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(Front cover) Image 1: Hairy Greenweed (*Genista pilosa*) on Cadair Idris. © B.Brown. See article on page 26.

(Page 2) Image 2: Sarah Stille busy recording near Llan Ffestiniog, 22nd Nov. 2018. © B.Brown. See article on page 9.

Image 3: Andy Karran found *Parentucellia viscosa* (Yellow Bartsia), the fifth record for v.c.35. © S.J.Tyler. See article on page 9.

Image 4: One of seven beginner Plant Family Training workshops held across Wales in 2019. © B. Brown. See article on page 24.

Items for inclusion in the next Welsh Bulletin should be sent to Richard Pryce by **1st May 2020**: Pryceeco@aol.co.uk

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BSBI Field Meetings Wales - 2019

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Many thanks to everyone who has offered to lead field meetings in 2020. Please keep your ideas coming - you do not need to be a vice-county recorder, though it is a good idea to talk to your local recorder first. Full details of all meetings are in the BSBI Yearbook for 2020 and on the BSBI website.

Fri 26 - Sun 28 June: Bangor. BSBI Welsh AGM. See page 8 of this bulletin.

Mon 13 – Mon 20 July: Glynhir residential, Carmarthenshire.

The meeting will cater for both experienced and inexperienced botanists and will provide an opportunity for the informal development of identification skills. Day outings will be tailored to individual needs to cover all skill and fitness abilities. Leaders: Richard & Kath Pryce.

Fri 24 – Mon 27 July: Caerdeen residential, Merionethshire.

The popular meeting at Caerdeen continues for another year. Further details and booking arrangements will be published on the Merionethshire BSBI webpage in due course.

Leader: Jo Clark and others.

Sat 22 August: Pumlumon, Cardiganshire.

The highest point in Cardiganshire (v.c.46) and source of the rivers Wye, Severn and Rheidol. Remarkably, Pumlumon is the only high mountain in Wales to have achieved zero grazing and it is instructive to see the effects here of nearly 10 years regrowth and changes in species distribution and abundance. Over this time there has been a remarkable recovery here in summit heath and grassland communities with previously unsuspected populations of *Salix herbacea* (Dwarf Willow), *Carex bigelowii* (Stiff Sedge) (here at its southern British locality) and the hybrid with *C. nigra* (Common Sedge), *C. x decolorans*, together with the dwarf mountain variants of *Succisa pratensis* (Devil's-bit Scabious), *Solidaga virgaurea* ssp. *minuta* (Goldenrod) and other upland or montane taxa.

Leader: Andy Jones contact aberystwyth1234@gmail.com. Meeting 10.30 am at Maesnant, on the end of the paved road on the south side of Nant y Moch reservoir at SN774.8789. Note this is challenging environment with steep climbs and bogs, so appropriate clothing and footwear are required.

BSBI Wales Annual General Meeting 2019

Stradey Park Hotel, Llanelli

Wednesday 22nd May 2018 at 9.30am

Minutes of the 57th AGM of the BSBI in Wales

24 people were in attendance of whom 5 were not resident in Wales. All were BSBI members.

1. **Welcome:** The Chairman, Stephanie Tyler welcomed everyone to Llanelli.

Liz Howe Julian Woodman told those present of the sad news that Liz Howe of NRW (formerly CCW) had passed away at the end of March and spoke very highly of her. Julian and Andy Jones said what a wonderful person she was and spoke of Liz's valuable contributions to conservation, both in her role at NRW as well as outside work, and of her contribution to the flow of records in Wales, managing CCW Phase 1 and Phase 2 habitat surveying, with much effort given to obtaining permissions from landowners. Those present were urged to read Liz's obituary in The Guardian and various tributes, plus 'last words' from Liz, on Radio 4, BBC Sounds and a podcast. It was agreed that a tribute to Liz would be published in the next edition of the Welsh Bulletin and Andy would ask for permission to include some of her 'last words' [*See issue 104 – Ed*].

2. **Apologies for Absence:** Jim Davies, Liz Dean, Stephen Evans, Theresa Greenaway, Gail Quartley-Bishop, Sue Spencer, Barry Stewart, Sarah Stille and Delyth Williams.

3. **Minutes of 2018 AGM:** The minutes of the 56th Annual General Meeting held at Aberystwyth University on 18th August 2018, which were printed in Welsh Bulletin No.103, were agreed by all present and signed by the Chairman as a true record of the proceedings.

