), 7.25km inland on the south-side of the A44(T), Penllwyn (SPC & HFC), and c. 8.25km inland, also on the A44(T), a little farther east, up the road near the Maes-bangor pub in Capel Bangor (SPC & HFC). It was also noticed in Penrhyn-coch, 8km inland (SPC) on the edge of the road by the garage where it was growing with *Rorippa palustris* (Marsh Yellow-cress). In recent years, during cold snaps, the edges of the A44(T) in particular, have been noticeably encrusted in liberally applied thick layers of rock salt. So perhaps heavier salting, i.e. in increased quantities where it is carried out, is responsible even though the frequency of applications is probably less nowadays due to winters becoming generally milder. Whatever the driver(s) pushing the species away from the coast, there is an ecological case for amending the common name of *S. marina* to Lesser *Salt*-spurrey.

Another interesting record of an inland halophyte was *Plantago coronopus* (Buck's-horn Plantain), some c. 100+ plants of which were found (SPC & HFC) brightening up the concrete edges of the road bridge over the Afon Rheidol near Capel Bangor station on the Vale-of-Rheidol Railway, SN649798, in December. This was only the second time and place this plantain has been found well away from the coast in the vice-county.

A highlight second vice-county record was *Chaenostoma cordatum* (Bacopa) (synonym *Sutera cordata*), found by AOC self-sown on a pavement in Aberystwyth, SN586817, on 5 July 2020. Interestingly the first vice-county record of the species was also an early winter find on an Aberystwyth street on 29 June 2011.

Another second vice-county record was a single plant of *Erigeron (Conyza) sumatrensis* (Guernsey Fleabane) found by SPC in a mix of ruderals on rough ground near the old barns and glasshouses in the middle of Aberystwyth University's Frongoch farm, SN605826, on 17 May 2020. Only the third plant of the species for the vice-county.

Other noteworthy finds included:

- *Centaurea cyanus* (Cornflower). AOC found scattered plants in a very weedy *Avena* (Oat) field near Llanilar, SN621753, where it was clearly derived from old seedbank, i.e. not from a wildflower seed mix. The first such occurrence since 2011 when it appeared in a Tir Gofal arable field near Monachty.
- *Cortaderia selloana* (Pampas-grass). SPC & HFC found one plant on a scrubby, rough slope c. 0.75km west-southwest of Chancery, SN572765. Third vice-county record.
- *Dryopteris aemula* (Hay-scented Buckler-fern). Gillian & Peter Foulkes found one plant on a roadside bank at the east end of Cwm Llyfnant, SN7397. The first vice-county record from the valley for 44 years.
- *Elatine hexandra* (6-stamened Waterwort). Found by MDS on the margin of a well-established artificial pond near Tynreithin, SN651613.
- *Equisetum x litorale* (Shore Horsetail). SPC & HFC found on a bank of the Afon Rheidol below the Rheidol falls, SN708790. The 7<sup>th</sup> vice-county site.
- *Lycopus europaeus* (Gypsywort). Found by David Hawkins in crevices of stonework of the inner harbour wall at Aberaeron. New for the hectad and an interesting rural-coastal habitat as it also grows on the harbour wall in the Gap at Aberystwyth.
- *Lysichiton americanus* (American Skunk-cabbage). SPC found one young plant on the Afon Rheidol in oakwood north-west of Devil's Bridge/Pontarfynach. Not seen on this length of the river before.

- *Mentha arvensis* (Corn Mint) in a field east of Llandysul, SN443411. Determined by AOC, hiding on a specimen of a rust fungus sent by J. Parish.
- *Saxifraga tridactylites* (Rue-leaved Saxifrage). Found by AOC on a railway platform at Aber-ffrwd station, Vale-of-Rheidol Railway, SN687787.
- *Verbena officinalis* (Vervain). Found by SPC and HFC on a wall in Melindwr Terrace, Capel Bangor, SN660800. The first hectad record since Salter had it as a garden weed in Llandre in 1904 and 1907 (Chater, 2010).
- *Veronica beccabunga* (Brooklime). Found by SPC sprawling in a flowerbed in Aberystwyth. New for the hectad in what must be one of the most thoroughly and regularly botanised towns in Wales, if not Britain.

The year was quirky for producing several new vice-county altitude-limit records, perhaps for no reason other than that people headed for the hills when they could. Examples included (new limit/previous limit):

- *Anaphalis margaritacea* (Pearly Everlasting). Tim Rayner found a plant on the edge of forestry track in the Bryn-y-rhyd plantation, SN688519, 440m/410m.
- *Danthonia decumbens* (Heath-grass) Found by SPC on a heathy bank south of Pen Lluest-y-garn, SN800861, 630m/590m.
- *Hypochaeris radicata* (Cat's-ear) Karen Heppingstall (KH) found 15 plants and c. 25-30 plants in two places respectively on the ridge west of Pumlumon Arwystli, SN811875, 690m/500m, almost a tectonic uplift!
- *Solidago virgaurea* ssp. *minuta* (Mountain Goldenrod). Found by SPC on a stony saddle north of the summit area of Pen Cerrig Tewion, SN799881, 670m/620m.
- *Sorbus aucuparia* (Rowan) Andy Jones (RAJ) & KH found four individuals south-west of Pumlumon Arwystli, SN801874 & SN805875, 700m & 720m/620m.

Chris Forster-Brown (CMFB) encountered an altitudinous colony of *Geranium lucidum* (Shining Crane's-bill) growing in abundance at 400m in the peculiar habitat of below and between the slats of a cattle grid on the minor road at the top of Cwm Ceulan, SN721908. As it turned out AOC had first spotted it precisely there in 2016! Why this species should be growing so vigorously and contentedly under a rain-soaked cattle grid in the uplands is quite mysterious.

A sour event, but one needing reporting for its dire impact on vice-county botany, was the severe fire, thought to be deliberately lit, that affected a large part of the Pencreigiau'r-Ilan SSSI in the uplands near Llyn Conach, north of the Angler's

Retreat area, on 17–18 May. Around 120ha of land was incinerated, including moorland supporting one of the two vice-county populations of *Neottia cordata* (Lesser Twayblade). The vegetation and its special biodiversity now converted, alas, into carbon dioxide. Reports of the fire appeared in the 21 and 28 May editions of the *Cambrian News*. Finally, I can report the exciting news that the county is the custodian of a novel British hybrid *Hypericum* (St. John's-wort). *H. x cereticae* R.A. Jones, F.J. Rumsey & N. Robson is a cross between the widespread *H. perforatum* (Perforate St. John's-wort) and the nationally scarce *H. undulatum* (Wavy St John's-wort). The plant was first found by RAJ in 2015 and is mentioned on p.329 in Stace (2019) but has only just been named and formally described as new to science in a paper (Jones & Rumsey, 2020) in *British and Irish Botany*. The paper is downloadable in pdf format from the BSBI website. So far it is known from just two sites, at Rhos Cross Inn SSSI and near Nanteos. The authors think it may have dispersed to the latter from the former. The epithet '*cereticae*' is the phytogeographically encoded Latinate form of Ceredigion/Cardiganshire.

I extend my thanks to all the local and visiting (some by virtual means) plant folk who sent in, reported verbally, or verified records this year, namely Arthur Chater, Helen Clow, Chris Forster-Brown, Gillian & Peter Foulkes, Chloe Griffiths, David Hawkins, Karen Heppingstall, Andy Jones, Justin Lyons, J. Parish, Ewan Parry, John Poland, Tim Rayner, Matt Sutton and Howard Williams.

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## *Cerastium pumilum* (Dwarf Mouse-ear) in Denbighshire

DELYTH WILLIAMS

Now that all the data for the BSBI's Atlas 2020 have been collected, 'square-bashing' duties have been alleviated somewhat and Covid restrictions are easing, we can focus on updating the Rare Plant Register. This means hunting for and checking up on previous, older records. Will the plants still be there?

*Cerastium pumilum* (Dwarf Mouse-ear) is a diminutive annual, rare in Wales and confined to a few parts of south-west England. Since 2000 it has been recorded in Caernarfonshire (v.c.49) from the Llandudno area, two or three records from Flintshire (v.c.51) and a couple of records from Denbighshire (v.c.50) (Bryn Euryn SSSI SH8379 and Mynydd Marian SSSI SH8877).

The plant is best described by P.S.Lusby who wrote this in Atlas 2000: “A winter-annual of chalk and limestone substrates, occurring mainly in open, barish patches within short-grazed grassland, especially on sunny banks and cliffs....; However, because the plant resembles other *Cerastium* species, has a short season and fluctuates in numbers, it may perhaps be overlooked to some extent.”

This is indeed true. It can be distinguished, with difficulty, from *C. glomeratum* (Sticky Mouse-ear) by the lack of long eglandular hairs extending from the tips of the leaves and sepals. From *C. diffusum* (Sea Mouse-ear) and *C. semidecandrum* (Little Mouse-ear) it is distinguished by 5 petals as long as the sepals and bracts with very narrow scarious margins. Flowering ends in April and by mid-May the plants are withering away.

A search on Mynydd Marian on 2 May revealed one small patch of straggly plants at SH889 773. It was first recorded there in 2004 by Wendy McCarthy, v.c.49 Caernarfonshire Recorder; Wendy confirmed this record. Success!

A further search for records taken in 1992 at Terfyn SH917 777 drew a blank. This area is now woodland, presenting no suitable habitat although we did look elsewhere on the escarpment.

But a visit on 9 May to the SSSI above Rhyd-y-foel looked more promising. Several patches of scruffy plants on bare paths and loose rubble on the steepest part of the escarpment proved to be our likely suspect at SH912 763, SH914 762, SH916 759 and doubtless elsewhere. On the same day we were able to confirm large patches of the similarly rare *Helianthemum oelandicum* subsp *incanum* (Hoary Rockrose) at SH914 762 and scattered patches of *Potentilla verna* (*P. tabernaemontana*) (Spring Cinquefoil) in the area.

All very positive. How many more of the rarer plants recorded within the last 20 years will we be able to re-find?

# Meirionnydd Naturalists 2020

JOANNA CLARK

Meirionnydd Naturalists is a local society of botany enthusiasts, but any nature will do where we come across it, as various members are also incredibly knowledgeable with their insects, birds and fungi! Since it was instigated eleven years ago by Sarah Stille, the members have contributed to county flora recording and the BSBI DDb.

In 2020, most of the regular monthly meetings were cancelled except for one or two of us meeting up when restrictions allowed. Eventually at the end of August a group of six were able to meet at Morfa Dyffryn. The weather was dry, though cold and we found a lot of sand had been displaced from the dune front and buried the leaves of the yellow Asteraceae, causing some confusion! In a dune slack further inland (SH5624), we came upon fifty or so *Gentianella campestris* (Field Gentian), *Euphorbia portlandica* (Portland Spurge) and *Sagina nodosa* (Knotted Pearlwort). Further south at SH568123, we found *Parentucellia viscosa* (Yellow Bartsia) and quite a few plants of *Stachys arvensis* (Field Woundwort).

Andrew and Janet Graham again visited Morfa Dyffryn in September and re-found the gentians and a decent sized patch of *Ophioglossum vulgatum* (Adder's Tongue) of over 100 plants.

Two mystery *Alliums* were found to be *Allium vineale* var. *compactum* (Wild Onion) which Heather Garrett found in June at Tywyn (SH5808) and Roger Cope's 2018 record from Fairbourne was confirmed as Babington's leek *Allium ampeloprasum* var. *babingtonii* at SH616149. On the theme of *Alliums*, David Elias recorded *Allium carinatum* (Keeled Garlic) near Llanderfel at SH983372.

Barbara Brown revisited Y Llethr in the Rhinogydd in July and made some interesting finds on the steep north face (SH6526), which is broken with many small ledges. There was *Thalictrum minus* (Lesser Meadow-rue), a ledge site with *Trollius europaeus* (Globeflower), as well as *Rhodiola rosea* (Roseroot), *Selaginella selaginoides* (Lesser Clubmoss) and a streamlet full of *Saxifraga hypnoides* (Mossy Saxifrage).

The September meeting was held at Rhobell Fawr (SH7925), where we hoped to re-find the *Antennaria dioica* (Mountain Everlasting) from 2018 but, despite much searching, we concluded that a visit in June or July would be preferable. Rhys Gwynne pointed us towards the only extant plant of *Juniperus communis* (Juniper). This Juniper plant is female and there are no males nearby, but some

new plants have been cultivated in a nursery and planted-out on the hillside in cages to protect them from grazing.

At the peak of Rhobell Fawr we found abundant *Diphasiastrum alpinum* (Alpine Clubmoss), *Huperzia selago* (Fir Clubmoss) and *Lycopodium clavatum* (Stag's-horn Clubmoss) and, after a very cold lunch stop, Heather Lewis located a single plant of *Selaginella selaginoides* tucked at the edge of a rock in a base-rich flush.

We look forward to some new adventures in 2021.

## Bog Orchid/Tegeirian Bach y Gors (*Hammarbya paludosa*) in Pembrokeshire v.c.45

STEPHEN EVANS, glanymor.dinas@gmail.com

### A) Background

This diminutive orchid, *Hammarbya paludosa*, was first found in Pembrokeshire in a bog on Brynberian Moor, Mynydd Preseli by Mrs. A. Nellie Gibby, from Durham, on 4 August 1948. She was very active with the Northern Naturalists Union. The specimen she collected is in the herbarium at National Museum Wales. Unfortunately, when approached by the author (SBE) in 1984 she was unable to recall any details of the discovery.

It was not until 8 August 1964 that it was found again. Jack Donovan (JWD) counted several small colonies in the complex series of flushes south-west of Glanyrafon-uchaf on Brynberian Moor. These flushes remain its stronghold in Pembrokeshire and the population has been studied at this location on numerous occasions in recent years. The bulk of this article presents some of the findings that emerged from the many records between 1964 and 2020.

Hopefully, these notes may be of interest to others who have had the good fortune to have studied *H. paludosa* elsewhere in Wales and who are concerned about the sustainability of their colonies.

### B) The main population of *H. paludosa* at Brynberian Moor south-west of Glanyrafon-uchaf SN115 345

The rounded hills of Mynydd Preseli, topped by tors of ancient igneous rock, dominate the landscape of North Pembrokeshire. Their lower slopes are plastered by Irish Sea glacial till and criss-crossed by numerous small spring-fed streams. To

the north, the unenclosed land extends in a vast sweep down from the summit at about 500m to as low as 120m above sea level, to Brynberian Moor which is some 11km in width. Here countless springs emerge from the toe of the concave slope to form peaty seepages, or flushes, known as soligenous mires. These soligenous mires and their associated areas of wet heathland, with frequent boulders, are where there are scattered populations of *Lycopodiella inundata* (Marsh Clubmoss) and *Pinguicula lusitanica* (Pale Butterwort) along with a few locations for *H. paludosa* (see image 12 showing the distribution on the back cover). The extensive area of open moorland was once grazed by cattle, ponies and sheep and there is a tradition of patch burning of the heathland which still continues. Today sheep are almost the sole grazing animals and numbers peaked in the 1970s through to the 1990's largely owing to the headage payment system. During the winter months grazing pressure is low as many of the sheep over-winter on the Ministry of Defence Castlemartin Ranges on the limestone of the south Pembrokeshire coast. They are gathered off the mountain in the autumn.

400m south-west of Glanyrafon-uchaf is a small but intricate area of interlinked gently sloping soligenous mires on the west side of a stream. It is here that about 35 *H. paludosa* plants were found in 1964. Late in August the following year it was re-found during a Wildlife Trust meeting and Tommie Warren Davis's (TAWD – my predecessor as V.C.45 Recorder) botanical diary entry reads '*It is distributed in small numbers over a large area south of Glan-yr-afon farm, now well in flower. Hammarbya paludosa.*' In August 1976 TAWD counted over 70 flowering spikes. On 23 August 1977 SBE joined TAWD to compile a Nature Conservancy Council rare plant population form. About 37 flowering spikes were counted along about 40 paces of the uppermost parts of the seepage lines at SN115 345 where they were growing in the channels and sides of flushes/soakways (see image 11, back cover) with much bog-moss (*Sphagnum* spp.). *Rhynchospora alba* (White Beak-sedge), *Potamogeton polygonifolius* (Bog Pondweed) and *Hypericum elodes* (Marsh St. John's-wort) were characteristic of the habitat and a total of 16 associated higher plants was recorded.

This population at SN115345 has been visited on numerous occasions since. *H. paludosa* has been found growing in short mire vegetation in *Sphagnum* moss, including *S. denticulatum* (Cow-Horn Bog-Moss), (see image 8, back cover), on the peaty sides of soakways/channels for over 45 years. The orchid also grows out in the shallow channels which are 0.8 to 2m wide. Here it is found in the water of the soakways in patchy open vegetation of scattered higher plants and brown bryophytes classified in the National Vegetation Classification as M29 *Hypericum elodes*-*Potamogeton polygonifolius* soakway. At this location there is an unusual complex of interlocking very slow flowing soakways arising from several minor

artesian water sources at the toe of a sheep grazed heath and gorse covered knoll of higher ground. This complex which includes cusps, promontories and small peaty islands is also home to populations of *Pinguicula lusitanica* and *P. vulgaris* (Common Butterwort) but lower down, all the soakways merge into a single slightly faster flowing channel. Counts of plants have been made some 20 times whilst associated higher plants have been recorded on 13 further population forms since 1977 – see Appendix 1. Since 2009, more effort has been made by SBE, with much help from Howard Williams, to visit each year and carefully re-survey using GPS readings and to photograph the orchid and its habitat. This extra effort was triggered by the failure to re-find it elsewhere at its Pembrokeshire locations and also by increasing concern about its decline in Wales after the publication in 2008 of 'A Vascular Plant Red Data List for Wales' (Dines, 2008) where it was categorised as 'Endangered in Wales'. It was felt important to learn as much as possible about this remaining population in case it does not survive.

### **C) A summary of the observations of this population south-west of Glanyrafon-uchaf**

**Counts:** Counting numbers of orchids became more precise with the use of hand-held GPS devices after 2009 at an accuracy of 3m. The orchid has been found along about 60m of the peaty channels. Even after a previous year's population has been re-located with the GPS the diminutive size of the orchids has meant that it is essential to have a kneeling mat – or wear shorts - and to slowly crawl alongside the runnels/soakways marking each orchid or cluster with white paper. Sketch maps of previous year's clusters can also be useful especially if marked up with locational measurements. Photographs are also helpful. It is necessary to be patient and allow plenty of time, particularly when locating plants not in flower. Late July through to early September is the best time to count flower spikes. Some continuity of observers from year to year is advantageous, if not essential.

In 2009, 3 visits were made. A single spike, starting to flower, was found on 28 June. No others were found despite a half hour search aided by 20+ members of the Bradford Botany Group. By 9 July, the single = main spike was more extended, with more flowers fully open, at 9cm in height and there were 2 more spikes of 4.5cm and 4cm in height and one non-flowering plant. By 20 August, the main spike was 9cm long and had 4 ripening capsules and there were 5 flowering spikes in total within a 23 x 31cm area. The additional spikes were shorter with few flowers. Moreover, during this third visit in 2009 another flowering spike of 6.5cm was found some 50m upstream. These observations illustrate the importance of correct timing when undertaking counts.

The highest, post 2009, counts of flowering spikes were 31 in 2017 and 27 in 2016, whereas there had been about 70 in the hot dry summer of 1976. The average of the annual counts made between 2009 and 2020 (no counts were made in 2011 and 2012) was 11.4 flowering spikes (see image 10, back cover). The average annual count of combined flowering spikes and plants with no flower spike over the same period was 25.7 with peaks of 49 in 2017 and 49 in 2018. Some of the non-flowering plants are likely to have flowered after the count. There was a total of 33 on 28 July 2020, of which 13 were in flower.

**Height of flowering spikes:** Flower spike height has been measured during 12 yearly counts. The flowers are invariably below the level of the surrounding vegetation of about 15 to 23cm in height. Maximum height of flowering spikes since 1977 has been 9 to 12cm. This was achieved in late August 1977, early July 2009, late July 2014, and early August 2016. In early September 2013 it was noted that a yellowing flower spike had aborted or had been eaten. It was 4cm in height and included a 1.5cm damaged spike. The plant had 2 leaves of 2cm in length with bulbils just starting. In late July 2017, it was found that most of the 11 flower spikes found had aborted or had been eaten: possibly by slugs as 2017 had been a wet year. Grazing pressure by sheep is light in the vicinity of the runnels.

**Leaf bulbils:** It is likely that the production of leaf bulbils plays a most important role in sustaining this population of the orchid (see image 9, back cover). They have been noted on leaf margins in 1965, 1982, 2009, 2014, 2018, 2019 and 2020. The earliest date they were found was 14 July 2009 when proto bulbils were developing on a tiny leaf and the latest was 17 September 1982, but the population has not been visited beyond that late date in any year. On occasions the bulbils are on plants with a flowering spike but quite often they were found on plants without flower spikes or obvious remains of spikes. Some of those could, of course, have gone on to flower at a later date.

**Leaf bulbils versus seed production in population viability:** The important role of leaf bulbils in perpetuating the orchid in Pembrokeshire was first alluded to on 22 August 1965 when TAWD wrote in his diary after visiting this population '*Found again in a number of places, including a group of plants producing bulbils at tips of leaves, the group a dozen or more plants touching one another, evidently the result of vegetative reproduction*'. In more recent years the author has become convinced that the micro-distribution pattern of the plants is partly or largely a result of bulbil production and movement. The following note was made on 30 August 2018 when 38 plants (only one in flower) were found in a sub-colony in a side channel - '*There were 16 clusters which varied from one to seven plants. They were spread out along 12 paces perhaps suggesting that they had originated as*

*bulbils washed down from above. Only 4 of the 16 clusters were growing out in the wet channel. The rest were on the channel edges.'* In the same places in the following August there were 40 plants but 14 were fine flowering plants 3-5cm tall.

Patterns of bulbil distribution in relation to slope and flow rates and openness are thus discernible within the main population. Autumnal/winter rains increase the flow, depth and width of water in the channels. This would occur at a time when bulbils have matured and could be distributed down the linear channels. The bulbils would then lodge where there were minute obstructions in, or on the margins of, the channels.

In addition, gathering livestock into pens in the autumn may well be important because by then the bulbils (or seed) are presumably viable and could be transported on the animal's feet. Is it a coincidence that this main population is close to a major livestock gathering pen? Another population 5km away – not re-found since 2009 - at the eastern end of Mynydd Preseli, ESE of Foeldrygarn, is by a further major gathering pen. There is also a 1983 record by Brynberian itself which is close to a former gathering area that was active at the time. When being driven to these points the animals have, on occasions, to cross the linear flushes/soakways at random pinch points not necessarily used during the summer months. Their feet could perhaps be responsible for moving and pressing the bulbils or seeds into lightly trampled ground alongside suitable channels at new locations or re-colonising former sites or just extending existing populations into adjacent side channels not directly linked by water flow. Wind and water dispersal of seed would obviously provide an alternative mechanism for the establishment of new plants and ultimately new colonies. Vegetative reproduction from the bulbils would, however, clearly be a much more rapid process than reproduction from seed. It may even be that the key to population viability, of this probably short-lived perennial, lies not with buried seed but with buried or partially submerged bulbils. It is easy to assume that most bulbils develop and flower in their second year but perhaps a proportion lie dormant for more than one year forming a 'bulbil bank'?

Maybe the thoughts expressed above highlight the vulnerability of small, isolated populations. The orchid is more likely to survive and even prosper on large open grazing sites with one or more core populations. Clusters of complex headwater soakways with stable low flow hydrological regimes as are found south-west of Glanyrafon-uchaf might provide ideal conditions and explain why this population has persisted over more than half a century. Dispersal from the core populations

over time could be viewed as a dynamic process that would lead to the establishment of small outlying colonies. With luck a few of these could become new core populations but most would not be sustained and would die out in the face of sub-optimal conditions.

**“Unknowns”:** these field observations at the main colony on Brynberian Moor have not addressed hydrology and water quality which is bound to be important especially as there is undoubtedly an artesian element to the water supply. Associated bryophytes have also not been examined. There remain many questions concerning seed production, seed longevity and seed germination let alone the symbiotic role and micro-distribution of any fungal species – believed to belong to the *Epulorhiza* genus – that are essential for the healthy growth of seeds, bulbils and mature plants and their rhizomes. Because the exact location of each individual plant has not been marked it is not possible to meaningfully discuss longevity of this probably short-lived perennial plant. Observations tentatively suggest that a successfully established non-flowering plant may well go on to flower in a second year but are there lots of dormant bulbils that flower in later years? More observations are needed late in each autumn to investigate how many of the tiny leaf bulbils mature and how many abort, and in particular what size are they when the host leaf decays. Over a longer timespan there is likely to be loss and recruitment as the exact locations of some sub-colonies south-west of Glanrafon-uchaf have changed by a few metres. On the other hand, one of the sub-colonies where it was present from 2009 to 2013 is where it was present in 1977.

**D) Pembrokeshire locations for *H. paludosa* away from its stronghold SW of Glanrafon-uchaf arranged by year of discovery.**

On **5 September 1965** TAWD and JWD found a few plants in ‘*the boggy springs*’ west of **Glynsaethmaen** on the south side of the main ridge of Mynydd Preseli at **SN10-30**-. TAWD’s botanical dairies note that one plant was ‘*with buds on the leaf margin at the tip*’.

A field excursion of the West Wales Trust for Nature Conservation on **30 August 1969** reported that a ‘*cluster*’ of 4 bog orchids was found when **returning from Carn Meini via Foel Drygarn** but there are no other details. It is likely that the find was on or just south of the backbone of Mynydd Preseli.

On **31 July 1981** Juliet Brodie of Dale Fort Field Study Centre found *H. paludosa* **north-west of Glanrafon-uchaf** in a flush and a small bog at SN116350 about 500m downstream from the main population. It was found here again in 1982,

1991, 1997, 2000 and 2003. 9 flowering spikes was the highest count in 1982 and in most counts, it was growing with or close to *Lycopodiella inundata*.

It was not until **4 August 1982** that *H. paludosa* was found again and it was also on the south side of the main Preseli ridge. The author came across 4 flowering plants at **SN117317 NNE of Cwmgarw**. They were spread over 1 x 0.5m of a boggy flush on a gentle south facing slope near the headwaters of the Afon Wern. 2 of the plants had a marginal fringe of tiny bulbils on most leaves. The 10 associated plants included *Carex pulicaris* (Flea Sedge), *C. hostiana* (Tawny Sedge), *Lysimachia tenella* (Bog Pimpernel), *Drosera rotundifolia* (Common Sundew) and *Juncus squarrosus* (Heath Rush) and there was a little bare mud and some *Sphagnum* mosses. Later that year, the author found another population on **14 September** this time, 2km to the north-east, on the north side of the Preseli ridge whilst recording *Lycopodiella inundata* during heathland survey work for the Nature Conservancy Council (NCC) at **SN128 338**. There were 4 flowering spikes of the orchid along with 5 not in flower but with bulbils along leaf margins. They were spread along 3m on the peaty banks of a tiny stream or rill which was 10cm deep and cut through hummocky, grazed, wet heath and were growing with bryophytes in the seepage margins of the rill which was derived from a soligenous flush above and discharged into another flush beneath. The moss *Scorpidium scorpioides* (Hooked Scorpion-Moss) was nearby and associates included *Rhynchospora alba*, *Drosera rotundifolia*, *Narthecium ossifragum* (Bog Asphodel) and *Succisa pratensis* (Devil's-bit Scabious) as well as *Lycopodiella inundata*.

In **August 1983**, Francis Rose found 37 *H. paludosa* plants in a flush on Brynberian Moor west of the main population and south-west **of the Brynberian Water Works at SN10662 34743** during one of his courses held at Oriulton Field Study Centre. Francis showed the author the location in later years.

A surprising find was of a colony much further west than Mynydd Preseli in a flush complex on the **north side of Carningli at SN059 377** some 6km north-west of the main population south-west of Glanrafon-uchaf on Brynberian Moor. On **6 September 1983**, Ian Smith was undertaking a heathland survey for the NCC when he discovered about 3 flower spikes and 17 non-flowering plants spread along about 40 to 50m of an extensive *Eleocharis multicaulis* (Many-stalked Spike-rush) flush and growing in a small *Sphagnum* lawn within the flush by the small stream. *Pinguicula lusitanica* was one of the associates along with *Lysimachia tenella*, *Carex echinate* (Star Sedge), *C. hostiana*, *Drosera rotundifolia*, *Narthecium ossifragum* and *Succisa pratensis*. Despite several subsequent visits this colony has not been re-found by the author.

In **July 1984** Stephen Coker, the dragonfly recorder for Pembrokeshire, during a British Dragonfly Society excursion led by Chris Batt and Wilf Nelson, reported that about 45 *H. paludosa* flowering spikes were at a new location. They were from a small flush complex on the edge of the unenclosed common **ESE of Foeldrygarn at SN163 334** some 5km east of the main population south-west of Glanrafon-uchaf. On **15 July 2001**, this population was re-found by the author and Stephen and Anne Coker and Ann Evans. There were 12 flowering plants and 16 just with leaves and bulbils were developing on the leaf margins of some plants. They were growing in closely grazed sloping flushes on the sides of runnels where *Sphagnum* species and brown mosses were dominant. Amongst the 14 associates were *Lysimachia tenella*, *Carex dioica* (Dioecious Sedge), *C. echinata*, *Drosera rotundifolia*, *Eleocharis multicaulis*, *Juncus squarrosus*, *Potamogeton polygonifolius* and *Narthecium ossifragum*. The author found it here again on **12 July 2006**, when there were 9 in flower and 5 not in flower and again on **8 July 2008**. The last record from here was by the author in company with Ann Evans and Howard Williams: 3 plants with only one in flower, and that had largely been eaten off, were found on **14 July 2009**. One leaf had tiny bulbils and it was noted that bryophyte cover was 70-80%. They were in the same minor bryophyte filled runnel as before and '*located on the outside down-slope bend of a meander in the weak old soakway flush where bulbils could lodge if washed down.*' A similar comment was made against the 2008 record that '*The plants were growing on the lower side of a brown moss lawn on a very slight slope in a cul-de-sac at the top of a soakway. Any bulbils would not be washed away by wet weather episodes but would lodge at the point where they occur.*' It has not been re-found since 2009 despite several searches.

The altitudinal range for all these Pembrokeshire populations lies between 110-270m above sea level.

Associated higher plants have been recorded on 6 population forms between 1982 and 2009 for the orchid away from its main population south-west of Glanrafon-uchaf and the frequency of association is shown at Appendix 2.

## Reference

Dines, T.D. (2005). *A Vascular Plant Red Data List for Wales*. Plantlife International, Salisbury.

**APPENDIX 1:** List of associated higher plants – derived from 14 population forms compiled between 1977 and 2020 for the main population south-west of Glan-yr-afon Uchaf, Brynberian Moor

12 *Anagallis tenella* – where 12 means that this plant was listed as an associate in 12 of the 14 population forms. 10 *Eriophorum angustifolium*. 10 *Molinia caerulea*. 10 *Rhynchospora alba*. 9 *Erica tetralix*. 9 *Potamogeton polygonifolius*. 8 *Eleocharis multicaulis*. 8 *Narthecium ossifragum*. 7 *Drosera rotundifolia*. 5 *Carex panicea*. 4 *Hypericum elodes*. 3 *Pinguicula vulgaris*. 2 *Juncus acutiflorus*.

Others recorded once as associates - *Carex dioica*, *C. pulicaris*, *C. viridula*, *Myrica gale*, *Pedicularis palustris*, *Potentilla palustris*, *Potentilla erecta*, *Ranunculus flamula*, *Succisa pratensis* and *Trichophorum germanicum*.

**APPENDIX 2:** List of associated higher plants – derived from 6 population forms compiled between 1982 and 2009 for the other Pembrokeshire populations excluding the main one south-west of Glan-yr-afon Uchaf, Brynberian Moor

5 *Drosera rotundifolia* – where 5 means that this plant was listed as an associate in 5 of the 6 population forms. 5 *Molinia caerulea*. 4 *Carex panicea*. 4 *Erica tetralix*. 4 *Narthecium ossifragum*. 3 *Anagallis tenella*. 3 *Carex echinate*. 3 *Eleocharis multicaulis*. 3 *Juncus bulbosus*. 2 *Carex hostiana*. 2 *Juncus squarrosus*. 2 *Lycopodiella inundata*. 2 *Succisa pratensis*.

Others recorded only once as associates - *Carex dioica*, *C. nigra*, *C. pulicaris*, *C. viridula*, *Eriophorum angustifolium*, *Juncus acutiflorus*, *Myrica gale*, *Pinguicula lusitanica*, *Potamogeton polygonifolius*, *Potentilla erecta*, *Rhynchospora alba* and *Viola palustris*.

**NB** for appendix 1 & 2. Bryophytes have been noted as associates on almost every population form and if identified to species level they would have greatly enhanced the value of the data collected; especially by providing extra clues about water chemistry.

# Peat and Other Matters

KATH PRYCE

It was good news to hear on the BBC Today programme recently that sales of peat to the public are to be banned. However, on learning that it won't be banned until 2024 (and I'm not even sure that it will apply to Wales), I am dismayed as concern about its use both in gardens and commercially has been a subject of discussion among conservationists for decades. I know it is decades as, whilst sorting old magazines (best not to ask!), I noticed the cover picture of Malham Tarn on a copy of Natural World with the headline "*NATIONAL CAMPAIGN: SAVE OUR PEATLANDS*" and read an article about the launch of a joint campaign led by the Royal Society for Nature Conservation (at the time, the umbrella body of the Wildlife Trusts) and other conservation groups, calling for an end to commercial peat extraction and the development of an effective National Peatland Conservation Strategy.

When was this? Spring 1990 - more than thirty years ago. Intact peatlands can be regarded as fundamental to our future wellbeing. Despite admiration, although generally small-scale initiatives such as the Carmarthenshire Bogs Project, I continue to despair that those in power are so slow to take meaningful action to prevent further destruction of peatlands and their apparent failure to understand their importance, despite persistent lobbying by those who have, for many years, fully understood the significance of peatland loss. Hopefully, post-Brexit agricultural support schemes in Wales will reflect the urgent need to address this crisis.

Despite growing up in the Cheshire countryside, my first experience of a proper peat bog was as a teenager when I visited Cors Fochno (or Borth Bog as I knew it then) on a school biology field trip - a whole week studying the plants on that most spectacular of wetlands. My friend Ann and I still talk about it! The plant names, as well as the plants themselves, were magical - *Drosera rotundifolia* (Round-leaved Sundew) and *Myrica gale* (Bog Myrtle) spring to mind. I'd never seen sundew before, and it wasn't even in my Observer's or Ladybird books.

Habitat creation such as tree planting and sowing "wildflower" meadows are often in the headlines. Is this because trees are large, and a show of flowers attracts public attention whereas the more subtle appeal of peatland habitats require close observation (and maybe wet feet) to appreciate them? The conservation of existing habitats is generally more urgent and very much more worthwhile than most of the habitat creation schemes which attract grants and public attention. Habitats should not have to be colourful and 'in-your-face' to

merit their conservation.

Another article in the same issue of *Natural World* was "*The jewels of Britain's Wetlands*" by Frank Perring ("*one of Britain's leading botanists*" was something of an understatement in the introduction!) in which he considered the data for various species included in the vascular plants Red Data Book (Perring & Farrell, 1977). He observed that some plants were not included in the Red Data Book because they were not rare enough to meet the British criteria but were, however, rare in Europe overall. For example, at least 50% of the north-west European populations of *Hammarbya paludosa* (Bog Orchid) were located in Britain. Since that time, the quality and volume of data now available to Government and public bodies has improved vastly thanks largely to the work of 'amateur enthusiasts' but are those in authority making proper use of it? Do they even know of its existence or the mechanisms by which it has been collected, collated and made available to them, largely *gratis*? It is an insult to all those volunteers, many with unique and authoritative knowledge of the subjects of their studies, if this data is not treated with respect and used wisely to "save the planet". Volunteers don't get paid, nor would most of them seek payment but a modicum of appreciation and acknowledgement would not go amiss.

Are we to continue to allow extraordinary, rare and valuable habitats to deteriorate as a result of the delays and inaction resulting from the apathy (or outright hostility in some cases) of our politicians? Are we going to be satisfied with the museum-like preservation of a handful of isolated examples of what a peatland was like for our children and grandchildren to marvel over or, more likely, lament the loss of the natural world that they never had a chance to experience? Will they remember our generation as the destroyers of their heritage and even the destroyers of the planet?

Will it continue to be possible for future generations to experience excursions as pleasurable as the one that led to my fond memories of that teenage visit to Cors Fochno?

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# The London Plane (*Platanus x Hispanica*) in Llanelli

IAN MORGAN

The London Plane is not a commonly-planted tree in Llanelli. It occurs as a street tree in areas built during the early 1900s and there are examples of recent plantings from the mid-1990s onwards at locations or areas subject to recent redevelopment. Examples of the latter include around the bus-stops near Llanelli Town Hall and the carpark opposite the library with others opposite the main railway station and at the eastern end of Mansel Street. Furthermore, there are new plantings in the Eastgate area of the town centre, most especially a row of eight unpollarded trees alongside the bus-stops (from SN50919 00374 to 51021 00446) with 4 more nearby at SN50978 00520. My particular interest in London Plane stemmed from the fact that it is the host plant for the non-native micro-moth *Phyllonorycter platani*, which I found new to the vice-county in autumn 2020.

Undoubtedly, the `headquarters` of this tree is located in a cluster of streets of superior Edwardian housing in the Alban Road, College Hill, Glevering Street and Glenalla Road area; all of which are periodically pollarded. Alban Road and College Hill have a virtually intact series of London Plane trees on both sides. Alban Road has 26 trees in total (see image 4, page 2) and College Hill 14 trees. The lengthy Glenalla Road only has 3 trees, with one on the corner with Glevering Street. Whilst Glevering Street only has 5, excluding the aforementioned corner tree.

In the other streets, trees have been removed, leaving gaps in what once would have been lines of London Planes on each side. Much lesser numbers of the species are also to be found in Walters Road and Coronation Road in the Bigyn Hill area (again housing dating from the Edwardian era) and along Queen Victoria Road, where there are 4 trees on the northern side at c.SN50403 00013 etc. There are also some original plantings of pollarded lime trees *Tilia x europaea*, as well as occasional other tree types.

## **Some records of London Plane** (all recorded on 16 October 2020)

- Total trees in Alban Road - College Hill and adjacent streets is 50 (26+14+3+5+2):Alban Road SN51410 00297 to 51420 00613 – 26 trees
- College Hill SN51198 00429 to 51390 00363 – 14 trees
- Lane off Glenalla Road SN51277 00507 – 3 trees
- Road linking Marble Hall Road and College Hill SN51227 00349 – 2 trees
- Glenalla Road at c.SN51277 00479 etc – 3 trees
- Small side street off Glenalla Road. SN51407 00624 – 2 trees

Coronation Road and Walters Road have a joint total 11 trees mixed with lime and occasional other species. These streets also date from the early 1900s; they are built in the same period as the Alban Road - College Hill - Glevering Street and Glenalla Road area. Details:

- Coronation Road – 2 trees at c.SS51230 99911
- Along the minor road linking Coronation Road and Walters Rd at c.SS51320 999292 – 2 trees
- Walters Road near roundabout at c.SS51408 99995 – 1 tree
- c.SS51369 99993 – 1 tree
- c.SS51306 99998 – 1 tree
- c.SS51249 99996 – 2 trees
- c.SS51216 99997 – 1 tree
- c.SS51140 99986 – 1 tree
- Palace Avenue SN514001 etc – 6 trees

In Eastgate (see image 3, page 2) the total number is 12 trees comprising 8 in the main line-planting plus 2 planted in linking alleyways and 3 towards the Zion Chapel part of the carpark.

Queen Victoria Road has 4 trees.

Opposite (north of) Llanelli Railway Station, 8 trees in car park at SS 50651 99509.

The east end of Mansel Street has 3 trees.

Near Llanelli Town Hall SN50399 00298 there are 7 trees in two groups comprising 3 and 4 trees respectively.

The carpark opposite Llanelli Library at SN50589 00488 has a row of 7 trees with 2 more in the northern corner at SN50580 00548 opposite the west end of Gelli Onn, totalling 9 trees.

Green space between Gathan Terrace and flats (north-west side of Glanmor Road) has 2 trees at SS50606 99600 and cSS 50588 99628 (amongst other tree plantings).

There were also 2 London Plane trees at the west end of Pembrey Road (just east of the former White Horse public house on the east side of Sandy Bridge at c.SN50043 00625 but they were both felled in or around 1974.

**Grand total of London Planes in the whole of Llanelli = 113 trees.**

*This article appeared in an abbreviated form in the last Llanelli Nats Newsletter.*

# Welsh Plant Records 2020

Welsh Plant Records are compiled by Stephen Coker, Mountain Grove, Clarboston Road, Haverfordwest, Pembrokeshire, SA63 4SG, from reports of BSBI vice-county Recorders to whom records should be sent. Plants are listed for each vice-county in the order of D.H. Kent's *List of Vascular Plants of the British Isles* (1992) and *Supplements 1, 2 & 3* (1996 & 2000) the number in those lists preceding the name so that names changed since 1996 can be given without giving the former name. Latin names follow the 3<sup>rd</sup> edition of C.A. Stace's *New Flora of the British Isles* (2010) or, if not in that Flora, E.J. Clement & M.C. Foster's *Alien Plants of the British Isles* (1994). T.B. Ryves, E.J. Clement & M.C. Foster's *Alien Grasses of the British Isles* (1996) or Sell & Murrell's *Flora of Great Britain and Ireland* (1996-2009). Authorities for Latin names are not given unless the name is not in any of these works. English names are those in Stace (2010) or *English Names of Wild Flowers* ed. 2 (1986) by Dony *et al*, or, if not in either of those, Clement & Foster (1994), Ryves, Clement & Foster (1996) or Sell & Murrell (1996-2018). English names enclosed by square brackets do not occur in any of these books but have been used elsewhere. Welsh names are those in *Planhigion Blodeuol, Conwydd a Rhedyn*, published by Cymdeithas Edward Llwyd (2003).