4. There were no **Matters Arising**.

5. **Chairman's report:** Stephanie Tyler thanked Richard and Kath Pryce for arranging this AGM with its associated excursions and talks and went on to thank the new Welsh Officer, Barbara Brown, who had been in post for about nine months and been very active already, for her work. The Chairman's thanks were echoed by the Committee and others. Stephanie reported that timesheets were being completed by Vice-county Recorders, to satisfy NRW's requirements for the grant to support Barbara's post. Kate Thorne and Gillian Foulkes were congratulated on their interesting article on Montgomeryshire in the 2019 BSBI News. Andy was thanked for his role as Minutes Secretary and the somewhat

fewer meetings arranged had been well attended. Elsa Wood was thanked for her support and Kath Pryce was thanked for minute-taking.

6. Welsh Officer's Report: Barbara Brown's report was printed in issue 103 of the BSBI Welsh Bulletin (July 2019) and in BSBI e-news. She reported arranging a variety of meetings including Welsh Volunteer meeting, a training day for Aberystwyth University students and Beginner Botanists courses. She had also given presentations on Atlas progress for WWBIC, BIS and COFNOD. She promised to write up this Wales AGM meeting for the Bulletin and was active on Twitter and the BSBI Blogspot. She was thanked for her work and enthusiasm.

7. Welsh Bulletin: Richard Pryce reported that the Welsh Bulletin is now free to all members who request it and that the BSBI Trustees had confirmed that funds would be made available centrally for the production of all the country bulletins. He appealed for articles and encouraged people to write 'short notes' on anything of particular relevance. He said that Katherine Slade and Sally Whyman are happy to continue as co-editors and they were warmly thanked. Amgueddfa Cymru - National Museum Wales was thanked for its continued support in allowing Katherine and Sally to prepare the Bulletin for printing in Museum time although it was noted that they do much of the work in their own time. Richard went on to thank all the vice-county recorders for supplying their qualifying records for Welsh Plant Records for publication and all agreed that Stephen Coker deserved a great deal of thanks for assembling and formatting all the data.

8. Election of Officers:

The Welsh Committee is complying with the new BSBI constitution. The following continue in their posts as officers of the Committee for Wales: Stephanie Tyler as Chairman, Elsa Wood as Hon. Secretary, Andy Jones as Meetings Secretary and Liz Dean as Treasurer (nominal but necessary to produce the Welsh Budget). No vote for election of Officers was required.

9. Election of Committee Members:

John Crellin and Kate Thorne were due to retire but wished to remain as non-voting observers. The nominations for their replacements were Gail Quartly-Bishop and John Palmer. No other nominations were received. It was proposed that the Committee members be re-elected *en-bloc*. This was proposed by Ray Woods and seconded by Arthur Chater.

The Committee now comprises:

Chairman:	Stephanie Tyler
Vice Chairman:	vacant
Secretary:	Elsa Wood

Treasurer: Liz Dean
Meetings: Andy Jones
Welsh Bulletin Editor: Richard Pryce
Voting Members: Steve Chambers, Gail Quartly-Bishop, John Palmer, Sarah Stille and Ray Woods

The following are NON-VOTING observers:-

John Crellin, Stephen Evans, Kate Thorne and
Kath Pryce (Minuting Secretary)

Bulletin Co-editors: Katherine Slade, Sally Whyman (corresponding members)

Observer ex officio HGS Delyth Williams

CCW Observer: Julian Woodman

Plantlife Representative: Colin Cheesman

Corresponding Members: Sue Spencer, Dr Natasha De Vere.

It was agreed that younger members are needed on the Committee.

Ray Woods asked whether a retiring committee member has to stand down for a year before being eligible for re-election. The reply was 'yes'.

10. Any Other Business:

1. A template for the production of a separate Welsh Report for the Atlas is awaited.
2. These minutes will appear on the website in due course.
3. The future of the Welsh AGM meeting was discussed. Due to lower attendances in recent years a one-day option was floated, with the option of staying overnight. Possible reasons for lower attendance this year were thought to include midweek timing, costs, looming deadline for Atlas and the perceived less interesting place (Llanelli area as opposed to somewhere such as the Gower or Snowdonia). Feedback from those present at the meeting suggested that they were finding the Llanelli area very interesting, made all the more attractive by the excellent hotel! A show of hands indicated that a three-day stay as usual was favoured over a one-day event.
4. The meeting was told that next year's Welsh AGM (2020) may be held in Llandudno (date yet to be decided).
5. The Chairman, Stephanie Tyler, wound-up the proceedings by thanking all the Officers and Committee members for their work, those in attendance for making it a success and Richard and Kath Pryce for organising the meeting.

The meeting concluded at 10:00am.

Exhibits included posters by Richard Pryce of past Carmarthenshire Recording Meetings held at Glynhir. Also, a sale of second-hand books had been arranged by Andy Jones.

A report of the field meetings and talks associated with the Wales AGM is published in the BSBI Yearbook 2020.

BSBI Wales field meeting and AGM 2020

Bangor, Fri 26th - Sun 28th June 2020

The 2020 AGM, exhibition and field excursions will be based at Reichel Hall in Bangor. The programme will include a range of field visits to reflect this diverse and spectacular part of North Wales. Preliminary plans include Treborth Botanic Gardens and Carboniferous Limestone grassland of the Great Orme together with options such as the coastal reserve, Morfa Aber, at Abergwyngregyn, Eithinog (Brewery Fields), wet grasslands at Moelyci Community Farm at Treborth and upland around Cwm Idwal.

The preliminary programme also includes:

- Evening talks on local botany and other topics of interest
- Display of books for sale
- Exhibits and posters prepared by members
- Help table: please bring specimens you would like experts to identify

An important part of the meeting will be the exhibition of posters prepared by members and we are encouraging as many people as possible to contribute. This is a great way to communicate your observations and stimulate discussion. Any material that will be of interest to other members is welcome - don't worry about producing a highly-polished, scientific poster!

See the BSBI website for further information on accommodation and location: www.bsbi.org/welsh-agm

Note that reserved accommodation at the university is limited so please book early.

Sarah Stille retires as Vice-County Recorder for Meirionnydd (v.c.48)

Barbara Brown

I am sure all readers would wish to join me in thanking Sarah Stille for her exceptionally successful tenure as Vice-county Recorder (VCR) for Meirionnydd and all her contributions to plant recording in Wales. Sarah joined the BSBI in 1999 and by 2003 joined the Wales Committee becoming its Treasurer. She continued in this role until 2013 whilst also contributing as Minuting and Field Secretary, the latter until 2017. Sarah took up the role of joint VCR for Meirionnydd in 2011 and became the sole VCR in 2012, but now is sadly taking retirement due to ill health.

As VCR she developed the Meirionnydd Local Group and set up and organised the yearly Caerdeon residential. This has become a popular and productive recording meet which is attended by botanists from across the UK. We have all learnt from her energy and dedication to botanical recording. She has recruited and trained her successor in the VCR role, Jo Clark, who will be ably assisted by Sally Peacock. Sarah will not be giving up plant recording though - she recently asked me for details of the French equivalent of the NBN atlas to help her record near her second home in the Puy de Dôme!

The 2019 season for plants in Monmouthshire, v.c.35

Steph Tyler and Elsa Wood

2019 was a busy season with two or more survey days a week to try to fill gaps in coverage for the Atlas as well as monthly walks of the Monmouthshire Botany Group. All this activity turned up a host of interesting records but perhaps the most exciting record was of *Turritis glabra* (Tower Mustard), see note on page 30.

Mention should be made of two other species. First *Oxybasis* (formerly *Chenopodium*) *glauca* (Oak-leaved Goosefoot) was the subject of a note by us in the BSBI Welsh Bulletin no.97, when in 2014 and 2015 we found small numbers around muck heaps and farm gateways in SO40 around Trellech (SO4804) and Lydart (SO4908), well inland. Then we found numerous plants near a muck heap near Llangwm in SO4008 in 2018, also in SO40 but far to the south. In 2019 we noted a few plants in the Usk Valley near Llanlowell in ST3899 and then more than 30 plants were seen below a muck heap near Llanvihangel Crucorney,

SO3221 in the Black Mountains. Is the species spreading or has it been overlooked inland?

Another strange find was that of a single plant of *Ranunculus sardous* (Hairy Buttercup) at Central Valley Gwent Wildlife Trust Reserve at Ebbw Vale, on the site of the former steelworks. This is in SO1708 well away from its centre of occurrence between Dingestow and Raglan in SO40 and SO41 where it can be abundant in farm gateways and along farm tracks but Trevor Evans had a record in his Flora from a tetrad adjacent to Ebbw Vale (SO10T).

We attended Bioblitzes at Caldicot Castle, Hendre Lake and at Tredegar Park, all three days turning up new species for the relevant tetrads. We missed a further Bioblitz at Central Valley Reserve (SO1708) but visited the site in August and made a long list of 154 species of plant including much *Catapodium rigidum* (Fern-grass), *Linaria repens* (Pale Toadflax) and *Lathyrus nissolia* (Grass Vetchling). Sadly *Alopecurus aequalis* (Orange Foxtail) – on our v.c.35 Rare Plant Register - noted in the Bioblitz at Central Valley Reserve proved to just be *A. geniculatus* (Marsh Foxtail).

Other plants of interest (either first or second records for a hectad) included *Ornithopus perpusillus* (Bird's-foot) growing on a sheep-grazed roadside bank on the Blorenge in SO2711, *Catapodium rigidum* (Fern-grass) in Bryngwenin in SO3316, *Trifolium fragiferum* (Strawberry Clover) in Altyryn Nature Reserve in Newport (in ST2988), much *Nymphoides peltata* (Fringed Water-lily) at Fourteen Locks, Newport also in ST2988 and *Urtica urens* (Small Nettle) in August on a muck heap near Llandewi Rhydderch in SO3513 and near The Bryn in SO3209.