The following symbols are used:

\* to indicate a new v.c. record; ⊗ to indicate an updated VCCC record; ☿ to indicate a record demonstrating the rediscovery of a taxon published as extinct in the VCCC

+ to indicate a new hectad record; ⊕ to indicate an updated hectad record; ⊖ to indicate a new tetrad record

† indicates archaeophyte; ‡ indicates neophyte; © indicates casual.

†‡© before the species number: to indicate that the species is regarded as an archaeophyte, neophyte or casual at least somewhere in the British Isles.

†‡© after the species number: to indicate that the species is regarded as an archaeophyte, neophyte or casual generally within the vice county, different from that of the British Isles.

†‡© before the record: to indicate a species which although a native, archaeophyte or neophyte at least somewhere in the vice county, is not so in the locality recorded.

[ ] to indicate that the record, previously published in error, should be deleted.

↔ to indicate an update to a rare or scarce taxon.

∅ to indicate that the taxon is now believed to be extinct in the locality cited.

N, S, E, W indicate points of the compass.

In general, only records which update the *Vice-county Census Catalogue* [VCCC] (2003) or the *New Atlas of the British & Irish Flora* (2002) will be listed. Other records are included at the discretion of the vice-county recorder. The minimum grid reference is to a hectad but, if supplied by the recorder, more precise grid references may be included. A letter in parentheses following a grid reference indicates a tetrad.

The current Vice-county Recorders are:

MONMOUTH, v.c.35; Dr Stephanie J. Tyler, Yew Tree Cottage, Lone Lane, Penallt, Mons, NP25 4AJ; steph\_tyler2001@hotmail.com & Mrs Elsa Wood (*all correspondence to Dr Tyler*).

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GLAMORGAN, v.c.41 (East); Mr Julian P. Woodman, c/o NRW, Rivers House, St Mellons Business Park, Fortran Road, St Mellons, Cardiff, CF3 0EY (Please mark PERSONAL); juwood66@gmail.com

BRECON, v.c.42; Mr Mike Porter, Aberhoywy Farm, Cyffredyn Lane, Llangynidr, near Crickhowell, Powys NP8 1LR; mikechris1@btinternet.com & Dr J.R. Crellin; jrc@crellin.org.uk (*all correspondence to Mr Porter*).

RADNOR, v.c.43; Miss Elizabeth R. Dean, Enmore House, Croft Lane, Kingsland, Leominster, Herefordshire, HR6 9PP; erd@btconnect.com

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PEMBROKE, v.c.45; Mr Stephen B. Evans, Glan-y-Mor, Dinas Cross, Newport, Pembrokeshire SA42 0UQ; glanymor.dinas@gmail.com

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MONTGOMERY, v.c.47; Dr A Kate Thorne, Churton House, Church Pulverbatch, Shropshire, SY5 8BZ; k.thorne@btinternet.com & Mrs Gill Foulkes

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ANGLESEY, v.c.52; Mr Ian R. Bonner, 15 Littledean Hill Road, Cinderford, Gloucestershire, GL14 2BD; bonner@caetrefor.co.uk & Mr Nigel Brown, Granary Cottage, Llanddyfnan, Talwrn, Llangefni, Anglesey, LL77 8JA; nigelbrown55@yahoo.com (*all correspondence to Mr Ian R. Bonner*)

MONMOUTH, v.c.35 (comm. S.J. Tyler & E. Wood)

+006/1.1. **Osmunda regalis** (Royal Fern) (Rhedynen Gyfrdwy). Garn -yr-erw'Blaenavon, SO246 104, S.Williams, 22nd Jun 2020, in acid flush on coal tip.

010/2.1.gam. **Trichomanes speciosum [gametophyte]** (Rhedynen Cilarne). Whitebrook, SO52 07, S.Bosanquet, 29th Nov 2020; Penallt, SO53 09, S.Bosanquet, 1st Mar 2020.

+028/17.3. **Thalictrum flavum** (Common Meadow-rue) (Arianllys). Llandegfedd reservoir, SO33 00, A.Griffiths, L.Maclean & S.Tyler, 22nd Sep 2020, damp grassland.

051/1.15. **Hypericum montanum** (Pale St John's-wort) (Eurinllys Gwelw). Blackcliff, ST53 98, D.Green, 12th Aug 2020, new site for a species that is now very rare in the county.

+075/15.2. **Agrimonia procera** (Fragrant Agrimony) (Llyisiau'r-dryw Pêr). Wentlooge levels, ST290 809, B.Stewart, 30th Jun 2020, sea wall.

+075/19.10.b. **Alchemilla filicaulis subsp. vestita** (Mantell-Fair Flewog). Duffryn farm, Blorenge, SO27 10, S.Tyler & L.Maclean, 13th Oct 2020.

+077/08.1.† **Lotus glaber [L. tenuis]** (Narrow-leaved Bird's-foot-trefoil) (Pysen-y-ceirw Gulddail). Peterstone Gout, ST276 804, B.Stewart, 29th Jul 2020, sea wall.

+077/10.3. **Ornithopus perpusillus** (Bird's-foot) (Troed yr Aderyn). Kymin, SO52 12, S.Bosanquet, 21st Nov 2020, in lawn at NT property.

+077/19.20. **Trifolium striatum** (Knotted Clover) (Meillionen Rychog). Rhymney Great Wharf, ST232 776, B.Stewart, 14th Jul 2020, sea wall.

+091/2.07. **Euphorbia stricta** (Upright Spurge) (Llaethlys Syth). Dyffryn farm, Blorenge, SO279 107, S.Tyler & L.Maclean, 16th Oct 2020, in a wild garden, origin probably Sussex.

+094/1.1. **Linum bienne** (Pale Flax) (Llin Culddail). Lasgarn wood, SO27 04, S.Smith, Jun 2020, grassland near wood.

+108/3.4. **Centaureum pulchellum** (Lesser Centaury) (Y Ganrhi Goch Fach). Llandegfedd reservoir, SO33 00, A.Griffiths, L.Maclean & S.Tyler, 22nd Sep 2020, dry shore line.

+110/3.1. **Atropa belladonna** (Deadly Nightshade) (Codwarth). St Pierre Pill headland, ST522 894, M.Pickard, 1st Jul 2020, sea wall.

+121/1.1. **Plantago coronopus** (Buck's-horn Plantain) (Llyriad Corn Carw). A40 dual carriageway, SO31 11, S.Tyler & L.Maclean, 13th Oct 2020, edge of hard shoulder.

+124/16.09. **Veronica scutellata** (Marsh Speedwell) (Rhwyddlwyn Culddail y Gors). Llandegfedd reservoir, SO33 00, A.Griffiths, L.Maclean & S.Tyler, 22nd Sep 2020, damp grassland by inflow.

+152/07.1. **Schoenoplectus lacustris** (Common Club-rush) (Llafrwynen). Llanvihangel, SO42 14, S.Tyler, 10th Jul 2020, pond in Trothy Catchment.

+152/07.2. **Schoenoplectus tabernaemontani** (Grey Club-rush) (Llafrwynen Arfor). Llanwern Steelworks, ST35 87, B.Stewart, 23rd Jun 2020, reens.

\*©153/PAN.dic. **Panicum dichotomiflorum** (Autumn Millet) (Miled yr Hydref).

Llandegfedd reservoir, SO33 00, A.Griffiths, L.Maclean & S.Tyler, 22nd Sep 2020, dry shore line

GLAMORGAN, v.c.41 (comm. J.P. Woodman & B. Stewart)

+001/1.1. **Huperzia selago** (Fir Clubmoss) (Cnwp-fwsogl Mawr). Deciduous woodland, Clyne Wood, SS610 912, Teifion Davies, 14th Dec 2020, single plant next to bike track (possible source of bulbil?) '...on steep moss-covered embankment beneath Sessile Oak'.

+004/1.3. **Equisetum variegatum** (Variegated Horsetail) (Marchrawnen Fraith). Flushed airport heath mosaic, Fairwood Airport, SS5664 9145, Barry Stewart, 31st May 2020.

‡017/2.1. **Cyrtomium falcatum** (House Holly-fern) (Gwrychredynen-y-Celyn y Tŷ). Gurnos, SN772 095, Jo Mullet, conf. Barry Stewart, 18th Feb 2020, presumed garden throw-out.

‡+021/4.1. **Juniperus communis** (Juniper) (Merywen). Road verge, Llwynnant, Ynysybwl, ST044 933, David Barden, 23rd Aug 2020, 3ft bush, well away from habitation, no obvious sign of being planted.

+027/1.1. **Ceratophyllum demersum** (Rigid Hornwort) (Cyrnddail Caled). Felindre (layby pond), SS644 997, Barry Stewart, 7th May 2020.

‡+‡053/2.2. **Malva pseudolavatera** (Smaller Tree-mallow) (Hocyswydden Fach). Road verge, St Thomas, Swansea, SS662 936, Barry Stewart, 1st Oct 2020, along edge of roadside pavement.

+062/12.3. **Rorippa islandica** (Northern Yellow-cress) (Berwr Melyn Gogleddol). Cymmer Tip, SS865 978, Barry Stewart, 18th Sep 2020.

075/09.13×14. **Potentilla × suberecta**. Grassland, Llantrisant Common, ST046 839, David Barden, conf. Brenda Harold, 29th Jun 2020, update of old hectad record.

+125/2.10.hel. **Orobanche minor var. heliophila**. Swansea Bay Campus, SS6986 9273, Barry Stewart, 26th Jul 2020, growing on Brachyglottis xjubar 'Sunshine' - verge planter bed adjacent to road SS69869273.

+‡135/27.4.a. **Pilosella praealta subsp. praealta**. Mynydd Resolven Quarry, SN8685 0312, Charles Hipkin & Hilary Hipkin, 8th Jun 2021, mesotrophic pool in Larch plantation.

\*135/28.07.58. **Hieracium pollichiae** (Roffey's Hawkweed). Open grassy steep large bank above A4055 road, Llandough, ST172 725, Tim Rich, conf. David McCosh, 16th Nov 2020, 1st Jan 2019, new to Wales.

‡+135/28.07.86. **Hieracium radyrense** (Radyr Hawkweed). Road bridge over railway, Danescourt rail station, Cardiff, ST144 785, Tim Rich, conf. David McCosh, 16th Nov 2020, 4th Jun 2020; (‡+) railway station bank, Danescourt rail station, Cardiff, ST144 786, Tim Rich, conf. David McCosh, 16th Nov 2020, 4th Jun 2020; (‡+) school wall, Llandaff North, Cardiff, ST147 793, Tim Rich, conf. David McCosh, 16th Nov 2020, 8th Jun 2020, since reduced to a single plant, 03/07/2020.

‡+‡135/28.08.ade. **Hieracium adelphicum P.D. Sell** (Glamorganshire Hawkweed). Grassland, Llantrisant Common, ST043 845, David Barden, conf. Tim Rich & David McCosh, 30th May 2020.

+‡135/62.03. **Senecio inaequidens** (Narrow-leaved Ragwort) (Creulys Gulddail). Tawe New Cut (St Thomas), SS661 934, Barry Stewart, 1st Oct 2020.

+145/1.1. **Zannichellia palustris** (Horned Pondweed) (Llynwlyddyn Corniog). Banwen Pyrddin, SN8649 0922, Charles Hipkin & Hilary Hipkin, 20th Sep 2021, in small pool at side of forest path with Potamogeton natans.

†+147/5.2.a. **Arum italicum subsp. neglectum**. Scrubby / grassy cliff, West Aberthaw/  
 Fontygary, ST659 044, Mark Hampton, conf. Tim Rich, 26th Oct 2020, 25th Oct 2020.  
 +151/1.06. **Juncus foliosus** (Leafy Rush) (Brwynen Ddeiliog). Flushed airport heath mosaic,  
 Fairwood Airport, SS572 919, Barry Stewart, 23rd May 2020.  
 154/1.3. **Sparganium angustifolium** (Floating Bur-reed) (Cleddlys Arnofiol). Sarn Helen,  
 Banwen, SN8521 0851, Charles Hipkin & Hilary Hipkin, 15th Jun 2021, oligotrophic, peaty  
 pool in Sitka Spruce plantation.  
 162/03.6. **Epipactis leptochila** (Narrow-lipped Helleborine) (Y Galdrist Finfain). Beech  
 woodland, Morganstown, ST126 820, Julian Woodman, conf. Mike Clark, 1st Jul 2017,  
 subsequent records, 2020 have 71 plants. Some here var.cordata.  
 +162/18.3. **Dactylorhiza incarnata** (Early Marsh-orchid) (Tegeirian-y-gors Cynnar). Flushed  
 airport heath mosaic, Fairwood Airport, SS572 919, Barry Stewart, 31st May 2020

BRECON, v.c.42 (comm. M. Porter & J. Crellin)

+001/3.1. **Lycopodium clavatum** (Stag's-horn Clubmoss) (Cnwp-fwsogl Corn Carw). Cwm  
 Callan, SO072 150, Sharon Pilkington & Claire Halpin, 20th Aug 2020.  
 +015/2.5.a. **Asplenium trichomanes subsp. trichomanes** (a subspecies of Maidenhair  
 Spleenwort). Afon Nedd Fechan, SN908 107, John Crellin, 1st Feb 2020.  
 \*†029/1.2. **Berberis thunbergii** (Thunberg's Barberry) (Pren Melyn Thunberg). Llaneglwys  
 Bridle Way, SO063 385, John Crellin, Sue Goodhead & Joan Millard, det. John Crellin, 16th  
 Sep 2020, in a hedge away from habitation.  
 +†031/5.07. **Fumaria officinalis** (Common Fumitory) (Mwg-y-ddaear Cyffredin). Henrhyd,  
 SN85 11, Arlene Jones, 26th Jun 2020, roadside verges, disturbed ground.  
 +†039/4.7. © **Quercus rubra** (Red Oak) (Derwen Goch). Forestry NW of Tirabad, SN86 42,  
 Sue Goodhead, 31st Aug 2020.  
 +040/3.1.† **Carpinus betulus** (Hornbeam) (Oestrwydden). Penpont, Parkside Fields,  
 SN9645 2799, Matt Sutton, 14th May 2020; (+) Cradoc, SO01 30, Sue Goodhead, 25th May  
 2020.  
 +043/1.15 **Chenopodium album** (Fat-hen) (Troed-yr-ŵydd Gwyn). Caehopkin, SN82 12,  
 John Crellin, Anne Griffiths & Arlene Jones, 12th Aug 2020.  
 +046/07.10. **Cerastium diffusum** (Sea Mouse-ear) (Clust-y-llygoden Arfor). Abercynithon,  
 SO02 50, Ray Woods, 9th Jun 2020.  
 \*046/20.mul. **Silene multifida** (Fringed Catchfly). Wern Coed, SN99 57, Ray Woods, 9th  
 Jun 2020, road verge.  
 +047/5.1×2. **Fallopia japonica** × **F. sachalinensis** = **F. × bohémica**. Talybont on Usk, SO112  
 246, John Crellin, 23rd Sep 2020.  
 +051/1.03. **Hypericum androsaemum** (Tutsan) (Dail y Beiblau). Pen y Crug East, SO03 30,  
 Sue Goodhead, 20th Jun 2020.  
 +061/2.16. **Salix repens** (Creeping Willow) (Corhelygen). Ystrad Fawr Nature Reserve,  
 SN791 098, Steph Coates, 15th May 2020, confirmed by Dr. I Belyaeva.  
 +†062/11.3. **Barbarea intermedia** (Medium-flowered Winter-cress) (Berwr-y-Gaeaf  
 Canolig). Tynewydd Farm, SO132 270, John Crellin, Sue Goodhead, Joan Millard & Ray  
 Woods, 17th Jun 2020.

- +†062/28.1. **Thlaspi arvense** (Field Penny-cress) (Codywasg y Maes). Field near pont Nichol, SO144 330, John Crellin, 7th Aug 2020.
- \*066/1.1. **Pyrola minor** (Common Wintergreen) (Glesyn-y-gaeaf Bach). Caehopkin, SN822 120, Arlene Jones, det. John Crellin, 6th May 2020, shaded N-facing bank; under conifers. Subsequently found to be abundant in a wide area of Larch plantation adjoining.
- +069/4.3. **Lysimachia vulgaris** (Yellow Loosestrife) (Trewyn). Nant y Bryn, SN87 43, Sue Goodhead, 31st Aug 2020.
- +†072/2.3. **Ribes nigrum** (Black Currant) (Llwyn Cwrens Duon). Glanyscir, SO00 30, Sue Goodhead, 1st May 2020.
- +†073/1.3. **Crassula helmsii** (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Hirwaun Old Ironworks site, SN958 060, John Crellin, 4th Jan 2020; (+) Talybont Reservoir edge, SO092 179, Sharon Pilkington & Claire Halpin, 2nd Sep 2020, one patch about 30 cm across seen.
- +†073/5.14. **Sedum album** (White Stonecrop) (Briweg Wen). Penpont, conifer plantation, SN977 278, Matt Sutton, 14th May 2020.
- +†075/11.3. **Fragaria ananassa** (Garden Strawberry) (Llwyn Mefus y Gerddi). Hirwaun West, SN95 05, John Crellin, 4th Jan 2020, seen on New Year Plant Hunt.
- +075/15.2. **Agrimonia procera** (Fragrant Agrimony) (Llysiâu'r-dryw Pêr). Hirwaun Old Ironworks site, SN955 059, John Crellin, 4th Jan 2020, seen on New Year Plant Hunt.
- +†075/17.3. **Poterium sanguisorba** (Bwrned). Middlewood Farm, SO13 23, Anne Griffiths & Joan Millard, 3rd Aug 2020.
- +075/20.1. **Aphanes arvensis** (Parsley-piert) (Troed y Dryw). Oakfield, SO22 41, John Crellin, 4th May 2020.
- \*†075/22.12. **Prunus serotina** (Rum Cherry) (Coeden Geirios Rým). Llwynfedwen, SN97 24, John Crellin, Sue Goodhead, Anne Griffiths, Claire Halpin, Arlene Jones, Joan Millard & Alan Salter, det. John Crellin, 29th Jul 2020.
- +†075/32.35. **Cotoneaster rehderi** (Bullate Cotoneaster) (Cotoneaster Deilgrych Rehder). Llaneglwys, SO06 38, John Crellin, Sue Goodhead & Joan Millard, det. John Crellin, 16th Sep 2020, the green at Danyrallt.
- +077/16.4. **Ononis repens** (Common Restharrow) (Tagaradr). Taf Fechan Nature Reserve, SO034 084, Stephanie Coates, 16th Jun 2020.
- +†077/17.3. **Melilotus officinalis** (Ribbed Melilot) (Yr Wydro Resog). Melin Llech, SN83 12, Arlene Jones, 29th Nov 2020, verge on Sustrans 43; (⊗) Talybont-on-Usk, SO112 227, Anne Griffiths & Joan Millard, 18th Aug 2020.
- 077/25.2. **Genista tinctoria** (Dyer's Greenweed) (Melynog y Waun). Pyllyn Farm hay meadow, SN973 249, Catherine Etchell, 9th Jul 2020.
- +084/1.07. **Epilobium roseum** (Pale Willowherb) (Helyglys Gwelw). Field near pont Nichol, SO144 330, John Crellin, Heather Colls, Sue Goodhead, Joan Millard & Alan Salter, det. John Crellin, 5th Aug 2020.
- +†084/4.1. **Oenothera glazioviana** (Large-flowered Evening-primrose) (Melyn-yr-hwyr Mawr). Field near pont Nichol, SO144 330, John Crellin, Heather Colls, Sue Goodhead, Joan Millard & Alan Salter, 5th Aug 2020.

- +‡102/1.06. **Oxalis stricta** (Upright Yellow-sorrel) (Suran Felen Unionsyth). Crickhowell, SO211 185, Anne Griffiths, 15th Oct 2020.
- +103/1.07. **Geranium pratense** (Meadow Crane's-bill) (Pig-yr-aran y Weirglodd). Battle End Farm, SO00 31, Sue Goodhead, 17th Apr 2020.
- ‡105/1.4. **Impatiens glandulifera** (Indian Balsam) (Jac y Neidiwr). Hodrid, SN984 628, Richard Knight, 11th Sep 2020, first county record for the hectad.
- +107/44.1.a. **Daucus carota subsp. carota** (Wild Carrot) (Moronen y Maes). Caehopkin, SN82 12, Arlene Jones, 22nd Apr 2020, verges.
- +‡109/1.1. **Vinca minor** (Lesser Periwinkle) (Perfagl Fach). Llanelly, SO23 14, John Crellin, 11th Mar 2020.
- +111/2.1. **Convolvulus arvensis** (Field Bindweed) (Cwlwm y Cythraul). Coelbren, SN84 11, Arlene Jones, 11th May 2020, roadside verges.
- +‡111/3.4. **Calystegia silvatica** (Large Bindweed) (Taglys Mawr). Llwynfedwen, SN97 24, John Crellin, Sue Goodhead, Anne Griffiths, Claire Halpin, Arlene Jones, Joan Millard & Alan Salter, 29th Jul 2020.
- +‡116/08.1. **Pentaglottis sempervirens** (Green Alkanet) (Llysiâu'r-gwrid Gwyrdd). Pen y Crug, SO02 30, Sue Goodhead, 9th Apr 2020.
- +‡116/09.2. **Borago pygmaea** (Slender Borage) (Tafod-yr-ych Bach). Llanbedr, SO235 202, Margaret Biss, 21st Oct 2020.
- 116/15.01. **Myosotis scorpioides** (Water Forget-me-not) (Sgorpionllys y Gors). Nant y Bryn, SN86 11, Arlene Jones, 17th Aug 2020, ditch.
- \*‡117/1.bon. **Verbena bonariensis** (Argentinian Vervain) (Ferfain yr Ariannin). Field near pont Nichol, SO144 330, John Crellin, Heather Colls, Sue Goodhead, Joan Millard & Alan Salter, det. John Crellin, 5th Aug 2020.
- +118/18.4. **Clinopodium vulgare** (Wild Basil) (Brenhinllys Gwyllt). Sustrans 43, SN824 120, Arlene Jones, 6th Aug 2020.
- +121/1.1. **Plantago coronopus** (Buck's-horn Plantain) (Llyriad Corn Carw). Brecon, SO04 28, Joan Millard, 28th Mar 2020.
- +124/01.07. **Verbascum thapsus** (Great Mullein) (Pannog Felen). Henrhyd, SN85 11, Arlene Jones, 17th Aug 2020, on Christy tramroad; (+) Cradoc, SO01 30, Sue Goodhead, 25th May 2020.
- +124/01.09.‡ **Verbascum nigrum** (Dark Mullein) (Pannog Dywyll). Talybont-on-Usk, SO11 22, Joan Millard, 12th Aug 2020.
- +124/13.1. **Linaria vulgaris** (Common Toadflax) (Llin-y-llyffant). Caehopkin, SN82 12, Arlene Jones, 1st Jul 2020, lagoon enclosure; Pen y Crug, SO02 30, Sue Goodhead, 11th Jun 2020.
- +‡124/13.3. **Linaria purpurea** (Purple Toadflax) (Llin-y-llyffant Porffor). Cradoc, SO01 30, Sue Goodhead, 2nd Jun 2020.
- +124/25.2. **Pedicularis sylvatica** (Lousewort) (Melog y Cŵn). Danyfforest, SO23 40, John Crellin, 12th May 2020.
- +‡129/1.10. **Campanula poscharskyana** (Trailing Bellflower) (Clychlys Ymlusgol). Pen y cae, SN847 150, Stephanie Coates, 24th Jun 2020; (+) Oakfield, SO22 41, John Crellin, 4th May 2020, walls.

- +†133/1.2. **Valerianella carinata** (Keeled-fruited Cornsalad) (Gwylaeth-yr-oen Ffrwythau Rhychog). Slwch, SO05 28, Joan Millard, det. John Crellin, 22nd Apr 2020.
- +†133/3.1. **Centranthus ruber** (Red Valerian) (Triaglog Goch). Caehopkin, SN82 12, Arlene Jones, 6th May 2020, near Caehopkin.
- +134/1.1. **Dipsacus fullonum** (Wild Teasel) (Cribau'r-pannwr Gwyllt). Hirwaun Old Ironworks site, SN955 059, John Crellin, 4th Jan 2020, NYPH; (+) Cradoc, SO01 30, Sue Goodhead, 25th May 2020.
- +135/05.4. **Carduus nutans** (Musk Thistle) (Ysgallen Bendrom). Rhos Fach, SO18 33, Anne Griffiths, 16th Sep 2020.
- +†135/12.1. **Cichorium intybus** (Chicory) (Ysgello). River Usk, south path, SO028 287, Anne Griffiths, 1st Sep 2020.
- +135/30.4. **Filago minima** (Small Cudweed) (Edafeddog Fach). Field near Ty Mawr, SN994 571, Ray Woods, 12th Jul 2020.
- +†135/43.4. **Erigeron karvinskianus** (Mexican Fleabane) (Amrhydlywyd y Cerrig). Cil-wich-fawr, SO14 20, John Crellin, Sue Goodhead & Joan Millard, 8th Sep 2020; (+) Hay-on-Wye pavement, SO227 421, John Crellin, 23rd May 2020.
- +†135/59.1. **Matricaria chamomilla** (Scented Mayweed) (Amranwen Bêr). Old Storehouse, SO08 25, Claire Halpin, 25th May 2020.
- +©135/GUI.ab. **Guizotia abyssinica** (Niger) (Guizotia). Pontywal Lane, SO142 350, Mike Lush, 11th Oct 2020.
- +152/3.4. **Eleocharis multicaulis** (Many-stalked Spike-rush) (Ysbigfrwynen Gadeiriog). Waen Ddu, SO186 165, John Crellin & Anne Griffiths, 12th Jun 2020.
- +†158/20.3. **Hyacinthoides hispanica** (Spanish Bluebell) (Clychau'r-gog Sbaenaidd). Llanfaes churchyard Brecon, SO03 28, Ben Mullen, 5th May 2020; (+) The Gliss path, SO229 426, John Crellin, 22nd Apr 2020.
- +†158/24.07. **Allium triquetrum** (Three-cornered Garlic) (Garlleg Trionglog). Llanelly, SO23 14, John Crellin, 11th Mar 2020.
- \*158/24.tri. **Allium trifoliatum** (Hirsute Garlic). Llandefalle churchyard, SO107 355, Joan Millard, det. John Crellin, conf. Referee (Paul Green), 18th May 2020.
- +162/14.1. **Anacamptis pyramidalis** (Pyramidal Orchid) (Tegeirian Bera). Coed Taf Fawr, SO000 130, Paul Parsons, 6th Jul 2020

RADNOR, v.c.43 (comm. E.R.Dean)

- ©034/1.1. **Cannabis sativa** (Hemp) (Cywarch). SW of Llandrindod Wells, SO05 60, A Shaw, Aug 2020, one plant growing in a crack in the bridge at Rock Park, Llandrindod Wells.
- ††091/2.17.b.© **Euphorbia characias subsp. veneta [wulfenii]**. Llanelwedd Rocks, SO05 51, Ray Woods, 21st Jun 2020, edge of Llanelwedd Quarries.
- 125/2.02. **Orobanche rapum-genistae** (Greater Broomrape) (Gorfanhadlen Fawr). Harley's Hill, SO29 64, John Ockenden & Phil Marshall, 30th Aug 2020, lane over exposed hilltop farmland, gorse hedge. NW side of rd.
- 129/7.3. **Lobelia dortmanna** (Water Lobelia) (Bidoglys y Dŵr). Llyn Cerrigllwydion Uchaf, SN86, Barbara Brown, Jul 2020, lots in bud.

±130/5.1. **Asperula cynanchica** (Squinancywort) (Mandon Fach). SE of Rhayader, SN97 67, A Shaw, 13th Jul 2020, many plants on front lawns of 2 properties at at Bryngwy, Rhayader.

135/30.4. **Filago minima** (Small Cudweed) (Edafeddog Fach). Llanellwedd, SO04 51, A Shaw, Jul 2020, scattered plants in short grassland behind Jewsons.

152/16.26 **Carex riparia** (Greater Pond-sedge) (Hesgen-y-dŵr Fawr). Llandrindod Wells Lake, SO06 60, Ray Woods, 2nd Jun 2020, reed swamp between road and lake.

162/14.1. **Anacamptis pyramidalis** (Pyramidal Orchid) (Tegeirian Bera). Presteigne, SO31 64, Kate Van den Ende, 2020, by-pass, 1 plant, mown last year, set seed this year.

CARMARTHEN, v.c.44 (comm. R.D. Pryce)

+017/1.1×2. **Polystichum × bicknellii**. South of Cwmpengraig, SN34922 35907, Ian K.Morgan, 5th Sep 2020, one robust plant growing adjacent to frequent *P.setiferum* on east side of lane in wooded cwm.

+030/2.1. **Papaver cambricum** (Welsh Poppy) (Pabi Cymreig). Near Gelligatti, west of Newcastle Emlyn, SN2864 4120, R.D.Pryce & K.A.Pryce, 29th Jul 2020, five plants self-sown on low roadside rock cutting on edge of larch plantation, south side of A484 well away from habitation.

+043/3.02. **Atriplex prostrata** (Spear-leaved Orache) (Llygwyn Tryfal). Near Gelligatti, west of Newcastle Emlyn, SN2863 4145, R.D.Pryce & K.A.Pryce, 29th Jul 2020, on shingle shoal on inside of meander of Afon Teifi.

\*©044/1.3. **Amaranthus cruentus** (Purple Amaranth) (Blodyn Amor Porffor).

Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

+†046/19.1. **Agrostemma githago** (Corncockle) (Bulwg yr Ŷd). Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

\*©046/20.pen. **Silene pendula** (Nodding Catchfly) (Gludlys Pendrwm). Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

+©046/23.1. **Vaccaria hispanica** (Cowherb) (Llysiau'r Fuwch). Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

+©060/CUT.max. **Cucurbita maxima** (Pumpkin) (Pwmpen). Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix. 2nd VCR.

062/34.5.† **Brassica nigra** (Black Mustard) (Mwstard Du). Near Gelligatti, west of Newcastle Emlyn, SN2864 4141, R.D.Pryce & K.A.Pryce, det. T.C.G Rich (from photograph), 29th Jul 2020, locally abundant on shingle shoal of the Afon Teifi. Also occasional at SN28634145 and a single plant on a section of eroding river bank at SN28684128.

+†062/38.1. **Hirschfeldia incana** (Hoary Mustard) (Mwstard Llwyd). Near Gelligatti, west of Newcastle Emlyn, SN2863 4145, R.D.Pryce & K.A.Pryce, 29th Jul 2020, on shingle shoal on inside of meander of Afon Teifi.

+069/6.2.a.car **Anagallis arvensis subsp. arvensis f. carnea** (Scarlet Pimpernel). Trevethin, School Road, Pwll, SN47702 01212, R.D.Pryce & K.A.Pryce, 31st Jul 2020, in recently recontoured ground spread with thin layer of topsoil.

+‡073/5.7. **Sedum spurium** (Caucasian-stonecrop) (Briweg y Cawcasws). Old sandstone wall near east end of Mansel Street, Llanelli, SS51078 99562, Ian K.Morgan, 11th Oct 2020, self-sown and naturalised.

\*‡075/03.5. **Spiraea japonica** (Japanese Spiraea) (Erwain Japan). Near Dyfed Steels premises, Bynea, SS55304 98804, Ian K.Morgan, 2nd Jul 2020, one shrub, either dumped or a vestige of 1970s plantings around the former Thyssens site.

+075/08.02.082. **Rubus silurum**. Near Gelligatti, west of Newcastle Emlyn, SN2870 4124, R.D.Pryce & K.A.Pryce, 29th Jul 2020, on steep slope down from roadside to Afon Teifi flood-plain.

\*‡075/32.13. **Cotoneaster lacteus** (Late Cotoneaster) (Cotoneaster Diweddar). Brownfield area east of Lidl store, Machynys, Llanelli, SS51343 98576, Ian K.Morgan, 28th Sep 2020, bird-sown shrub.

+‡075/32.34. **Cotoneaster bullatus** (Hollyberry Cotoneaster) (Cotoneaster Deilgrych). Blaenyfan Quarry, Meinciau, SN45558 11310, Richard D.Pryce, 9th Jun 2020, edge of young secondary scrub woodland on steep vegetated limestone spoil mound; also at SN4555811336.

+‡077/17.1. **Melilotus altissimus** (Tall Melilot) (Yr Wydro Dal). Lan Farm, near Gwyddgrug, SN461 347, Matt Sutton, 27th Aug 2020, northernmost record in VC.

+077/19.19. **Trifolium incarnatum**. Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

+‡091/2.17. **Euphorbia characias** (Mediterranean Spurge) (Llaethlys Môr y Canoldir). Cwmbach Road, Llanelli, SN49794 01375, Ian K.Morgan, 4th May 2020, on north side of road.

\*‡107/26.rot. **Bupleurum rotundifolium** (Thorow-wax) (Paladr Trwyddo Deilgrwn). Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

\*©107/ANE.gra. **Anethum graveolens** (Dill) (Llyisiau'r Gwewyr). Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

+‡110/1.1.© **Nicandra physalodes** (Apple-of-Peru) (Afal Periw). Corner of Northumberland Road, Llanelli, SS50676 98869, Ian K.Morgan, 25th May 2020.

+©110/CAP.ann. **Capsicum annuum** (Sweet Pepper) (Pupryn Melys). Rear of Chapman Street: on cycle track south of Furnace, Llanelli, SN49983 01008, Ian K.Morgan, 24th Sep 2020, one small plant self-sown from nearby garden. 2nd VCR.

+‡111/2.1.deca. **Convolvulus arvensis f. decarrhabdotus P. D. Sell**. By footpath (former mineral railway,) New Dock, Llanelli, SS51235 99053, Ian K.Morgan, 4th Jun 2020, 3rd VCR.

\*©111/IPO.pur. **Ipomoea purpurea** (Common Morning-glory) (Tegwch-y-bore). Embankment Road, New Dock, Llanelli, SS50720 98918, Ian K.Morgan, 4th Sep 2020, at entrance to sewage works site, currently undergoing renovation; legacy of `wildflower` seed-mix.

\*‡©116/02.ros. **Echium rosulatum** (Lax Viper's-bugloss) (Gwiberlys Llac). Stradey, Llanelli, SN49880 00926, Ian K.Morgan, 24th Sep 2020, several plants in neglected planting area adjacent to recent housing estate. No other aliens present.

\*©128/27.his. **Salvia hispanica** L. (Chia). Back-lane east of Station Road, Llanelli, SN50740 99587, Ian K.Morgan, det. D.A.Pearman, 11th Oct 2020, a large clump on pavement at base of wall. First Welsh record.

+‡122/1.2. **Buddleja davidii** (Butterfly-bush) (Y Gynffon Las). Lan Farm, near Gwyddgrug, SN461 347, Matt Sutton, 27th Aug 2020.

\*‡123/JAS.bee. **Jasminum beesianum** (Red Jasmine) (Jasmin Coch). Back-lane of Margam Place, Bigyn, Llanelli, SS51076 99760, Ian K.Morgan, 22nd May 2020, one rooted plant (c 30cm high) at junction of wall and back-lane.

+124/16.11. **Veronica anagallis-aquatica** (Blue Water-Speedwell) (Graeanllys y Dŵr). Lan Farm, near Gwyddgrug, SN4663 3429, Matt Sutton, 27th Aug 2020, in a tiny flush within Molinia by the new wind farm access track.

+‡133/1.2. **Valerianella carinata** (Keeled-fruited Cornsalad) (Gwylaeth-yr-oen Ffrwythau Rhychog). North Dock garage, Llanelli, SS49852 99888, Ian K.Morgan, 14th May 2020.

+‡135/43.4. **Erigeron karvinskianus** (Mexican Fleabane) (Amrhydlwyd y Cerrig). Y Ddol, Llanboidy, SN2275 2344, R.D.Pryce & K.A.Pryce, 29th Jul 2020, naturalised near house.

\*135/58.1.irc. **Leucanthemum vulgare Lam. subsp. ircutianum (DC.) P.D. Sell.** Former Copperworks site, Seaside, Llanelli, SS50707 99111, Ian K.Morgan, 20th May 2020.

‡©135/78.1. **Rudbeckia hirta** (Black-eyed-Susan) (Blodyn-pigwrn Blewog). Embankment Road, New Dock, Llanelli, SS50679 98870, Ian K.Morgan, 22nd Jul 2020, pavement weed, 2nd VCR.

+‡135/79.2. **Helianthus tuberosus** (Jerusalem Artichoke) (Blodyn-yr-haul Oddfog). Backlane south of Sandy Road, Llanelli, SN49666 00578, Ian K.Morgan, 9th Jul 2020.

+‡©135/83.1.© **Cosmos bipinnatus** (Mexican Aster) (Cosmos Mecsic). Embankment Road, New Dock, Llanelli, SS50679 98870, Ian K.Morgan, 22nd Jul 2020, pavement weed.

+142/1.15. **Potamogeton berchtoldii** (Small Pondweed) (Dyfrllys Bach). Garn Ganol, Crwbin, SN47325 12569, R.D.Pryce & K.A.Pryce, 31st Aug 2020, in Waun Ganol pond constructed two years previously.

+152/16.46.a. **Carex lepidocarpa** (Long-stalked Yellow-sedge). Lan Farm, near Gwyddgrug, SN4663 3429, Matt Sutton, 23rd Aug 2020, in a tiny flush within Molinia by the new wind farm access track.

+153/14.2. **Vulpia bromoides** (Squirreltail Fescue) (Peisgwellett Cynffon Gwiwer). Near Gelligatti, west of Newcastle Emlyn, SN2848 4116, R.D.Pryce & K.A.Pryce, 29th Jul 2020, gravel surfaced open area on Carms side of Afon Teifi.

+‡158/24.03. **Allium roseum** (Rosy Garlic) (Garlleg Rhosliw). Coronation Road allotments, Llanelli, SS51342 99868, Ian K.Morgan, 25th May 2020, several flowering spikes at boundary fence.

+162/14.1. **Anacamptis pyramidalis** (Pyramidal Orchid) (Tegeirian Bera). Ffos-y-Broga, Cwrt Henry, SN55079 23169, Andrew & Helen Martin, 21st Jun 2020, one plant in flower on trackside bank opposite house. Most northerly and furthest inland record in VC.

PEMBROKE, v.c.45 (comm. S.B. Evans)

+004/1.9. **Equisetum telmateia** (Great Horsetail) (Marchrawnen Fawr). South-west of Orange Gardens, Pembroke Town, SM9826 0082, Matt Sutton, 6th Aug 2020, a patch was growing around an overgrown spring.

+010/1.1. **Hymenophyllum tunbrigense** (Tunbridge Filmy-fern) (Rhedyndach Teneuwe Tunbridge). Pwll Deri cliffs, Trefasser, St. Nicholas, SM88963 38112, Matt Sutton, 23rd Oct 2020, two good sized patches found on the lower edge of block scree. A small patch was also found on block scree west of the two larger ones at SM 8894 3811.

+011/1.1x2. **Polypodium × mantoniae**. Canoe Store, Corsydd Teifi, SN1916 4487, Howard Williams, 4th Feb 2020, a dense vigorous patch above the canoe store. In contrast to putative parents no decent spores were present.

\*017/3.10. **Dryopteris expansa** (Northern Buckler-fern) (Marchredynen y Gogledd). Pwll Deri Cliffs, Trefasser, St. Nicholas, SM8895 3811, Matt Sutton, 23rd Oct 2020, emerging from a hole in the lower edge of block scree on this north-facing cliff slope. A single frond was collected, determined by Matt and confirmed by Arthur Chater. Both were confident but Arthur more so. Arthur commented to Matt that 'agrees with *Dryopteris expansa* in all characters (although no sori present)', apparently new for Pems.

+‡019/1.1. **Azolla filiculoides** (Water Fern) (Rhedyndach y Dŵr). Trefloyne Lane, Penally, SN111 003, Matt Sutton, 8th Mar 2020, abundant in the ditch alongside the lane.

+‡028/06.1. **Aconitum napellus** (Monk's-hood) (Cwccwll y Mynach). West side of road, Gallt Clynhercyn, SN2252 4230, Howard Williams, 8th Jun 2020, probably from garden waste from fly tipping as it is not far from *Pulmonaria officinalis* which would also be from fly tipping of garden waste.

+057/1.01.a **Viola odorata var. dumetorum**. 100m south of Llechrhyd Bridge, SN21788 43527, Howard Williams, 3rd Apr 2020, a clump of white violets was found at the bottom of the west facing hedge on the road to Boncath 100m south of Llechrhyd Bridge. The purple in the spur was very deep so it was *Viola odorata var. dumetorum*. The plants did not seem to be a garden escape as the other side of the hedge was a field.

+‡077/19.04. **Trifolium hybridum** (Alsike Clover) (Meillionen Sweden). Apiary, Sunnyhill, Jeffreyton, SN0801 0681, Matt Sutton, 13th Jun 2020, a single plant in the apiary.