In early September a visit to Llanwern Steelworks escorted by the steelworks ecologist Mike Launder, produced new records for two tetrads, the more interesting being *Verbascum virgatum* (Twiggy Mullein), *Trifolium arvense* (Hare's-foot Clover) and *Sisymbrium altissimum* (Tall Rocket) on the tip there – in ST3986 (the only previous records of *S. altissimum* post 2000 were at Newport Docks ST3284 and the old Alpha Steel works in ST3384 in 2008 and 2009 respectively). Nearby were two patches of *Erodium maritimum* (Sea Stork's-bill). These patches were in a new hectad as previous records were mainly from MOD Caerwent and other nearby localities in ST48, 49 and 59. The presence of *Carex extensa* (Long-bracted Sedge) near the Sea Stork's-bill by a reed containing effluent with a pH of 13 was of interest as all other records were along the coast in saltmarsh. On the land south of the Queensway Road (ST3686) were large stands of *Calamagrostis epigejos* (Wood Small-reed), one of the biggest populations in the county.

Three species of garden escapes proved to be vice county 'firsts' – *Nonea lutea* (Yellow Monkswort) in SO2807, *Libertia formosa* (Chilean-iris) in ST2586 and

Acorus gramineus (Slender Sweet-flag) in ST2988; these join the ever-growing list of casuals or of established neophytes in v.c.35. Colin Titcombe and Chris Hatch turned up a range of interesting casuals, new for the hectads too, including *Securigera varia* (Crown Vetch) on the Caldicot Levels in ST3685 and then growing on a pile of earth in Llandogo village (SO5204) *Lepidium campestre* (Field Pennywort), *Solanum rostratum* (Buffalo-bur) and *Oenothera stricta* (Fragrant Evening-primrose).

Along the verge of the M4, Barry Stewart found much *Catapodium marinum* (Sea Fern-grass) in five monads in ST38 and ST48, the latter records being new for the hectad. [He also found dense populations of the species all along the M4 in Glamorgan and into Carmarthenshire, continuing all the way along the A48 to Carmarthen but no further west – Ed.].

Anthemis cotula (Stinking Chamomile) has proven to be widespread with 2019 records in Monmouth (SO5012), Coed Morgan (SO3510), at Llandenny in SO4104, near Raglan Castle in SO4008, near Abergavenny in SO3014 and near Llanvihangel Crucorney (SO3321). Likewise the nationally threatened *Mentha arvensis* (Corn Mint) is common in the vice-county and equally at home in arable fields and along forest tracks and in damp and dry pastures.

Andy Karran found *Parentucellia viscosa* (Yellow Bartsia) near Croesyceiliog in ST3198 in July (see image 3, page 2), only the fifth record for the vice-county. At Clytha in SO3608 he noted *Lysimachia tenella* (Bog Pimpernel) and *Triglochin palustris* (Marsh Arrowgrass), both species uncommon in central Monmouthshire.

Sam Bosanquet noted *Saxifraga tridactylites* (Rue-leaved Saxifrage) on bridges over the A40 dual carriageway in SO4208 and SO4408 between Dingestow and Raglan and also much *Anisantha madritensis* (Compact Brome) along the dual carriageway central reservation between Raglan and Abergavenny. This is becoming widespread throughout v.c.35 and there are also more records of *A. diandra* (Great Brome) which Elsa Wood and Adrian Wood found on Cobbler's Plain in SO4700 in early June. We then found more in the west of the vice-county in ST2586 in early July.

Another good contributor of records is Heather Colls who found a rare alien grass *Phalaris paradoxa* (Awned Canary-grass) on dumped soil north of the new Rockfield estate on the edge of Monmouth in SO4913. Unfortunately before anyone else could go to see this plant it had been removed along with *Avena fatua* (Wild-oat) growing with it! In October Heather found flowers of *Leucanthemella serotina* (Autumn Oxeye), similar to *Leucanthemum x superbum* (Shasta Daisy) on grassland around a new pond west of Monmouth in SO4912.

Mike Ogden has been busy helping fill gaps in poorly covered tetrads and among many new records he found two sites for *Sambucus ebulus* (Dwarf Elder) – at Llanwenarth in SO2714 and Rhymney SO1008 and *Ulmus x hollandica* (Dutch Elm) at Clytha in SO3709.

Up in the extreme north-west of the vice-county, Susan Arnold found a patch of *Pyrola rotundifolia* (Round-leaved Wintergreen) near a cycle track in Dukestown in SO1410, only the sixth known site for this species in v.c.35.