+‡084/1.12 **Epilobium brunnescens** (New Zealand Willowherb) (Helyglys Seland Newydd). Priory Cottage, Haverfordwest, SM9513 1503, Matt Sutton, 11th Jul 2020, growing on a gravel surfaced yard.

+094/2.1. **Radiola linoides** (Allseed) (Llin Gorhadog). Northmoor Common, SM950 119, Jane Hodges, 26th Apr 2020, frequent where there was bare ground in the grassy heath and grassland. The common had been very well grazed by horses and there was much poaching.

+©116/02.1. **Echium vulgare** (Viper's-bugloss) (Gwiberlys). New inner bypass by Cooperative supermarket, Fishguard, SM9562 3692, Stephen Evans, 15th Jun 2020, in flower on topsoil on the new ground just inside the start of the new inner bypass on the right side when turning off the A40. *Trifolium incarnatum* was here in 2019. Clearly a wildflower seed mix had been used.

+124/16.11. **Veronica anagallis-aquatica** (Blue Water-Speedwell) (Graeanllys y Dŵr). The Park, Martletwy, SN0381 0976, Matt Sutton, 27th Jul 2020, disturbance area around a new ditch. *Hypericum undulatum* was also present.

+†©135/11.3. **Centaurea cyanus** (Cornflower) (Glas yr Ŷd). Penlan Isaf, east of Crymych, SN2084 3346, Nigel Lee, 17th Oct 2020, in flower on a bridleway on open bank vegetation amidst sparse wooded section. The blue cornflowers appear to be growing with an unusual yellow composite with serrated lanceolate leaves on distinctive vertical pubescent red stems. Both were presumably garden escapes.

+135/11.deb. **Centaurea debeauxii** (Slender Knapweed). Range West, Castlemartin, SR897 964, Matt Sutton, 29th Aug 2020.

+©135/55.aus. **Anthemis austriaca** (Austrian Chamomile). Old Bridge, Haverfordwest, SM9540 1587, Stephen & Ann Evans, 16th Sep 2020, growing with *Echinochloa crus-galli*, *Panicum miliaceum* and *Setaria viridis*, below the limestone bridge dedication memorial in the centre of the north side of the Old Bridge. Presumably all were of bird seed origin either directly from bird feeding or from droppings/pellets after perching.

+†151/1.02. **Juncus tenuis** (Slender Rush) (Brwynen Fain). Track edge near yard, Jordanston Mountain, SN0894 0359, Matt Sutton, 9th Aug 2020, one small clump of *Juncus tenuis* on track edge near yard.

+153/18.06. **Poa angustifolia** (Narrow-leaved Meadow-grass) (Gweunwellt Culddail). Bottom Meadow Quarry, West Williamston, SN0382 0580, Matt Sutton, 10th May 2020, there was a small patch which was examined closely.

+†153/70.1.© **Setaria viridis** (Green Bristle-grass) (Cibogwellt Gwyrddlas). Old Bridge, Haverfordwest, SM9540 1587, Stephen & Ann Evans, 16th Sep 2020, growing with two other alien grasses below the limestone bridge dedication memorial in the centre of the north side of the Old Bridge. Probably of bird seed origin either directly from bird feeding or from droppings/pellets after perching.

+†153/PAN.mil.© **Panicum miliaceum** (Common Millet) (Miled). Old Bridge, Haverfordwest, SM9540 1587, Stephen & Ann Evans, 16th Sep 2020, growing with two other alien grasses below the limestone bridge dedication memorial in the centre of the north side of the Old Bridge. Probably of bird seed origin either directly from bird feeding or from droppings/pellets after perching.

+©153/ZEA.may. **Zea mays** (Maize) (India-corn). Pavements by Old Post Office, Quay Street, Haverfordwest, SM9547 1557, Stephen Evans, 8th Sep 2020, two tiny maize plants growing on the wall side of the street pavement

CARDIGAN, v.c.46 (comm. S.P. Chambers)

c1-1-glo **Tolypella glomerata** (Clustered Stonewort). Winter-flooded shallow scrape and bare slack created by management seen during April and May, Ynys-las Dunes NNR, SN606

935, J.P.Lyons, 2020, in area covered by SN606935 to SN610938. Not recorded in VC since 1996/7.

001/3.1. **Lycopodium clavatum** (Stag's-horn Clubmoss) (Cnwp-fwsogl Corn Carw). c. 300 m NW of Pen Cerrig Tewion, Pumlumon, SN796 882, S.P.Chambers, 16th Jul 2020, in area covered by SN796882 to SN798883. Five patches in montane *Nardus stricta* - *Racomitrium lanuginosum* vegetation. New tetrad for VC - uncommon axiophyte.

+004/1.4x5. **Equisetum x litorale** (Shore Horsetail) (Marchrawnen y Glenydd). SW-bank of the Afon Rheidol below the Rheidol Falls, SN708 790, S.P.Chambers & H.F.Clw, det. S.P.Chambers, 31st May 2020, scattered stems extending for c. 20 m along river edge mud and adjacent marshy grassland. The 7th VC-site & new hectad.

016/4.1. **Gymnocarpium dryopteris** (Oak Fern) (Rhedyndyn Dridarn). S-side of the Nant y Fawnog side-ravine in Coed Rheidol NNR, c. 0.5 km NW of Devil's Bridge (Pontarfynach), SN732 774, S.P.Chambers, 25th May 2020, three colonies, one c. 1 x 0.2 m with c. 18 fronds, one c. 1 x 4 m with c. 10 fronds, one c. 2 x 2m with c. 75 fronds, plus other scattered fronds, on steep woodland floor. New site c. 700m W of the Mynach confluence one at SN739791.

017/3.05. **Dryopteris aemula** (Hay-scented Buckler-fern) (Marchredynen Bêr). E end of Cwm Llyfnant, SN73 97, G. & P.Foulkes, 18th Oct 2020, one plant on roadside bank. The 1st VC46 record from the Llyfnant valley for 44 years.

‡020/7.peu. **Pinus peuce** (Macedonian Pine) (Pinwydden Macedonia). Gellireirin (Dolfawr) mine, Cwm Rheidol, SN706 795, S.P.Chambers, 5th Nov 2020, at least c. 50+ self-seeded treelets of various sizes, c. 1 - 7 ft tall, on slope of S-facing mine spoil. *P. peuce* was observed coning here by AOC in 1992 but the trees had not then produced offspring.

031/4.1. **Ceratocapnos claviculata** (Climbing Corydalis) (Mwg-y-ddaear Dringol). On heathy rock ledge, Craig y Pistyll, SN712 855, M.D.Sutton & T. Ottley, det. M.D.Sutton, conf. S.P.Chambers, 20th Jan 2020, rare inland in the VC, & the 1st post-1987 record for the tetrad.

034/2.1. **Humulus lupulus** (Hop) (Hopys). Roadside hedge, Cwm Rheidol, SN707 793, S.P.Chambers & H.F.Clw, det. S.P.Chambers, 23rd Aug 2020, the 1st post-1987 hectad record.

043/1.06. **Chenopodium rubrum** (Red Goosefoot) (Troed-yr-ŵydd Coch). c. 300 m S of Maes-bangor, Capel Bangor, SN633 798, S.P.Chambers & H.F.Clw, det. S.P.Chambers, 4th Jul 2020, one weak plant on dry tump used for feeding livestock in sheep pasture. Only the 2nd tetrad for the hectad for this scarce VC species.

+†043/1.13. **Chenopodium ficifolium** (Fig-leaved Goosefoot) (Troed-yr-ŵydd Dail Ffigys). S-side of the Afon Rheidol c. 200 m NNE of Rhiwarthen-uchaf, SN649 797, S.P.Chambers & H.F.Clw, det. S.P.Chambers, 17th Jun 2020, hundreds of plants, over c. 20 x 8 m, mixed c. 60/40 with *C.album*, on silage and/or livestock bedding muck heap on edge of cattle field beside track on river bank. The 6th VC-record & probably the most plants of this species ever to have occurred in the VC & all in the one place.

+043/3.02. **Atriplex prostrata** (Spear-leaved Orache) (Llygwyn Tryfal). Muck heap in field, NE-side of the Nant Gou c. 0.5 km SE of Bayliau farm, c. 0.75 km S of Cellan, SN607 482, S.P.Chambers, 29th Sep 2020, 1st hectad record at least for the VC46 part of the square.

043/3.07.lin. **Atriplex patula var. linearis**. Muckheap, Pensarnau, Cross Inn, SN394 571, M.D.Sutton, det. A.O.Chater, 7th Aug 2020, the 1st VC-record for the var. since it was recorded in Aberystwyth in 1917.

046/05.4. **Stellaria neglecta var. neglecta** (Greater Chickweed) (Gwlyddyn-y-dom Mawr). W-end of riverside terrace N of Troed-rhiw-felen, Cwm Rheidol, SN665 783, S.P.Chambers, 13th Apr 2020, colony over c. 10 x 8 m on steep, NE-facing wooded bank near river. New colony c. 0.5 km W of the 1996/2006 colony at SN671783, still present in 2020.

046/17.3. **Spergularia marina** (Lesser Sea-spurrey) (Troellig Arfor Bach). between the war memorial & the garage, Penrhyncoch, SN642 840, S.P.Chambers, 27th Nov 2020, five plants along S-facing wall-base at edge of road. Here 8 km inland; S-side of the A44(T), Penllwyn, Capel Bangor, SN654 803, S.P.Chambers & H.F.Clow, det. S.P.Chambers, 17th Jun 2020, frequent plants extending for c. 10 m along c.10-15 cm wide muddy-soily damp road edge driven on occasionally by vehicles. Here 7.25 km inland; S-side of the A44(T) c. 100 m E of Maes-bangor, Capel Bangor, SN663 802, S.P.Chambers & H.F.Clow, det. S.P.Chambers, 4th Jul 2020, one plant in crevice in kerb on road edge. The farthest inland VC-location to-date at 8.35 km from the sea.

050/1.1. **Elatine hexandra** (Six-stamened Waterwort) (Gwybybyr Chwebrigerog). Tynant, Tynreithin, SN651 613, M.D.Sutton, det. A.O.Chater, conf. S.P.Chambers, 1st May 2020, growing at the margin of a well-established artificial pond. A new site for this VC-scarce plant.

+062/12.4. **Rorippa palustris** (Marsh Yellow-cress) (Berwr Melyn y Gors). between the war memorial & the garage, Penrhyncoch, SN642 840, S.P.Chambers, 27th Nov 2020, one plant in fruit, growing with *Spergularia marina*, at S-facing wall-base at edge of road. New hectad record & novel habitat for the VC.

+074/05.19. **Saxifraga tridactylites** (Rue-leaved Saxifrage) (Tormaen Tribys). Vale-of-Rheidol railway station, Aber-ffrwd, SN687 787, A.O.Chater, 3rd Mar 2020, a few plants on gravelly platform.

+075/13.3. **Geum macrophyllum** (Large-leaved Avens) (Mapgoll Fawr)). SE of Glasffrwd beyond Pantyfedwen, c. 1 km SE of Ystrad Fflur/Strata Florida, SN753 647, G. & P.Foulkes, 1st Dec 2020, couple of plants, still in flower, on road verge.

+075/21.05.06. **Rosa rugosa** (Japanese Rose) (Rhosyn Japan). NW-side of minor road c. 300 m SW of Synod Mill, c. 2.5 km S of Cross Inn, SN388 544, S.P.Chambers, 13th Mar 2020, colony c. 1 x 0.5 m, naturalised near where originally planted on roadside bank by hedge.

+075/21.16 **Rosa sherardii** (Sherard's Downy-rose) (Rhosyn Sherard). Hedge, NW-side of minor road c. 50 m NE of Bayliau farm, c. 300 m SW of Cellan, SN604 486, S.P.Chambers, 29th Sep 2020, 1st hectad record at least for the VC46 part of the square.

075/28.01. **Sorbus aucuparia** (Rowan) (Criafolen). Montane heath, above Blaen Cwmgwerin, SW of Pumlumon Arwystli, SN801 874, R.A. Jones & K.Heppingstall, 3rd Oct 2020, four individuals in area covered by SN801874 to SN805875. New VC altitude limit of 720 m.

077/14.08. **Vicia tetrasperma** (Smooth Tare) (Ffacbysen Lefn). Frongoch farm, c. 1 km NE of Aberystwyth, SN606 826, S.P.Chambers, 17th Sep 2020, patch over c. 40 x 20 cm on grassy dry track edge. New site & tetrad for VC-uncommon plant with few recent records.

079/2.4. **Myriophyllum alterniflorum** (Alternate Water-milfoil) (Myrdd-dail Blodau Bob yn Ail). S-side of river channel on bend, Afon Rheidol, Cwm Rheidol, c. 0.5 km NW of Aberffwd, SN681 792, S.P.Chambers, 25th Apr 2020, new upstream limit for the species on the Afon Rheidol.

+081/1.1. **Lythrum salicaria** (Purple-loosestrife) (Llyisiau'r-milwr Coch). Linear marshy backwater, NW-bank of the Afon Teifi c. 0.5 km N of Cellan, SN607 496, S.P.Chambers, 29th Sep 2020, 1st hectad record at least for the VC46 part of the square.

084/6.1x2. **Circaea xintermedia** (Upland Enchanter's-nightshade) (Llyisiau-Steffan yr Ucheldir). S-side of the Nant y Fawnog side-ravine in Coed Rheidol NNR, c. 0.5 km NW of Devil's Bridge (Pontarfynach), SN732 774, S.P.Chambers, 25th May 2020, colony over c. 1 x 0.5 m on steep, mossy woodland slope. New site for this VC-uncommon plant in the Rheidol valley woods.

+107/06.2.© **Anthriscus caucalis** (Bur Chervil) (Gorthyfail Gwrychog). Edge of garden, Gwel Ystwyth, c. 1 km S of Llanafan, SN684 710, E.Parry, det. A.O.Chater, 2019, only the 2nd certain record & the 1st for 15 years, germinating almost certainly from seed in chicken feed.

110/8.6. **Solanum dulcamara** (Bittersweet) (Elinog). Afon Rheidol, c. 3/4 km NW of Devil's Bridge/Pontarfynach, SN733 777, S.P.Chambers, 12th May 2020, in two places on the top of part-vegetated rocky ridges at edge of river channel in Oakwood. A very inland location for the sp. in the VC & previously unrecorded from this part of the VC.

‡116/09.1. **Borago officinalis** (Borage) (Tafod yr Ych). N-side of road by church, Penrhynoch, SN643 840, S.P.Chambers, 27th Nov 2020, one plant by base of wall. New tetrad for VC-scarce ruderal.

+†117/1.1. **Verbena officinalis** (Vervain) (Y Ferfain). Melindwr Terrace, Capel Bangor, SN660 800, S.P.Chambers & H.F.Clw, det. S.P.Chambers, 7th Jun 2020, one plant at foot of old wall. The 1st hectad record for over a century since Salter had it as a garden weed in Llandre in 1904 & 1907.

+†118/01.8. **Stachys arvensis** (Field Woundwort) (Briwllys y Tir Âr). Capel Caeronnen, Cellan, SN606 489, S.P.Chambers, 26th Aug 2020, growing in profusion on & around a single burial plot (William Davies, d.1935) in chapel graveyard. The 1st hectad record for at least the VC46 part of SN64, & the 2nd occurrence in a chapel/churchyard in the VC.

+118/22.1. **Lycopus europaeus** (Gypsywort) (Llyisiau'r Sipsiwn). Aberaeron harbour, SN457 629, D.Hawkins, 12th Aug 2020, growing out of stonework of inner harbour wall.

+118/23.1. **Mentha arvensis** (Corn Mint) (Mintys yr Âr). Field, Banc Llanfair, 2 km E of Llandysul, SN443 411, J.Parish, det. A.O.Chater, 19th Sep 2019, **Hb. AOC**

+120/1.5. **Callitriche obtusangula** (Blunt-fruited Water-starwort) (Brigwlydd Ffrwythau Blaendwn). Stream-river confluence, NW-bank of the Afon Teifi c. 0.5 km N of Cellan, SN607 496, S.P.Chambers, 29th Sep 2020, 1st hectad record at least for the VC46 part of the square.

+121/1.1. **Plantago coronopus** (Buck's-horn Plantain) (Llyriad Corn Carw). road bridge over the Afon Rheidol between Rhiwarthen-uchaf & Penllwyn, c. 0.75 km SW of Capel Bangor, SN649 798, S.P.Chambers & H.F.Clw, det. S.P.Chambers, 19th Dec 2020, at least c. 100+ plants, mostly on the E-side of the roadway edge, on river bridge. New hectad record & only the 2nd non-coastal occurrence in the VC.

+‡122/1.2. **Buddleja davidii** (Butterfly-bush) (Y Gynffon Las). NE-side of the Nant Gou c. 0.5 km SE of Bayliau farm, c. 0.75 km S of Cellan, SN607 482, S.P.Chambers, 29th Sep 2020, one bush on rubble heap in field. The 1st hectad record at least for the VC46 part of the square.

\*‡124/01.06. **Verbascum densiflorum** (Dense-flowered Mullein) (Pannog Ddwysflodeuog). St David's church, Capel Bangor, SN655 801, S.P.Chambers, conf. A.O.Chater & J.P. Poland, 2nd Jul 2020, one tall flowering plant & c. 5 non-flowering 1st year rosettes, on & by corner of grave plot in burial yard, **hb. SPC**

124/02.2. **Scrophularia auriculata** (Water Figwort) (Gwrnerth y Dŵr). Afon Rheidol, c. 3/4 km NW of Devil's Bridge/Pontarfynach, SN733 775, S.P.Chambers, 12th May 2020, three plants, two mature & one young, on vegetated shingle strip at edge of river channel. Not seen on the upper part of the Afon Rheidol before & possibly originating from seed washed down from the Nant y Fawnog from the colony near Ty'n-y-castell.

+‡124/04.2. **Mimulus guttatus** (Monkeyflower) (Blodyn Mwnci). Afon Rheidol, c. 3/4 km NW of Devil's Bridge/Pontarfynach, SN733 777, S.P.Chambers, 12th May 2020, two vegetative young plants on rock crevices on spines of river channel bedrock. Confirmed from collected plant, grown on & later flowering & fruiting; the 1st confirmed record of the species rather than the agg. for the hectad.

+124/16.10. **Veronica beccabunga** (Brooklime) (Llyisiau Taliesin). Thespian Street, Aberystwyth, SN586 817, S.P.Chambers, 13th Aug 2020, sprawling patch, c. 1 x 1 m, growing over wood chips in flowerbed.

©124/SUT.cor. **Sutera cordata** (Bacopa). near the NE-end of Alexandra Road, Aberystwyth, SN586 817, A.O.Chater, 5th Dec 2020, one plant on wall base on sunken pavement. The 2nd VCR. The 1st VCR was also an early winter find (SPC, 29 Nov 2011) on an Aberystwyth pavement, **Hb. AOC**

130/6.07. **Galium album** (Hedge Bedstraw) (Briwydd y Clawdd). Penllwyn chapel, Capel Bangor, SN653 804, A.O.Chater, 6th Oct 2020, on grave in chapel graveyard. A new & the 10th chapel graveyard site for the VC.

+‡133/1.2. **Valerianella carinata** (Keeled-fruited Cornsalad) (Gwylaeth-yr-oen Ffrwythau Rhychog). Nantyronnen Vale-of-Rheidol station, Cwm Rheidol, SN674 781, S.P.Chambers, 25th Apr 2020, scattered plants locally frequent along c. 7 m of stony slope below edge of railway station platform.

+134/1.1. **Dipsacus fullonum** (Wild Teasel) (Cribau'r-pannwr Gwyllt). NE-side of the Nant Gou c. 0.5 km SE of Bayliau farm, c. 0.75 km S of Cellan, SN607 482, S.P.Chambers, 29th Sep 2020, abundant over c. 25 x 15 m on dumped rubble heaps in field. The 1st hectad record at least for the VC46 part of the square.

+135/09.1. **Serratula tinctoria** (Saw-wort) (Dant y Pysgodyn). Cors Fochno, Dyfi NNR, SN6--9--, J.P.Lyons, 26th Jul 2020, two plants in damp pasture.

†135/11.3. **Centaurea cyanus** (Cornflower) (Glas yr Ŷd). 300 m NNW of Llanilar church, SN621 753, A.O.Chater, 22nd Aug 2020, scattered plants in an extremely weedy oat crop. Clearly derived from seedbank & not from a 'wildflower' seed mix.

+†135/12.1. **Cichorium intybus** (Chicory) (Ysgello). NW-side of minor road between Lodge Cottage & Llanfair House, 0.5 km NW of Cellan, SN603 495, S.P.Chambers, 29th Sep 2020, frequent throughout rye-grass dairy ley. The 1st hectad record at least for the VC46 part of the square.