A visit by us in September to the lake in the Punchbowl on the side of the Bloreng in SO2811 yielded abundant *Ceratophyllum submersum* (Soft Hornwort) and *Littorella uniflora* (Shoreweed). The same field trip also added *Prunus cerasifera* (Cherry Plum) as a new hectad record near Llanellen (SO2911).

The botany group outing in September found *Eriophorum latifolium* (Broad-leaved Cottongrass) growing on the old coal tip by Aberbargoed Grasslands reserve (ST1699), only the fourth record for the county and a new hectad record.

The genus *Potentilla* can be confusing with *P. reptans* (Creeping Cinquefoil), *P. anglica* (Trailing Tormentil) and hybrids between the two (*Potentilla x mixta* Hybrid Cinquefoil) all widespread. There is also *Potentilla x suberecta*, the hybrid between *P. erecta* (Tormentil) and *P. anglica* and Dave Green found this on a ride at Beacon Hill (SO5105) in June with lots of *P. anglica* and *P. erecta* nearby. This hybrid has not been seen in the vice county for 40 years but may well have been overlooked and written off as *P. x mixta* s.l.

Recording in Montgomeryshire (v.c.47) in 2019

Kate Thorne and Gill Foulkes

At the time of writing (mid-November) over 28,000 records have been submitted to the Distribution database. Our main focus this year has been to improve tetrad coverage. As well as individual recording we have had ten full days of flora group recording, plus field society outings and also a *Rubus* (Brambles) weekend with expert Dave Earl. The latter provided a major boost to our recording of this difficult group and we are extremely grateful to Dave for his time and expertise. He spent two and a half very long days with Kate Thorne and others touring eastern Montgomeryshire. Over 300 new records were added comprising 28 different species. This included a first vice-county record for a specimen collected in the west (SN79) prior to the meeting and later identified by Rob Randall as *Rubus ludensis*. This species' main area of distribution is central Wales.

The first record (confirmed by the BSBI referee) was made for *Potentilla x mixta* (Hybrid Cinquefoil), found with both parents (*P. anglica* Trailing Tormentil and *P. reptans* Creeping Cinquefoil), close to an old rail yard on the final Flora Group meeting of the year. Two non-native species have appeared along our waterways; for the first time *Impatiens capensis* (Orange Balsam) has been recorded in five monads along the Montgomery Canal. Following a 2007 record from BIS, *Lathraea clandestina* (Purple Toothwort) was found by two different recorders growing on alder along the Afon Dulas and Afon Dyfi in the west. Several mature, native trees of *Betula celtiberica*¹ were recorded in open wood pasture (SJ01). This is the first confirmed vice-county record.

Other notable finds have included *Scleranthus annuus* (Annual Knawel) (SO29), only the second vice-county record since 2000. A single plant of *Galeopsis speciosa* (Large-flowered Hemp-nettle) was found on the edge of a beet field/felled conifer (SO28), the seventh post-2000 record for this declining species. Two other priority species, *Trollius europaeus* (Globeflower) and *Vicia orobus* (Wood Bitter-vetch), were recorded at new sites in the west (SN88, 98, 99).

After much searching of old sites, a tiny, single frond of *Botrychium lunaria* (Moonwort) was found near Dolanog (SJ01) in species-rich neutral grassland in a burial ground (see image 10 on back page). This was only the second post-2000 record, a fortuitous find since the area had been taped off to protect twayblades (*Neottia* spp.) and other orchids.

A stray *Ophrys apifera* (Bee Orchid) was spotted by some sharp-eyed RSPB staff on gravelly land close to a hotel helipad at Vyrnwy (SJ01), possibly due to imported aggregate? This is the only record for this species away from Llanymynech (SJ22).

In Montgomeryshire, 2019 seems to have favoured *Aira praecox* (Early Hair-grass) and *Vulpia bromoides* (Squirreltail Fescue). There have been 80 *A. praecox* records this year out of a total of 199 since 2000 (i.e. 40% of post-2000 records for this species were made in 2019). Similarly, *V. bromoides* was recorded 38 times out of a total of 108 records (i.e. 35% of post-2000 records were made in 2019). Was this due to improved identification skills and increased awareness of these species or the consequence of a warm, dry spring? For comparison, in 2019, common species in the county (e.g. *Plantago lanceolata* Ribwort Plantain) made up about 20% of total post-2000 records.

Not surprisingly, we have seen an increase in *Spergularia marina* (Lesser Sea-spurrey) due to spread by road salting, with eleven records in seven hectads in

¹ Note that Stace (2019) lists this as a subspecies of *B. pubescens* (Downy Birch).