135/15.1. **Hypochaeris radicata** (Cat's-ear) (Melynydd). W of Pumlumon Arwystli, SN811 875, K.Heppingstall, conf. A.O.Chater, 11th Oct 2020, two colonies, one with 15 plants over 3 x 2 m & one with c. 25 x 30 plants over 5 x 2 m, on stony ground on mountain ridge. New VC altitude limit of 690 m.

†135/17.1. **Helminthotheca echioides** (Bristly Oxtongue) (Tafod-y-llew Gwrychog). Frongoch farm, c. 1 km NE of Aberystwyth, SN605 826, S.P.Chambers, 16th Sep 2020, numerous plants over c. 10 x 5 m on rough ground between old glasshouses. New site & tetrad for VC-uncommon archaeophyte.

+†135/32.1. **Anaphalis margaritacea** (Pearly Everlasting) (Edafeddog Hirhoedlog). Bryn-y-rhyd conifer plantation, c. 2.5 km SE of Llanddewi Brefi, SN688 519, T.G.R.Rayner, 3rd Nov 2020, one plant on edge of forestry track. New hectad record & new VC altitude limit of 440 m.

135/40.1.min. **Solidago virgaurea subsp. minuta (L.) Arcang.** Below the N-side of the summit area of Pen Cerrig Tewion, SN799 881, S.P.Chambers, 16th Jul 2020, single plant with sessile capitulum at ground-level on stony saddle. New VC altitude limit of 670 m for the ssp.

+135/43.sum. **Erigeron sumatrensis.** (Guernsey Fleabane) (Amrhydlwyd Guernsey) Frongoch farm, c. 1 km NE of Aberystwyth, SN605 826, S.P.Chambers, 17th Sep 2020, one plant in ruderal community on rough ground between old glasshouses. The 2nd VCR, **hb.**  
**SPC**

+†135/79.1. **Helianthus annuus** (Sunflower) (Blodyn yr Haul). Field c.70 m E of St David's church on the S-side of the A44(T), Capel Bangor, SN656 801, H.F.Clow & S.P.Chambers, det. H.F. Clow, 25th Aug 2020, two plants in crop of 2-rowed Barley.

+137/4.1. **Alisma plantago-aquatica** (Water-plantain) (Llyriad y Dŵr). Linear marshy backwater, NW-bank of the Afon Teifi c. 0.5 km N of Cellan, SN607 496, S.P.Chambers, 29th Sep 2020, 1st hectad record at least for the VC46 part of the square.

+†138/4.2. **Elodea nuttallii** (Nuttall's Waterweed) (Ffugalaw Nuttall). NW-side of the Afon Teifi c. 0.5 km N of Cellan, SN607 496, S.P.Chambers, 29th Sep 2020, seen in three places below riverbank in deep water. The 1st hectad record at least for the VC46 part of the square.

+†147/2.1. **Lysichiton americanus** (American Skunk-cabbage) (Pidyn-y-gog Americanaidd). Afon Rheidol, c. 3/4 km NW of Devil's Bridge/Pontarfynach, SN733 777, S.P.Chambers, 12th May 2020, one juvenile plant c. 15 cm tall on muddy shoal at edge of river.

152/05.1 **Scirpus sylvaticus** (Wood Club-rush) (Clwbfrwynen Bengron). NW-bank of the Afon Teifi c. 0.5 km N of Cellan, SN609 497, S.P.Chambers, 29th Sep 2020, small colony of c. 10 stems over 1 x 0.5 m on base of riverbank. New site & monad for VC-scarce species.  
+152/16.31 **Carex pendula** (Pendulous Sedge) (Hesgen Bendrom). c. 50 m SE of Capel-yr-erw, Cellan, SN604 487, S.P.Chambers & T.G.R.Rayner, det. S.P.Chambers, 26th Sep 2020, one mature plants and two juveniles on edge of old trackway under trees. The 1st hectad record at least for the VC46 part of the square.

153/12.04. **Festuca altissima** (Wood Fescue) (Peiswellt y Coed). Epiphytic on mossy upperside of fallen *Quercus* trunk, S-side of the Nant y Fawnog side-ravine in Coed Rheiddol NNR, c. 0.5 km NW of Devil's Bridge (Pontarfynach), SN732 774, S.P.Chambers, 25th May 2020, an interesting niche for the species.

153/61.1. **Danthonia decumbens** (Heath-grass) (Glaswellt y Rhos). Heathy bank, c. 300 m S of Pen Lluest-y-garn, Pumlumon, SN800 861, S.P.Chambers, 30th Jul 2020. New VC altitude limit of 630 m.

+153/62.1. **Cortaderia selloana** (Pampas-grass) (Peithwellt). Scrubby, rough slope below minor road, c.3/4 km WSW of Chamcery (Rhydgaled), SN572 765, S.P.Chambers & H.F.Clow, det. S.P.Chambers, 2nd Feb 2020, one plant, perhaps a garden throw-out. The 3rd VCR.

+158/33.3. **Narcissus poeticus subsp. recurvus (Haw.) P.D. Sell.** S-side of the A44(T), Capel Bangor, SN657 802, S.P.Chambers, 30th Mar 2020, one clump at base of hedge beside grass verge. 1st hectad record for the subsp.

MONTGOMERY, v.c.47 (comm. A.K. Thorne)

+001/1.1. **Huperzia selago** (Fir Clubmoss) (Cnwp-fwsogl Mawr). Ffos Gasaf (SW of Llangurig), SN87026 77446, Gillian and Peter Foulkes, 11th Sep 2020, several plants with Lyc clav at side of plantation track by old, wet lay-down area.

+001/3.1. **Lycopodium clavatum** (Stag's-horn Clubmoss) (Cnwp-fwsogl Corn Carw). Ffos Gasaf (SW of Llangurig), SN8694 7736, Gillian and Peter Foulkes, 11th Sep 2020, several patches along NW side of track in conifer plantation; (+) Pyllau Mawn (SW of Llangurig), SN871 775, Gillian and Peter Foulkes, 11th Sep 2020, good patch on NW bank of plantation track at SN87101.77515 with Emp nig and Vac myrt. A further extensive patch with fruiting bodies at SN87194.77558.

+001/4.1. **Diphasiastrum alpinum** (Alpine Clubmoss) (Cnwp-fwsogl Alpaidd). Ffos Gasaf (SW of Llangurig), SN86986 77411, Gillian and Peter Foulkes, 11th Sep 2020, side of conifer plantation track with Lyc clav; (+) Pyllau Mawn (SW of Llangurig), SN87186 77558, Gillian and Peter Foulkes, 11th Sep 2020, small patch on stony area at plantation track junction.

+005/1.1. **Ophioglossum vulgatum** (Adder's-tongue) (Tafod y Neidr). Machynlleth, SH756 016, D.Elias, det. D. Elias, 2020, 100's of plants on steep aea of unimproved grassland.

+014/2.1. **Phegopteris connectilis** (Beech Fern) (Rhedynen Gorniog). Kerry Hill (Nant Rhydyfedw), SO150 855, A.K.Thorne & W.I.J.Thorne, 16th Jun 2020, open access area, north of county boundary stream. Ar least 3 stands on rocky undercut stream bank.

+017/3.03b. **Dryopteris cambrensis**. Llanerfyl (nr), SJ04 09, A.K.Thorne & W.I.J.Thorne, 4th Aug 2020, hedgerow.

- +†030/1.3. **Papaver somniferum** (Opium Poppy) (Llysiâu Cwsg). Machynlleth, SH70K, D.Elias, 2020.
- +†030/1.4. **Papaver rhoeas** (Common Poppy) (Pabi Coch). Llandrino (The Haim), SJ33 16, A.K.Thorne & W.I.J.Thorne, det. A.K. Thorne, 1st Oct 2020, river/floodplain.
- +†043/1.13. **Chenopodium ficifolium** (Fig-leaved Goosefoot) (Troed-yr-ŵydd Dail Ffigys). Churchstoke (Pentre Farm), SO276 923, A.K.Thorne, 6th Sep 2020, Camlad floodplain. Soil heap by stream; (+) Criggion, SJ29 15, A.K.Thorne & W.I.J.Thorne, 24th Jul 2020, single plant with other Chenopods in arable field gateway, R. Severn floodplain.
- +046/11.2 **Scleranthus annuus** (Annual Knawel) (Dinodd Unflwydd). Lan Fawr, SO300 971, J.Clayfield, 24th May 2020, dried up and bleached, possibly missed on other rock outcrops.
- +047/1.12. **Persicaria lapathifolia** (Pale Persicaria) (Canwraidd y Dom). Severn-Vrynwy confluence, Crew Green, SJ32 16, A.K.Thorne & W.I.J.Thorne, 7th Aug 2020, river bank.
- +†047/4.3. **Polygonum arenastrum** (Equal-leaved Knotgrass) (Y Canclwm Manddail). Severn-Vrynwy confluence, Crew Green, SJ32 15, A.K.Thorne, R.Meade & Liz Wilson, 3rd Sep 2020.
- +051/1.06×07. **Hypericum xdesetangsii** (Des Etangs' St John's-wort) (Eurinllys Des Etangs). Llandrino (The Haim), SJ33 16, A.K.Thorne & W.I.J.Thorne, 1st Oct 2020.
- +051/1.14. **Hypericum hirsutum** (Hairy St John's-wort) (Eurinllys Blewog). Afon Lwyd valley, SN865 904, Gillian and Peter Foulkes, 2nd Aug 2020, close to old wet quarry in conifer plantation where new aggregate dumped.
- +†057/1.13. **Viola arvensis** (Field Pansy) (Trilliw'r Tir Âr). Llandrinio (The Haim), SJ32 16, A.K.Thorne & W.I.J.Thorne, 1st Oct 2020, river/floodplain.
- +061/1.2. **Populus tremula** (Aspen) (Aethnen). Machynlleth, SH70K, D.Elias, 2020.
- +†061/2.09. **Salix viminalis** (Osier) (Helygen Wiail). Machynlleth, SH70K, D.Elias, 2020.
- +061/2.09×11. **Salix xsmithiana** (*Salix viminalis* × *S. caprea*), (Broad-leaved Osier, Meifod ox-bow, SJ17 14, A.K.Thorne, MFG, 9th Sep 2020, oxbow, north side.
- +†062/31.2. **Lepidium didymum** (Lesser Swine-cress) (Olbrain Bach). Cemmaes (W of), SH83 06, Gillian Foulkes, 13th Oct 2020, spoil heap in field.
- +†062/34.3. **Brassica rapa** (Turnip). Machynlleth, SH70K, D.Elias, 2020.
- +†073/1.3. **Crassula helmsii** (New Zealand Pigmyweed) (Corchwyn Seland Newydd). Meifod ox-bow, SJ17 14, J.Clayfield, det. A.K.Thorne, 9th Sep 2020, river shingle.
- +†073/5.14. **Sedum album** (White Stonecrop) (Briweg Wen). Lan Fawr, SO300 971, J.Clayfield, 24th May 2020.
- +075/21.12×13. **Rosa xdumalis (R. canina × R. caesia)**. Dolfor (N of), SO108 881, R.Maskew, Aug 2020; (+) Dolfor (N of), SO110 882, R.Maskew, Aug 2020.
- +075/21.12×16. **Rosa canina × R. sherardii = R. xrothschildii**. Guilsfield (Trawscoed), SJ2161 1206, A.J Hotchkiss, det R. Maskew, 1st Sep 2020.
- +075/21.13.b. **Rosa caesia subsp. vosagiaca** (Glaucous Dog-rose) (Rhosyn Llwydwyrdd). Welshpool, SJ2228 0798, A.J Hotchkiss, det. R. Maskew, 9th Oct 2020, in a hedge. Ysgol Gymraeg y Trallwng, Red Bank.
- +075/21.17. **Rosa mollis** (Soft Downy-rose) (Rhosyn Blewog). Bishop's Moat, SO28 89, A.K.Thorne & W.I.J.Thorne, 4th Oct 2020, low bush on road verge.

- +084/1.05. **Epilobium tetragonum** (Square-stalked Willowherb) (Helyglys Pedronglog). Cemmaes (W of), SH83 06, Gillian Foulkes, 13th Oct 2020, spoil heap in field; (+) Kerry Hill (Y Drain), SO14 85, A.K.Thorne & W.I.J.Thorne, 16th Jun 2020, north side of county boundary stream; (+) Corndon, SO30 97, J.Clayfield, 2nd Feb 0-05.
- +084/1.07. **Epilobium roseum** (Pale Willowherb) (Helyglys Gwelw). Machynlleth, SH70K, D.Elias, 2020.
- +†107/21.1. **Foeniculum vulgare** (Fennel) (Ffenigl). Machynlleth, SH70K, D.Elias, 2020.
- \*108/5.4.a.sl. **Gentianella amarella subsp. amarella**. Llanymynech Hill, SJ26 21, R.A.Dawes, det. T.C.G.Rich, 21st Aug 2020, quarry floor and banks, only recorded previously as *G. amarella*.
- +110/8.1. **Solanum nigrum** (Black Nightshade) (Codwarth Du). Cemmaes (W of), SH83 06, Gillian Foulkes, 13th Oct 2020, several plants on spoil heap in field; (+) Kerry (S of), SO15 87, J.Clayfield, 3rd Jun 2020.
- +‡111/3.3. **Calystegia pulchra** (Hairy Bindweed) (Taglys Blewog). Warren Parc (nr Penegoes), SH778 012, Gillian Foulkes, 27th Aug 2020, in hedge on NW side of A489 close to Warren Parc Caravan Site.
- +‡111/3.4. **Calystegia silvatica** (Large Bindweed) (Taglys Mawr). Corndon, SO30 97, Gillian and Peter Foulkes, 7th Sep 2020.
- +118/06.5. **Galeopsis bifida** (Bifid Hemp-nettle) (Y Benboeth Hollt). Glan y Nant (Llanidloes), SN93 84, Barbara Brown, det. A.O.Chater, 17th Jul 2020.
- +120/1.6.bru. **Callitriche brutia subsp. brutia** (Pedunculate Water-starwort) (Brigwlydd Coesog). Llanerfyl (Moel Bentyrch NE), SJ06 10, A.K.Thorne & W.I.J.Thorne, 4th Aug 2020, tiny flowing channel associated with river island/shingle.
- +123/4.1. **Ligustrum vulgare** (Wild Privet) (Yswydd). Machynlleth, SH70K, D.Elias, 2020.
- +124/02.2. **Scrophularia auriculata** (Water Figwort) (Gwrnerth y Dŵr). Abergwydol, SH79 03, Gillian and Peter Foulkes, 7th Jun 2020, in rushy floodplain meadow; (+) Machynlleth, SH70K, D.Elias, 2020.
- +†124/16.19. **Veronica agrestis** (Green Field-speedwell) (Rhwyddlwyn-y-maes Gwyrdd). Bryndan, SN821 976, Gillian and Peter Foulkes, 1st Sep 2020, in old overgrown quarry by roadside.
- +124/20.03. **Euphrasia officinalis subsp. anglica** (Effros Lloegr). Mynydd Esgairneiriau, SH7826 0954, Gillian and Peter Foulkes, det. C.Metherell, 17th Jul 2020, semi-improved grassland at 240m; (+) Mynydd Esgair Llewelyn (Aberllefenni), SH795 090, Gillian and Peter Foulkes, det. C.Metherell, 17th Jul 2020, unimproved upland grazing at 320m; (+) Kerry Hill (Nant Rhydyfedw), SO152 855, A.K.Thorne, det. C Metherell, 16th Jun 2020, in pasture close to patch of base rich mire.
- +124/20.05. **Euphrasia arctica** (Arctic Eyebright) (Effros yr Arctig). Kerry Hill, SO149 871, A.K.Thorne & W.I.J.Thorne, 11th Jul 2020, semi-improved grassland.
- +130/6.07. **Galium album** (Hedge Bedstraw) (Briwydd y Clawdd). Machynlleth, SH70K, D.Elias, 2020.
- +†135/12.1. **Cichorium intybus** (Chicory) (Ysgello). nr Llanerfyl, SJ04 10, A.K.Thorne & W.I.J.Thorne, 4th Aug 2020, disturbed ground.
- +‡135/19.1. **Tragopogon pratensis** (Goat's-beard) (Barf-yr-afr). Cubbwlch, SO303 947, A.K.Thorne, 30th Jul 2020, central GR for hay meadow, single plant.

+135/26.3. **Crepis biennis** (Rough Hawk's-beard) (Gwalchlys Garw). Llandinam Gravels, SO022 879, R.G.Woods, 2nd Jul 2020, several plants on both sides of old railway line (now track), with Cre cap.

+†135/28.01.1.bla. **Hieracium sabaudum f. bladonii**. Abercegir, SH79913 01720, Peter Foulkes, det. T.C.G.Rich, 10th Aug 2020, dryish bank by side of Glyndwr's Way on Abercegir Common.. Many plants with buds, only 1 flowering. Also confirmed by D McCosh.

+135/55.3×60.2. **Tripleurospermum inodorum**. Llanerfyl (nr), SJ04 09, A.K.Thorne & W.I.J.Thorne, 4th Aug 2020, forest access margins.

+†138/4.2. **Elodea nuttallii** (Nuttall's Waterweed) (Ffugalaw Nuttall). Machynlleth, SH70K, D.Elias, 2020.

+†147/2.1. **Lysichiton americanus** (American Skunk-cabbage) (Pidyn-y-gog Americanaidd). Machynlleth, SH70K, D.Elias, 2020, 2-3 plants in ditch alongside former garden centre.

+†151/1.02. **Juncus tenuis** (Slender Rush) (Brwynen Fain). Kerry Hill (Pool Plantation), SO134 856, F.Gomersall, 7th Jun 2020; (+) Kerry Hill, SO14 86, A.K.Thorne & W.I.J.Thorne, 11th Jul 2020, trackside in forest.

+152/16.26 **Carex riparia** (Greater Pond-sedge) (Hesgen-y-dŵr Fawr). Churchstoke, SO27 93, A.K.Thorne, 6th Sep 2020, Camlad floodplain. Well established in damp ditch, may have spread from a pool upstream.

+152/16.28. **Carex rostrata** (Bottle Sedge) (Hesgen Ylfinfain). Machynlleth, SH70K, D.Elias, 2020.

+153/12.02. **Schedonorus arundinaceus** (Tall Fescue) (Peiswellt Tal). Abergwydol, SH79 03, Gillian and Peter Foulkes, 31st May 2020.

\*†153/46.2. **Polyopogon viridis** (Water Bent) (Barfwellt y Dŵr). Machynlleth, SH70K, D.Elias, det. A.O.Chater, 2020, frequent on a few roadsides and hard standings.

+153/49.2. **Phleum bertolonii** (Smaller Cat's-tail) (Rhonwellt Penfain). Cae Eithaf (nr Aberhosan), SN821 976, Gillian and Peter Foulkes, 29th Aug 2020, rough grassy road verge almost opposite old quarry.

+†153/52.1. **Anisantha diandra** (Great Brome) (Pawrwellt Mawr). Abercegir, SH809 018, Peter Foulkes, 14th Aug 2020, a couple of plants on very edge of road at SH809018. Pressed specimen confirmed by A.O.Chater Jan 2021 who commented: lemmas measure as 23.5-25µm, the lower glumes 16-19mm and the upper glumes 26-30mm, which makes it definitely *A. diandra* according to Cope, and good enough for Stace too.

+153/59.4. **Hordeum secalinum** (Meadow Barley) (Haidd y Maes). Wern, SJ259 148, J.Clayfield, det. A.K.Thorne, 8th Sep 2020, on bund.

+153/64.1. **Phragmites australis** (Common Reed) (Corsen). Machynlleth, SH70K, D.Elias, 2020

MERIONETH, v.c.48 (comm. J. Clark)

\*†020/1.nor. **Abies nordmanniana** (Caucasian Fir) (Ffynidwydden y Cawcasws). Rhobell Fawr, SH79 25, Meirionnydd Naturalists, 25th Sep 2020.

†061/2.02. **Salix fragilis** (Crack-willow) (Helygen Frau). River Dee, south of Corwen, SJ05 42, A.N.Graham & J.E.Graham, 3rd Aug 2020.

‡+075/21.17. **Rosa mollis** (Soft Downy-rose) (Rhosyn Blewog). Corwen Railway Line, SJ064 426, A.N.Graham & J.E.Graham, 3rd Aug 2020.

+‡084/4.1. **Oenothera glazioviana** (Large-flowered Evening-primrose) (Melyn-yr-hwyr Mawr). Morfa Dyffryn, SH56 24, Meirionnydd Naturalists, 28th Aug 2020.

091/2.12. **Euphorbia portlandica** (Portland Spurge) (Llaethlys Portland). Harlech NNR, SH55 34, J.Langton, 29th Aug 2020; (‡+) Morfa Dyffryn, SH564 372, Meirionnydd Naturalists, 28th Aug 2020.

108/5.2. **Gentianella campestris** (Field Gentian) (Crwynllys y Maes). Morfa Dyffryn, SH5581 2531, A.N.Graham & J.E.Graham, 9th Sep 2020; Morfa Dyffryn, SH5581 2533, A.N.Graham & J.E.Graham, 9th Sep 2020; Morfa Dyffryn, SH561 242, Meirionnydd Naturalists, 28th Aug 2020.

‡+124/23.1. **Parentucellia viscosa** (Yellow Bartsia) (Gorudd Melyn). Morfa Dyffryn, SH56 24, Meirionnydd Naturalists, 28th Aug 2020, 1st hectad record since 1974.

135/43.6 **Erigeron acris** (Blue Fleabane) (Amrhydlwyd Glas). Harlech NNR, SH55 34, J.Langton, 29th Aug 2020.

‡135/44.1. **Conyza canadensis** (Canadian Fleabane) (Amrhydlwyd Canada). Harlech Forest, SH568 331, A.N.Graham & J.E.Graham, 12th Jul 2020, 1st hectad record since 1956.

153/49.2. **Phleum bertolonii** (Smaller Cat's-tail) (Rhonwellt Penfain). Harlech NNR, SH55 34, J.Langton, 29th Aug 2020, 1st hectad record since 1974.

⊗‡158/24.12. **Allium carinatum** (Keeled Garlic) (Garlleg y Mynydd). Llanderfel, SH983 372, David Elias, 4th Aug 2020, 1st VC and hectad record since before 1969.

\*‡158/24.13.b. **Allium ampeloprasum var. babingtonii** (Babington's Leek) ([Cenhinen Babington]). Fairbourne Spit, SH616 149, R.Cope, det. Paul Green 26/07/2020, 1st Jul 2018.

158/24.16.com. **Allium vineale var. compactum**. Tywyn, SH58 08, Heather Garrett, det. Paul Green 26/07/2020, 27th Jun 2020, 1st hectad record since 1986.

162/06.2. **Neottia cordata** (Lesser Twayblade) (Caineirian Bach). Craig Ddu, SH9330 3008, A.N.Graham & J.E.Graham, 29th Jul 2020, 1st record for hectad this millennium.

162/18.3.c. **Dactylorhiza incarnata subsp. pulchella**. Tir Stent, SH752 164, A.N.Graham & J.E.Graham, 16th Jun 2020, 1st localised record for subsp.

162/18.4. **Dactylorhiza praetermissa** (Southern Marsh-orchid) (Tegeirian-y-gors Deheuol). Trawscoed, SH845 328, A.N.Graham & J.E.Graham, 28th Jun 2020

CAERNARFON, v.c.49 (comm. W. McCarthy)

+‡024/1.1 **Laurus nobilis** (Bay) (Llawrwydden). Beside footpath, Llanfairfechan, SH67 73, Ted Phenna, 21st Sep 2020.

\*‡028/12.5. **Clematis viticella** (Purple Clematis) (Barf-yr-hen-ŵr Borffor). Among brambles by footpath, Great Orme, SH76 82, Wendy McCarthy, Sep 2020.

+‡030/6.1.© **Eschscholzia californica** (Californian Poppy) (Pabi Califfornia). Grass bank in lane, Pontwgan, Conwy, SH75 70, Wendy McCarthy, 2nd Oct 2020.

- +‡043/1.13. **Chenopodium ficifolium** (Fig-leaved Goosefoot) (Troed-yr-wydd Dail Ffigys). Disturbed soil in park, Llandudno, SH79 81, Wendy McCarthy, 12th Feb 2020.
- +‡069/1.1×3. **Primula xpolyantha** (False Oxlip) (Briallen Groesryw). By path to Elephants cave, Happy Valley, Llandudno, SH78 83, Wendy McCarthy, 30th May 2020, cultivated type with purple flowers.
- +‡069/3.1. **Cyclamen hederifolium** (Sowbread) (Bara'r Hwch). Beside footpath, Llanfairfechan, SH67 73, Ted Phenna, 10th Sep 2020.
- +‡072/2.4. **Ribes sanguineum** (Flowering Currant) (Llwyn Cwrens Blodeuog). Sandy path through sand dunes, Abersoch, SH31 27, Caernarvonshire Recording Group, 13th Mar 2020.
- +‡075/32.39. **Cotoneaster franchetii** (Franchet's Cotoneaster) (Cotoneaster Franchet). Sandy path through sand dunes, Abersoch, SH31 27, Caernarvonshire Recording Group, det. Wendy McCarthy, 13th Mar 2020.
- \*‡077/25.1. **Genista monspessulana** (Montpellier Broom) (Banhadlen Montpellier). Roadside bank, Pydew, SH80 78, Suzanne Coleman, det. Mike Crewe, 7th Jul 2020, determined from photos on Facebook.
- +‡085/3.1. **Griselinia littoralis** (New Zealand Broadleaf) (Griselinia). Edge of footpath near houses, Morfa Bychan, SH54 36, Wendy McCarthy, 10th Jan 2020, several small self-sown bushes near mature planted trees.
- +‡091/2.17. **Euphorbia characias** (Mediterranean Spurge) (Llaethlys Môr y Canoldir). Railway embankment, Llanfairfechan, SH68 74, Ted Phenna, 14th Oct 2020.
- +‡093/2.1.© **Parthenocissus quinquefolia** (Virginia-creeper) (Dringwr Fflamgoch). Spreading through hedge into grassland, Vardre, Deganwy, SH78 79, W.McCarthy, M.Roberts,L.Ball, 15th Aug 2020.
- +103/1.18. **Geranium lucidum** (Shining Crane's-bill) (Pig-yr-aran Loywddail). Sandy path through sand dunes, Abersoch, SH31 27, Caernarvonshire Recording Group, 13th Mar 2020.
- \*‡123/JAS.off. **Jasminum officinale** (Summer Jasmine) (Jasmin yr Haf). Roadside, Llanfairfechan, SH68 75, Ted Phenna, 21st Jul 2020.
- +‡130/4.1. **Phuopsis stylosa** (Caucasian Crosswort) (Croeslys y Cawcasws). Bank beside track opposite houses, Great Orme, SH76 82, Wendy McCarthy, 27th Jun 2020; (+) bank under trees in wood, Happy Valley, Llandudno, SH77 83, Wendy McCarthy, 29th Aug 2020.
- +‡135/08.1. **Silybum marianum** (Milk Thistle) (Ysgallen Fair). Beside footpath, Y Fron, SH51 54, Mari Roberts, 4th Oct 2020, two small seedlings.
- +‡135/43.1. **Erigeron glaucus** (Seaside Daisy) (Amrhydlywd Arfor). Sandy path through sand dunes, Abersoch, SH31 28, Caernarvonshire Recording Group, det. Wendy McCarthy, 13th Mar 2020.
- +‡135/44.2. **Conyza sumatrensis** (Guernsey Fleabane) (Amrhydlywd Guernsey). Promenade, Llanfairfechan, SH68 74, Ted Phenna, 10th Sep 2020.
- +‡135/62.03.© **Senecio inaequidens** (Narrow-leaved Ragwort) (Creulys Gulddail). In road over iron grill, Llanfairfechan, SH69 74, Ted Phenna, 14th Oct 2020.

- \*©135/CAE.chi **Callistephus chinensis** (China Aster) (Seren Tsieina). In gutter beside pavement, Llandudno, SH76 82, Wendy McCarthy, det. Mike Crewe, 1st Feb 2019, determined from photos on Facebook.
- \*©135/GUI.ab. **Guizotia abyssinica** (Niger) (Guizotia). Disturbed ground at field edge, Llangwnadl, SH19 32, Tony Brand, 11th Oct 2020, several plants away from houses (& bird feeders).
- \*‡147/4.1. **Zantedeschia aethiopica** (Altar-lily) (Lili'r Pasg). Grounds of long-demolished hotel, Llandudno, SH76 82, Wendy McCarthy, 20th Jun 2020.
- +‡147/5.2.b. **Arum italicum subsp. italicum**. Beside footpath near houses, Vardre, Deganwy, SH78 79, Wendy McCarthy, 14th Jul 2020.
- \*‡151/2.4. **Luzula luzuloides** (White Wood-rush) (Coedfrwynen Wen). Wooded road verge, Bryn Bras, Llanrug, SH54 62, Emily Meilleur, 8th Jun 2020, possible escape from nearby caravan park.
- +153/51.3. **Bromopsis erecta** (Upright Brome) (Pawrwellt Talsyth). Limestone grassland, Little Orme, Llandudno, SH81 82, Wendy McCarthy, 16th Jul 2020.
- +‡153/PAN.mil.© **Panicum miliaceum** (Common Millet) (Miled). Grassy path edge, Abergwyngregyn, SH65 73, Ted Phenna, 0000.
- \*158/19.sar. **Scilla sardensis** (lesser glory-of-the-snow). Sandy path through sand dunes, Abersoch, SH31 27, Caernarvonshire Recording Group, det. Wendy McCarthy, 13th Mar 2020.
- +‡158/21.1. **Hyacinthus orientalis** (Hyacinth) (Hiasinth)). Sandy path through sand dunes, Abersoch, SH31 28, Caernarvonshire Recording Group, 13th Mar 2020.
- +©158/24.por. **Allium porrum** (Leek) (Cenhinen). Roadside, Llanfairfechan, SH68 75, Ted Phenna, 7th Jul 2020, 3 plants in flower.
- +‡158/32.1. **Galanthus nivalis** (Snowdrop) (Eirlys). Sandy path through sand dunes, Abersoch, SH31 27, Caernarvonshire Recording Group, 13th Mar 2020

DENBIGH, v.c.50 (comm. D. Williams)

- +017/3.03b. **Dryopteris cambrensis**. The Nant, SJ289 501, D.Williams, G.Lowden & J.Palmer, 28th Sep 2020, very big plant in shade on N side of road.
- +‡020/6.2. **Cedrus atlantica** (Atlas Cedar). Cefn-bychan, SJ284 415, D.Williams & G.Lowden, 18th Oct 2020, in grounds of large house.
- +‡020/6.lib. **Cedrus libani** (Cedar-of-Lebanon) (Cedrwydden Libanus). Cefn-bychan, SJ284 415, D.Williams & G.Lowden, 18th Oct 2020, in grounds of nursing home.
- +©021/1.1x2.noo. **Cupressus macrocarpa** × **Chamaecyparis nootkatensis** = **×Cupressocyparis leylandii** (Leyland Cypress) (Cypreswydden Leyland). Wynnstay Yard, SJ2939 4337, Joshua Styles, 5th Feb 2020, occasional.
- +028/13.17. **Ficaria verna** (Lesser Celandine) (Llygad Ebrill). Foryd, SH994 804, Denbs Group (D.Williams), 12th Dec 2020.
- +028/13.26. **Ranunculus fluitans** (River Water-crowfoot) (Crafanc-y-frân yr Afon). Dongray Hall, SJ402 465, D.Williams & G.Lowden, 20th Jul 2020, dee. Frequent.
- +‡030/6.1. **Eschscholzia californica** (Californian Poppy) (Pabi Califfornia). Fenn's Bank, SJ500 393, K.K.Bell, 12th Jul 2020, roadside.

- +031/5.01.b. **Fumaria capreolata subsp. babingtonii**. Cefn-bychan, SJ2864 4167, D.Williams & G.Lowden, 18th Oct 2020, flower on bank by road; (+) Rhosllanerchrugog, SJ290 463, D.Williams, G.Lowden & P.Stevenson, 29th Nov 2020; (+) Dongray Hall, SJ40123 46693, D.Williams & G.Lowden, 20th Jul 2020, west bank of Dee.
- +031/5.03. **Fumaria bastardii** (Tall Ramping-fumitory) (Mwg-y-ddae'r Grymus). Bonc-yr-Hafod, SJ31062 46147, Delyth Williams, 11th Aug 2020, factory demolition area. On a large pile of rubble.
- +039/2.2. **Nothofagus alpina** (Rauli) (Ffawyddden Ddeheuol Rauli). Rhosymedre, SJ2831 4283, D.Williams, G.Lowden & P.Stevenson, 22nd Nov 2020, a few smallish trees planted on E side of path.
- +043/1.06. **Chenopodium rubrum** (Red Goosefoot) (Troed-yr-wydd Coch). Llys Dymper, SH89 59, N.J. & S.K.Osley, 7th Aug 2020, upland path/track.
- +043/1.13. **Chenopodium ficifolium** (Fig-leaved Goosefoot) (Troed-yr-wydd Dail Ffigys). Trevalyn, SJ398 570, Delyth Williams, 11th Jul 2020, field footpath.
- +045/2.2. **Claytonia sibirica** (Pink Purslane) (Porpin Pinc). Dongray Hall, SJ402 465, D.Williams & G.Lowden, 20th Jul 2020, west bank of Dee. Single plant above waterline.
- +046/05.3. **Stellaria pallida** (Lesser Chickweed) (Gwlyddyn-y-dom Bach). Pentre-celyn, SJ156 523, Delyth Williams, 16th May 2020, laneside.
- +046/20.04. **Silene vulgaris** (Bladder Champion) (Gludlys Codrwrth). Pwll-hir, SJ247 352, S.Swindells, 7th Jun 2020, a few flowering plants by The Mount on a roadside hedgebank.
- +046/20.05. **Silene uniflora** (Sea Champion) (Gludlys Arfor). Bonc-yr-Hafod, SJ3106 4614, Denbs Group (D.Williams), 1st Sep 2020, large pile of rubble in disused factory site. Garden throw-out?
- +047/4.2.a. **Polygonum oxyspermum subsp. raii**. Llanddulas, SH9115 7870, N.J. & S.K.Osley, 30th Jul 2020, near the mouth of A. Dulas. A single plant on landward side of shingle storm crest.
- +050/1.2. **Elatine hydropiper** (Eight-stamened Waterwort) (Gwybybyr Wythfrigerog). Hanmer Mere, SJ45339 39135, N.Aspey, 19th Sep 2020, Immediately N of a field boundary extended into the mere.
- +051/1.01. **Hypericum calycinum** (Rose-of-Sharon) (Rhosyn Saron). Rhosllanerchrugog, SJ290 468, D.Williams, G.Lowden & P.Stevenson, 29th Nov 2020, roadside; (+) Moss, SJ307 535, D.Williams & G.Lowden, 11th Oct 2020, spreading on verge from house.
- +053/2.1.† **Lavatera arborea** (Tree-mallow) (Hocyswydden). Bonc-yr-Hafod, SJ31062 46147, Delyth Williams, 11th Aug 2020, factory demolition area. A few plants on a large pile of rubble.
- +061/1.1. **Populus alba** (White Poplar) (Poplysen Wen). Cae Coch, SJ143 566, Delyth Williams, 15th Jun 2020, suckering all over verge from nearby tree in garden.
- +062/14.7. **Cardamine flexuosa** (Wavy Bitter-cress) (Berwr Chwerw Hyblyg). Foryd, SH994 808, Denbs Group (D.Williams), 12th Dec 2020, sand dunes at Horton's Nose.
- +062/30.2. **Lepidium campestre** (Field Pepperwort) (Pupurlys y Maes). Bonc-yr-Hafod, SJ3111 4603, Delyth Williams, 11th Aug 2020, factory demolition area. Several plants on a pile of rubble.

- +†062/30.5. **Lepidium ruderales** (Narrow-leaved Pepperwort) (Pupurlys Culddail). Rhiwabon North, SJ3046 4416, M.O.Stead, 4th Jan 2020, centre of dual carriageway High St. Ruabon.
- +†062/31.1. **Lepidium coronopus** (Swine-cress) (Olbrain). Minera Quarry NWWT Reserve, SJ24 51, Jonathan D.Shanklin, 12th Jul 2020; (+) Minera Quarry NWWT Reserve, SJ25 52, Jonathan D.Shanklin, 12th Jul 2020.
- +†062/7.2. **Erysimum cheiri** (Wallflower) (Blodyn y Fagwyr). Cefn-bychan, SJ284 417, D.Williams & G.Lowden, 18th Oct 2020, main road; (+) Rhosllanerchrugog, SJ290 468, D.Williams, G.Lowden & P.Stevenson, 29th Nov 2020, roadside.
- +069/1.1×3. **Primula xpolyantha (P. vulgaris x P. veris)** (False Oxlip) (Briallen Groesryw). Bryn Euryn, SH8311 8008, I.Fraser, 17th Apr 2020, 3 little colonies within 2 sq m.
- +073/5.16. **Sedum anglicum** (English Stonecrop) (Briweg y Cerrig). Foryd, SH994 808, Denbs Group (D.Williams), 12th Dec 2020, sand dunes at Horton's Nose.
- +‡074/03.1. **Bergenia crassifolia** (Elephant-ears) (Clustiau Eliffant). Moss, SJ306 538, D.Williams & G.Lowden, 11th Oct 2020, spreading on banks.
- \*‡074/05.10. **Saxifraga hirsuta** (Kidney Saxifrage) (Saxifraga hirsuta - kidney saxifrage - tormaen blewog)). Moss, SJ303 539, D.Williams & G.Lowden, 11th Oct 2020, path passing old garden area.
- +075/21.12. **Rosa canina** (Dog-rose) (Rhosyn Gwylt). Foryd, SH995 802, Denbs Group (D.Williams), 12th Dec 2020.
- +‡075/32.21. **Cotoneaster horizontalis** (Wall Cotoneaster) (Cotoneaster Asgwrn). Foryd, SH994 805, Denbs Group (D.Williams), 12th Dec 2020, the Bridge and to the S; (+) Minera Quarry NWWT Reserve, SJ25 52, Jonathan D.Shanklin, 12th Jul 2020.
- +‡075/32.33. **Cotoneaster simonsii** (Himalayan Cotoneaster) (Cotoneaster Simons). Foryd, SH994 805, Denbs Group (D.Williams), 12th Dec 2020, the Bridge and to the S.
- +‡075/32.34. **Cotoneaster bullatus** (Hollyberry Cotoneaster) (Cotoneaster Deilgrych). Marford Quarry NWWT Reserve, SJ35 55, Jonathan D.Shanklin, 11th Jul 2020.
- +‡075/32.39. **Cotoneaster franchetii** (Franchet's Cotoneaster) (Cotoneaster Franchet). Graigfechan, SJ1480 5445, Delyth Williams, 13th Jun 2020, a few plants in the quarry.
- +077/14.09. **Vicia sepium** (Bush Vetch) (Ffacbysen y Cloddiau). Foryd, SH994 808, Denbs Group (D.Williams), 12th Dec 2020, sand dunes at Horton's Nose.
- +©077/14.11.c. **Vicia sativa subsp. sativa** (Pupysen). Rhosymedre, SJ2842 4260, D.Williams, G.Lowden & P.Stevenson, 22nd Nov 2020, large robust plants, paler purple flowers growing over wire mesh fence; (+) Rhosllanerchrugog, SJ2895 4680, D.Williams, G.Lowden & P.Stevenson, 29th Nov 2020, robust plant climbing over railings, purple flowers, hairy brownish pods.
- +‡077/17.2. **Melilotus albus** (White Melilot) (Yr Wydro Wen). Foryd, SH99 80, G.Lowden, 12th Dec 2020.
- +‡084/4.1. **Oenothera glazioviana** (Large-flowered Evening-primrose) (Melyn-yr-hwyr Mawr). The Nant, SJ2833 5050, Denbs Group (D.Williams), 28th Sep 2020, lane beside houses.
- +‡084/4.5. **Oenothera stricta** (Fragrant Evening-primrose) (Melyn-yr-hwyr Pêr). Pensarn, SH9379 7847, N.J. & S.K.Osley, 27th Jul 2020, against sea wall.

+‡091/2.16. **Euphorbia amygdaloides** (Wood Spurge) (Llaethlys y Coed). Ruthin South, SJ131 579, Delyth Williams, 2nd Jun 2020, shady cutting. Escaped over verge from garden.

+‡091/2.16.b. **Euphorbia amygdaloides subsp. robbiae**. coed abergele, SH947 768, N.J. & S.K.Osley, 8th Mar 2020, scattered patch in old hedgerow and rough ground above and on bank beside Afon Gele.

+‡103/2.2. **Erodium moschatum** (Musk Stork's-bill) (Pig-y-crëyr Fwsg). Cefn-bychan, SJ284 417, D.Williams & G.Lowden, 18th Oct 2020, main road.

+107/28.1. **Apium graveolens** (Wild Celery) (Seleri Gwyllt). Foryd, SH994 805, Denbs Group (D.Williams), 12th Dec 2020, the Bridge and to the S.

\*‡107/37.2 **Angelica archangelica** (Garden Angelica) (Llysiau'r-angel Pêr). Sinet, SJ1519 5645, Delyth Williams, 15th Jun 2020, two large plants by field gate. Voucher of fruits.

+107/40.1.‡ **Pastinaca sativa** (Wild Parsnip) (Panasen Wylt). Chirk, SJ2996 3938, Tom Knight, 17th Jul 2020, a few plants on verge.