2019. Similarly, *Spergula arvensis* (Corn Spurrey) was recorded on ten occasions, also across seven hectads, presumably as the result of imported fodder. On the same theme, *Stellaria neglecta* (Greater Chickweed) has been recorded on 20 occasions out of a total of 53 post-2000 records (37.7% of finds were in 2019). This species is mainly confined to the east of the county on hedge banks/wood margins. The increase is likely to be due to a greater awareness (stemming from group meetings) of a second chickweed species to consider.

Some of our less common sedges were found at new sites: *Carex divulsa* ssp. *divulsa* (Grey Sedge) (SJ21), *C. magellanica* (Tall Bog-sedge) (SH91), *C. strigosa* (Thin-spiked Wood-sedge) (SJ20, SO19) and *C. vesicaria* (Bladder-sedge) (SJ01, SJ21, SO18). *Orobanche rapum-genistae* (Greater Broomrape) was recorded growing under gorse near Bettws Cedewain (SO19), only the tenth post-2000 record, while *Salix pentandra* (Bay Willow) and *Petrosedum forsterianum* (Rock Stonecrop) were each recorded at two new sites (SJ21, SO19). *Selaginella selaginoides* (Lesser Club-moss) was found at a new site on Llanbryn-mair moors, the fifth post-2000 record. *Silene x hampeana* (the hybrid Pink Campion) - only the second post-2000 record (SN98) may be under-recorded. The numbers of locations of *Equisetum telmateia* (Great Horsetail) and *Rorippa amphibia* (Great Yellow-cress), both rare/scarce species, have increased post-2000 with records for new hectads in 2019 (SH80 and SO19 respectively).

The final year of recording has brought more records for some of the harder to identify species e.g. *Circaea x intermedia* (Upland Enchanter's-nightshade), *Euphrasia* spp. (Eyebrights), *Dryopteris affinis* ssp. *cambrensis* (Golden-scaled Male-fern), *Equisetum x litorale* (Shore Horsetail) and *Hieracium* spp. (Hawkweeds).

As the Atlas recording period ends it feels like we, the flora group and all our individual recorders are just getting into our stride!

Reference

Stace, C. (2019). *New Flora of the British Isles: Fourth Edition*. C&M Floristics

Anglesey Plants in 2019

Ian Bonner

As usual this is partly an account of some of the interesting plants noted this year together with a record of the activities of the Anglesey Flora Group.

In February Nigel spotted *Polystichum x bicknellii*, the hybrid between Hard and Soft Shield-fern, with both the parents in limestone pavement at Parciau (SH50.84), the first certain record of the hybrid since 1989.

The Flora Group got off to an early and very wet start this year with a 7th March visit to Ynys Faelog (SH56.72), one of several small islands in the Strait, off Menai Bridge. Both this and the neighbouring Ynys Gaint, contain semi-natural habitats modified by various land use changes and plantings over the years. This has resulted in first records including *Choisya ternata* (Mexican Orange), *Pseudosasa japonica* (Arrow Bamboo) *Skimmia japonica* (Skimmia) and *Veronica brachysiphon* (Hooker's Hebe).

On the morning of Monday April 8th, 13 members met at the California Hotel, Brynteg, for an early season planning meeting when we were joined by Barbara Brown, the BSBI Wales Officer and Aisling May from COFNOD. The main topics centred on the BSBI's Atlas 2020 with the priorities for action in this last year of recording and progress with monad recording towards a possible new Anglesey Flora.

In the afternoon we visited limestone grassland at Glyn, near Benllech (SH51.81), finding a few small patches of *Alchemilla filicaulis* ssp. *vestita* (Hairy Lady's-mantle) and *Viola hirta* (Hairy Violet).

On the Tuesday, the morning was spent on Ynys Gaint (SH56.72) – see above, and 170 taxa were listed. The flora ranged from *Calluna vulgaris* (Heather) and *Deschampsia flexuosa* (Wavy Hair-grass) on the rocky outcrops, through scrub with *Mercurialis perennis* (Dog's Mercury) and *Sanicula europaea* (Sanicle) to salt-marsh, the last with convincing *Cochlearia anglica* (English Scurvygrass): many of the Anglesey records of this species are now thought to be *Cochlearia x hollandica*, the hybrid between *C. anglica* and *C. officinalis* (Common Scurvygrass). As on Ynys Faelog, the semi-natural vegetation has been much modified by introductions in the past and further first records included *Cotoneaster salicifolius* (Willow-leaved Cotoneaster) and *Pittosporum tenuifolium* (Kohuhu) as well as many other alien plants, testifying to the many uses to which the island has been subjected over the years.

Ynys Gaint was visited again on 11th August when a further 48 species were added to the list – including, again, a number of trees originally planted and now

mixed amongst the semi-natural vegetation. Pat Denne identified *Ostrya carpinifolia* (Hop Hornbeam), *Abies nordmanniana* (Caucasian Fir), and *Picea orientalis* (Oriental Spruce) as further first county records. Along with *Hypericum androsaemum* (Tutsan), *H. hircinum* (Stinking Tutsan) is a widespread shrub along the Strait, and several bushes on the island appeared to be intermediate and were identified as the hybrid – *H. x inodorum* (Tall Tutsan) – for which there was only one other Anglesey record in the DDb, from Holyhead in 2006.

In October, Robbie Blackhall-Miles made another visit to the island and made the most exciting discovery of a single tree of *Sorbus arvonicola* (Menai Whitebeam) growing with *S. croceocarpa* (Orange Whitebeam). Menai Whitebeam has been known for many years by the Menai Strait at Nantporth in v.c.49, but this is the first time this critically endangered endemic has been found on Anglesey.

In the afternoon of 9th April, the Flora Group visited Cadnant Dingle SSSI (SH55.73), courtesy of Anthony Taverner. The wooded dingle supports the largest population of *Polystichum aculeatum* (Hard Shield-fern) on Anglesey and several plants of *P. x bicknellii* were also noted for the second time this year.

Cemaes (SH37.93) was the starting point on Thursday the 11th for an exploration along the coast to Llanbadrig Point in SH37.94. The complex of Precambrian rocks of this area include areas of limestone and plant finds included a new hectad record for *Myosotis ramosissima* (Early Forget-me-not) and a limestone face with over 30 clumps of *Asplenium ceterach* (Rustyback) on natural rock: almost all other Anglesey localities are on mortared walls.

In early May, a visit to Fedw Fawr (SH60.82) enabled the Flora Group to check on the small (80 x 50cm) patch of *Antennaria dioica* (Mountain Everlasting). Only 30 inflorescences were counted, a reduction on the 2017 figure and this is now one of only four surviving locations. The Group then made their way west along the newly opened coastal path and were surprised the abundance of *Adoxa moschatellina* (Moschatel) growing beneath bracken along the cliff-top.

Jane and Ivor Rees have continued to add a great many records. Especially notable was the discovery of *Chaenorhinum minus* (Least Toadflax) at the base of a wall in Bethel (SH396.704) – the first sighting since 1987. Other finds include new localities for *Trifolium ornithopodioides* (Bird's-foot Clover) *Trifolium subterraneum* (Subterranean Clover) in the Llanfaiynghornwy area (SH31.92 & SH32.92) and *Trifolium scabrum* (Rough Clover) at two sites in Aberffraw (SH34.68 & SH35.69) and along the sea front in Rhosneigr (SH31.72). Also, the rediscovery of *Viola lactea* (Pale Dog-violet) and *V. canina* (Heath Dog-violet) from coastal slopes at Porth y Garan (SH25.77) – neither have been seen from here since the 1980s.

The Flora Group visited the coast at Porthygychiaid, south of Point Lynas (SH4891) on 15th June, in an effort to relocate Paul Day's 1983 record of *Vicia sylvatica* (Wood Vetch) on the coastal slopes – however, without success! They did manage to add *Calamagrostis epigejos* (Wood Small-reed), *Erodium maritimum* (Sea Stork's-bill), *Serratula tinctoria* (Saw-wort) and 26 other taxa to the monad list. *Hylotelephium telephium* (Orpine) was especially frequent – making for one of the best populations around the coast.

On 20th June, the Flora Group visited Pentraeth Forest (SH5478 & 5578), refinding *Dryopteris carthusiana* (Narrow Buckler-fern) and *Thelypteris palustris* (Marsh Fern), the latter quite common in the carr around Llyn Llwydiarth. Also discovered, was a new locality for *Oreopteris limbosperma* (Lemon-scented Fern), only the fifth recent record but *Dryopteris aemula* (Hay-scented Buckler-fern) and *Osmunda regalis* (Royal Fern) were not refound. Walking between Pentraeth and the forest there were hundreds, if not thousands of flowering shoots of *Orobanche rapum-genistae* (Greater Broomrape) beneath the gorse bushes.

Geranium endressii (French Crane's-bill) was found established in a small field near Llanddona (SH5779) on 1st July – just the third vice-county record.

A visit on 4th July to arable fields in the Rhosbadrig area (SH35.72) found *Chenopodium ficifolium* (Fig-leaved Goosefoot) for the first time and *Lamium amplexicaule* (Henbit Dead-nettle) only the fifth post-2000 sighting, amongst a number of other arable weed species.

The rubble surrounds to the car-park at Rhosneigr golf club (SH32.73) continues to support the only known population of *Amsinckia micrantha* (Common Fiddleneck) first noted here in 1999 along with *Lupinus arboreus* (Tree Lupin).