\*‡116/12.2.© **Amsinckia micrantha** (Common Fiddleneck) (Amsincia). Dongray Hall, SJ40123 46694, D.Williams & G.Lowden, 20th Jul 2020, two plants on alluvial silt just above the waterline on W bank of Dee, **Hb D.W.**

+118/23.1×3. **Mentha arvensis** × **M. spicata** = **M. xgracilis** (Bushy Mint) (Mintys Culddail). Dongray Hall, SJ400 467, D.Williams & G.Lowden, 20th Jul 2020, west bank of Dee.

+‡118/23.3×4. **Mentha spicata** × **M.suaveolens** = **M. xvillosa** (Apple-mint) (Mintys Lletgrwn). Pentre Mawr Park, SH9412 7854, D.Williams & J.Palmer, 8th Sep 2020, rabbit-grazed field between railway and bund to S of coastal path.

+118/23.4.‡ **Mentha suaveolens** (Round-leaved Mint) (Mintys Deilgrwn). Garn Brys, SH8951 4982, Tom Knight, 23rd Aug 2020, good patch on verge near bridge.

+123/2.ang. **Fraxinus angustifolia**. Wrexham Hospital, SJ322 503, N.Aspey, 19th Sep 2020, frequently planted around verges of carparks.

+‡124/01.05. **Verbascum phlomoides** (Orange Mullein) (Pannog Oren). Marford Quarry NWWT Reserve, SJ35 55, Jonathan D.Shanklin, 11th Jul 2020.

+124/20.07. **Euphrasia nemorosa** (Effros). Johnstown, SJ3085 4647, Denbs Group (D.Williams), 1st Sep 2020, large patch of tall plants.

\*124/DIA.bar. **Diascia barberae** (Twinspur). Penley, SJ41884 39784, N.Aspey, 16th Aug 2020, 2 small flowering plants in base of a tree stump on road verge. New raised flowerbed the possible source.

+‡129/1.10. **Campanula poscharskyana** (Trailing Bellflower) (Clychlys Ymlusgol). The Nant, SJ289 501, D.Williams, G.Lowden & J.Palmer, 28th Sep 2020, large patch several m circumference naturalised on N side of road on shady bank under trees.

+‡130/4.1. **Phuopsis stylosa** (Caucasian Crosswort) (Croeslys y Cawcasws). Graigfechan, SJ1498 5437, Delyth Williams, 20th May 2020, spreading along verge from house.

+135/11.1. **Centaurea scabiosa** (Greater Knapweed) (Y Bengaled Fawr). Coed Tai-isaf, SH940 544, Sue Burnett, 31st Jul 2020, forest track by the Alwen reservoir.

+135/22.2.‡ **Lactuca virosa** (Great Lettuce) (Letusen Chwerw). Eyarth Rocks, SJ12043 54693, J.Palmer, det. D.Williams, 14th Jun 2020, on and below the bridge. Recent earthworks in the area around the bridge.

- +135/28.01. **Hieracium** sect. **Sabauda**. Marford Quarry NWWT Reserve, SJ3560 5603, Jonathan D.Shanklin, 11th Jul 2020.
- +‡135/43.4. **Erigeron karvinskianus** (Mexican Fleabane) (Amrhydylwyd y Cerrig). Ty Mawr Holiday Park, SH965 795, Delyth Williams, 21st Sep 2020, frequent along railway embankment and rocks; (+) Foryd, SH994 806, Denbs Group (D.Williams), 12th Dec 2020.
- +‡135/62.01. **Senecio cineraria** (Silver Ragwort) (Creulys Ariannaid). Stryt-issa, SJ2866 4567, Tom Knight, 4th Jun 2020, single plant growing from top of garden brick wall.
- +135/62.15.vul.vul. **Senecio vulgaris** subsp. **vulgaris** var. **vulgaris**. Wynnstay Yard, SJ2939 4337, Joshua Styles, 5th Feb 2020, rare.
- \*‡135/79.2.xpau. **Helianthus tuberosus** × **H. pauciflorus** = **H. xlaetiflorus** (Perennial Sunflower) (Blodyn-yr-haul Lluosflwydd). Graigfechan, SJ1499 5402, Delyth Williams, 9th May 2020, large clump by entrance to field gate, almost opposite house.
- +152/16.27. **Carex pseudocyperus** (Cyperus Sedge) (Hesgen Gynffonnog). Towyn, SH9787 7957, N.J. & S.K.Osley, 21st Jul 2020.
- +152/16.46.a. **Carex lepidocarpa** (Long-stalked Yellow-sedge). Bryn Cerbyd, SH84 45, N.J. & S.K.Osley, 9th Aug 2020, along Nant y Fuddai.
- +153/18.09.‡ **Poa compressa** (Flattened Meadow-grass) (Gweunwellt Cywasgedig). Llan-y-pwll, SJ3779 5025, Tom Knight, 21st Jan 2020, occasional to locally frequent along disturbed bank by industrial unit.
- +153/21.1. **Catapodium rigidum** (Fern-grass) (Gwenithwellt Caled). Coed Draw, SJ1084 7173, Tom Knight, 26th Nov 2020, single plant - probably brought in with limestone hardcore in gate-way.
- +‡153/59.1.© **Hordeum distichon** (Two-rowed Barley) (Haidd Dwyresog). Dongray Hall, SJ402 465, D.Williams & G.Lowden, 20th Jul 2020, west bank of Dee.
- +©153/ZEA.may. **Zea mays** (Maize) (India-corn). Foryd, SH994 808, Denbs Group (D.Williams), 12th Dec 2020, sand dunes at Horton's Nose.
- \*158/06.eni. **Kniphofia ensifolia**. Abergele Hospital, SH9535 7500, N.J. & S.K.Osley, 20th May 2020, 5 or 6 plants in bloom near junction and entrance to a green lane. Planted?
- \*‡158/22.1. **Chionodoxa forbesii** (Glory-of-the-snow) (Glas yr Eira). Bryn Euryn, SH8306 8010, I.Fraser, det. D.Williams, 17th Apr 2020, 3 colonies in an area of about 20 sq m. 1 plant in flower at SH8309 8009. Another colony in grassland nearby.
- +‡158/33.5. **Narcissus pseudonarcissus** (Gweler yr Isrywogaethau yn Unig). Abergele Hospital, SH9435 7530, N.J. & S.K.Osley, 22nd Mar 2020, steep bank of rough pasture west of Coed Ysgeirallt. Numerous clumps over 10 x 15m

FLINT, v.c.51 (comm. G. Quartly-Bishop)

No records that qualify for inclusion in Welsh Plant Records were made in 2020 due to Covid restrictions.

ANGLESEY, v.c.52 (comm. N.H. Brown & I.R. Bonner)

+004/1.9. **Equisetum telmateia** (Great Horsetail) (Marchrawnen Fawr). Plas Newydd, SH52 69, Nigel & Caroline Brown, 5th Jul 2020, well distributed through the wood and along the foreshore.

\*#016/1.1. **Matteuccia struthiopteris** (Ostrich Fern) (Rhodynyn Estrys). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted in naturalising border.

+#020/7.2.a. **Pinus nigra subsp. nigra** (Austrian Pine) (Pinwydden Awstria). Holyhead Mountain, SH217 822, Nigel Brown, 14th Sep 2020, in small plantation by Llyn Cwm.

+#020/7.5. **Pinus radiata** (Monterey Pine) (Pinwydden Monterey). Wylfa Power Station, SH35 93, Nigel Brown, 25th Oct 2020, several mature trees planted near the visitor car park.

+#021/3.1. **Thuja plicata** (Western Red-cedar) (Cedrwydden Goch). SH491 795, Nigel Brown, 19th Jan 2020, conifer plantation.

+026/1.1. **Nymphaea alba** (White Water-lily) (Alaw). Holyhead Mountain, SH217 822, Nigel Brown, 14th Sep 2020, probably planted. Llyn Cwm.

+#028/06.1. **Aconitum napellus** (Monk's-hood) (Cwccwll y Mynach). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted in damp grassland; (+) Plas Newydd, SH5242 7034, Nigel & Caroline Brown, 5th Jul 2020, 2.5m x 1m patch, two others nearby, probably originally planted, all with very hairy pedicels.

+#030/1.3. **Papaver somniferum** (Opium Poppy) (Llysiâu Cwsg). Hootons Nursery, SH50 69, Nigel & Caroline Brown, 10th Jul 2020, on disturbed soil heap.

+#039/3.1. **Castanea sativa** (Sweet Chestnut) (Castanwydden Bêr). Holyhead Mountain, SH218 823, Nigel Brown, 14th Sep 2020, one planted by Llyn Cwm.

+#057/1.11x12xalt. **Viola xwittrockiana** (Garden Pansy) (Trilliw'r Gerddi). Tan-y-mynydd, SH53 72, Pat Denne, 2020, scattered in garden and adjacent area, originally thought to be *V. tricolor*.

+#058/1.1. **Tamarix gallica** (Tamarisk) (Grugbren). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted in damp grassland.

+061/1.3.a. **Populus nigra subsp. betulifolia** (a subspecies of Black-poplar). Plas Newydd, SH5223 7012, Nigel & Caroline Brown, 5th Jul 2020, 90ft.tall specimen by woodland track.

+#061/1.balxdel. **Populus x jackii** (Balm-of-Gilead) (Poplysen Balm Gilead). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted in marsh.

+#061/2.03. **Salix alba** (White Willow) (Helygen Wen). Wylfa Power Station, SH35 93, Nigel Brown, 25th Oct 2020, fairly frequent in damp hollow near visitor carpark.

+#062/20.1. **Lobularia maritima** (Sweet Alison) (Alyswm Pêr). Llangefni, SH459 756, Nigel Brown, 20th Feb 2020, in good quantity in pavement cracks by riverside path.

\*#065/8.1. **Gaultheria shallon** (Shallon) (Gweunlwyn Sialon). Bull Bay, SH4229 9429, Nigel Brown, 17th Sep 2020, strong colony on dry stony bank.

+#071/HYD.mac. **Hydrangea macrophylla** (Hydrangea) (Trilliw ar Ddeg). between Porth Wen and Bull Bay, SH4194 9433, Nigel Brown, 17th Sep 2020, roadside verge.

+073/5.5. **Sedum telephium** (Orpine) (Canewin). Newborough Forest SSSI, SH3920 6574, Nigel & Caroline Brown, 25th Jun 2020, 1 flowering plant at edge of forest.

\*075/06.pur. **Filipendula purpurea**. Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted and naturalising in grassland and marsh.

+#075/17.3.b. **Poterium sanguisorba subsp. balearicum** (Fodder Burnet) (Bwrned Ebran). Cerrig Cynrig, SH3270 7632, Mandy Forde, 2020, on spoil excavated from field ditch.

+‡Llangefni Industrial Park S. SH4625 7459, Nigel & Caroline Brown, 24th Jun 2020, several plants on roadside recently relandscaped as part of new bypass.

+‡075/28.07. **Sorbus intermedia** (Swedish Whitebeam) (Cerddinen Sweden). Cymyran, SH2998 7594, N.H.Brown & R.Blackhall-Miles, 22nd Jun 2020, 1.5m high young tree.

+‡077/17.3. **Melilotus officinalis** (Ribbed Melilot) (Yr Wydro Resog). Plas Newydd, SH519 697, Nigel & Caroline Brown, 24th Jun 2020, single plant as pathside weed.

+‡077/21.1. **Lupinus arboreus** (Tree Lupin) (Coeden Bysedd y Blaidd). Tregel, SH35 92, Debbie Evans, 21st Jun 2019, on land next door to a garage.

+‡080/1.man. **Gunnera manicata** (Brazilian Giant-rhubarb) (Rheonllys Mawr Brasil). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted in marsh.

+082/1.2. **Daphne laureola** (Spurge-laurel) (Clust yr Ewig). Plas Newydd, SH5215 6970, Nigel Brown, 11th Mar 2020, mature shrub 1.2m. tall, close to the garden, but looked native.

\*087/1.1. **Viscum album** (Mistletoe) (Uchelwydd). Beaumaris, SH601 758, T.H.Blackstock, 25th Feb 2020, four large bunches with well-formed berries on an old *Crategus monogyna*. In December Richard Birch noted 3 clusters on a lime tree very close to the hawthorn reported in February.

\*091/2.07. **Euphorbia stricta** (Upright Spurge) (Llaethlys Syth). Tyddyn Adda, SH501 709, James Robertson, 2020, naturalised as a garden weed.

+‡091/2.09. **Euphorbia lathyris** (Caper Spurge) (Llaethlys Caprys). Hootons Nursery, SH50 69, Nigel & Caroline Brown, 10th Jul 2020, on disturbed soil heap.

+‡091/2.15. **Euphorbia cyparissias** (Cypress Spurge) (Llaethlys Cypreswydd). Tan-y-fron, SH3267 8347, Debbie Evans, 13th Feb 2019, single plant on verge near track; (+) Penraig, SH46 75, Debbie Evans, 5th Jul 2019, in hedgerow, by windmill. Llangefni. Garden escape.

\*‡107/26.rot. **Bupleurum rotundifolium** (Thorow-wax) (Paladr Trwyddo Deilgrwn). Cerrig Cynrig, SH3252 7627, Mandy Forde, 1st Sep 2020, found in 3 areas of grass, bird seed not used, source unknown.

+108/4.1. **Blackstonia perfoliata** (Yellow-wort) (Y Ganrhi Felen). Amlwch, SH4497 9370, Charles Aron, 25th Jul 2020, locally plentiful, ruderal/stony ground of former Octel site.

+110/2.1. **Lycium barbarum** (Duke of Argyll's Teaplant) (Ysbeinwydden Hardd). Aberffraw, SH35 68, Nigel Brown, 11th Oct 2020, along riverside lane, Aberffraw village.

+‡116/04.07. **Symphytum caucasicum** (Caucasian Comfrey) (Cyfardwf y Cawcasws). Talwrn, SH4875 7755, Nigel Brown, 23rd Apr 2020, shady roadside hedgerow.

+‡116/10.1. **Trachystemon orientalis** (Abraham-Isaac-Jacob) ("Abraham, Isaac a Jacob"). Plas Newydd, SH5234 7021, Nigel Brown, 11th Mar 2020, well established in woodland ravine.

+‡117/1.bon. **Verbena bonariensis** (Argentinian Vervain) (Ferfain yr Ariannin). Plas Newydd, SH519 697, Nigel & Caroline Brown, 24th Jun 2020, single plant as casual, disturbed ground, NT volunteer's carpark.

+118/25.4. **Salvia verbenaca** (Wild Clary) (Clari Gwyllt). Llanddwyn SSSI, SH3864 6254, Nigel Brown, 28th Jul 2020, 13 plants, 6 flowering shoots. 2.5m S of path, 15m above beach. 25m from Pilot Cottages. Open dune turf.

\*‡124/16.25. **Veronica longifolia** (Garden Speedwell) (Rhwyddlwyn Hirddail). Cerrig Cynrig, SH3253 7627, Mandy Forde, 1st Jul 2020, planted in grassland in 2018.

- +130/6.07. **Galium album** (Hedge Bedstraw) (Briwydd y Clawdd). Cefni Reservoir (SE Section), SH4417 7769, Nigel Brown, 19th Sep 2020, 1m. x 1.5m. colony on trackside/clearing.
- +‡131/6.6. **Lonicera japonica** (Japanese Honeysuckle) (Gwyddfifd Japan). Penlon, Newborough, SH4304 6476, Nigel Brown, 19th Jul 2020, scrubby roadside boundary.
- +135/05.4. **Carduus nutans** (Musk Thistle) (Ysgallen Bendrom). Llangefni Industrial Park, SH4657 7478, Nigel & Caroline Brown, 24th Jun 2020, several plants on roadside recently relandscaped as part of new bypass.
- +‡135/12.1. **Cichorium intybus** (Chicory) (Ysgello), SH58 81, T.H.Blackstock, 4th Jul 2020, frequent in small roadside field SE of Bwrdd Arthur, since cut.
- +‡135/22.1. **Lactuca serriola** (Prickly Lettuce) (Letusen Bigog). Cerrig Cynrig, SH3250 7636, Mandy Forde, 2020, on overgrown sandy mound in paddock.
- +135/26.5. **Crepis vesicaria** (Beaked Hawk's-beard) (Gwalchlys Gylfinog). Cerrig Cynrig, SH3250 7636, Mandy Forde, 2020, in gravel on the driveway.
- +‡135/40.3. **Solidago canadensis** (Canadian Goldenrod) (Eurwialen Canada). Penlon, Newborough, SH4310 6448, Nigel Brown, 19th Jul 2020, established clump on road verge & in grassland.
- +‡135/41.4×5. **Aster × salignus (A. novi-belgii × A. lanceolatus)** (Common Michaelmas-daisy) (Blodyn Mihangel). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted at edge of grassland.
- +‡135/44.1. **Erigeron canadensis** (Canadian Fleabane) (Amrhydlyd Canada). Amlwch, SH4488 9329, Charles Aron, 25th Jul 2020, wasteland.
- +‡135/45.2. **Olearia macrodonta** (New Zealand Holly) (Llwyn-llygad-y-dydd Celynnog). Red Wharf Bay, SH531 814, Nigel Brown, 13th Mar 2020, several bushes planted along edge of coast by scrub/woodland.
- +‡135/62.18. **Senecio viscosus** (Sticky Groundsel) (Creulys Ludiog). Amlwch, SH4496 9373, Charles Aron, 25th Jul 2020, locally plentiful, ruderal/stony ground of former Octel site.
- +‡153/05.1 **Pseudosasa japonica** (Arrow Bamboo) (Bambŵ'r Saethau). Plas Newydd, SH522 699, Nigel & Caroline Brown, 5th Jul 2020, becoming naturalised in the woods.
- +‡153/62.1. **Cortaderia selloana** (Pampas-grass) (Peithweltl). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, mature plant by pond.
- +‡158/06.1. **Kniphofia uvaria** (Red-hot-poker) (Procer Poeth). Aberffraw Common (SH3568), SH3564 6875, Jane & Ivor Rees, 15th Jun 2020, 2nd VCR.
- +158/24.01. **Allium schoenoprasum** (Chives) (Cenhinen Syfi). Talwrn, SH49 78, Nigel Brown, 23rd Apr 2020, lane-side verge, c.100m from nearest garden, appeared long established.
- +‡160/3.1. **Cordyline australis** (Cabbage-palm) (Palmwydden Fresych). Wylfa Power Station (gen.monad), Nigel Brown, 25th Oct 2020, one fine mult-stemmed 10m.tall mature specimen in wooded copse near carpark.
- +‡160/4.1. **Phormium tenax** (New Zealand Flax) (Llin Seland Newydd). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted by pond.

+162/03.4. **Epipactis helleborine** (Broad-leaved Helleborine) (Y Galdrist Lydanddail). Plas Newydd, SH5192 6958, Nigel Brown, 5th Jul 2020, 13 flowering shoots on low bank in volunteer's carpark.

+162/18.4. **Dactylorhiza praetermissa** (Southern Marsh-orchid) (Tegeirian-y-gors Deheuol). Brynsiencyn, SH4735 6681, Ian Hawkins, 30th May 2020, 7 flower spikes, around pond, first noted c, 2018.

\*‡020A/CRY.jap. **Cryptomeria japonica** (Japanese Red-cedar) (Cochwydden Japan). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted at base of main bank.

\*‡020A/TAX.dis. **Taxodium distichum** (Swamp Cypress). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted in shade by pond.

\*‡023A/LIR.tul. **Liriodendron tulipifera** (Tulip-tree). Rhuddlan, SH489 814, Nigel Brown, 29th Jul 2020, planted in damp grassland

**Images on page 71:** See Carmarthenshire Flora Progress 2020 article, page 11. All images © Ian Morgan.

Image 5: *Mentha pulegium*: still present and well established at Llanelli Gate development site, Dafen, 11 July 2020.

Image 6: *Cordyline australis*: bird-sown on wall-top, Penallt Terrace, Llanelli, 20 April 2020.

Image 7 (inset): *Cordyline australis*: self-sown in backlane south of Sandy Road, Llanelli, 2 May 2020.

### **Images on back cover:**

See Bog Orchid/Tegeirian Bach y Gors (*Hammarbya paludosa*) in Pembrokeshire article on page 25. All images © Stephen Evans.

Image 8: Medium distance view of *Hammarbya* habitat showing growth on *Sphagna*.

Image 9: Pseudo bulb shown on a *Hammarbya paludosa* plant.

Image 10: *Hammarbya paludosa* flower spike from a cluster of 11 seen at Brynberian Moor, Mynydd Preseli, Pembrokeshire, August 2019.

Image 11: Typical habitat of *Hammarbya* showing side channel.

Image 12: Aerial photograph of Brynberian Moor SW of Glanymor showing locations of *Hammarbya* in red along the channels, set in 100m grid.