In August, the RAF kindly facilitated a two-day follow-up visit to Valley Airfield. Although not blessed with the glorious sunny weather we enjoyed in June 2006, the Group still managed to make a good few additions to the monad lists. The more notable finds included two new locations for *Equisetum x meridionale*. This hybrid horsetail between *E. ramosissimum* (Branched Horsetail) and *E. variegatum* (Variegated Horsetail), has been known since 2000 from either side of the entrance to the RSPB Valley Lakes reserve and because it is only found here and in Cheshire and has a complex taxonomic history, it has featured in earlier Annual Reviews. Three groups of plants were found in rather grassy dune heath in two monads, SH30.75 and 31.75, further material was collected for the herbarium at the Natural History Museum, London.

Adding to the clover finds, several groups of *Trifolium scabrum* were growing along runway edges, also *T. ornithopodiodes*. A scatter of *Filago germanica* (Common Cudweed) was also noted, a plant that is markedly uncommon on

Anglesey with only three other post-2000 locations and two small clusters of *Parentucellia viscosa* (Yellow Bartsia), again an uncommon species with only three other locations – all quite recent as it was not found on the Island until 2004.

In mid-August, Llyn Hafodol (SH39.89) and Salbri Bog (SH37.88) were visited as a change from early March visits to monitor *Ranunculus tripartitus* (Three-lobed Crowfoot). The first site appeared rather undergrazed but a good list was made from the tall fen vegetation with more *Dryopteris carthusiana*. At Salbri we were impressed by the amount of *Carex limosa* (Bog-sedge) scattered quite widely over the site.

The west end of Cemlyn (SH32.93) became one of the most visited monads this year. In August, Richard Birch surveyed the pools west of the causeway to Tyn Llan and added *Ruppia cirrhosa* (Spiral Tasselweed) in addition to *Ruppia maritima* (Beaked Tasselweed) and also *Zannichellia palustris* (Horned Pondweed) followed by Nigel Brown, who visited the walled grounds of Bryn Aber to list the plants for the owner. Like Ynys Gaint in the Menai Strait (see above), Bryn Aber is a mix where ornamental plants have been introduced into a range of semi-natural habitats and many of them continue to coexist. The result is 15 additions to the SH39 hectad, of which four are first county records: *Forsythia suspensa* (Trailing Forsythia or Golden Bell), *Olearia nummularifolia* (Daisy Bush), *Petunia x hybrida* (Petunia) and *Pittosporum crassifolium* (Karo).

A September visit to Tywyn Fferam (SH32.71) and Tywyn Llyn at Rhosneigr (SH32.72) was principally to advise Natural Resources Wales about invasive aliens in the dunes in advance of implementing the Dynamic Dunes Project which aims to revitalise dunes here and elsewhere around the Anglesey coast. One result was an addition to the Flora – *Olearia solandri* (Coastal Daisy-bush) a shrub native to New Zealand, determined by Mark Duffell, the BSBI Referee for this group. Also, new hectad records were made for two Michaelmas Daisy hybrids, *Symphotrichum x salignum* (Common Michaelmas-daisy) and *S. x versicolor* (Late Michaelmas-daisy) and for *Phormium tenax* (New Zealand Flax).

The last field visit of the season was on 8th October to the Anglesey Show-ground at Mona (SH40.75), one of the very few previously unvisited monads in the county. Despite the late date, over 200 taxa were noted by the four recorders. *Clematis montana* (Himalayan Clematis) robustly overtopping one of the hedges was the only new county record and it was interesting to spot *Spergularia marina* (Lesser Sea-spurrey) away from the coast.

In addition to being a “good” year for annual clovers, especially Rough Clover, it has also been good for *Spiranthes spiralis* (Autumn Lady’s-tresses) with Richard Birch finding c.35 flower spikes in what appears to be a new site in the former

limestone quarries at Carreg Onnen (SH58.81 & 58.82) and Ivor & Jane Rees and James Robertson estimating a population in excess of 10,000 flower spikes in the large dune slack at Aberffraw (SH35.68).

There have also been exceptionally good numbers of *Gentiana pneumonanthe* (Marsh Gentian) this year, with over 4000 plants at Penrhoslligwy (SH48.86), the highest count on the NWWT's Cors Goch sites since 1996 (see image 11 on back cover).

Raphanus raphanistrum ssp. *maritimus* (Sea Radish) is a plant having more than a good year – indeed it has been spreading in abundance around the coast since around 2000. In *Flowering Plants and Ferns of Anglesey* (1982), Roberts lists subsp. *maritimus* as very rare on sandy or gravelly shores and gives just two localities: Traeth Llydan, Rhosneigr (SH3272) and Trwyn Cemlyn (SH33.93?). In the first published version of the Anglesey Rare Plant Register (2006), Sea Radish is included as a County Scarce plant recorded from 14 monads between 1971 and 2005. The current version of the Anglesey Flora database (October 2019) lists records from 63 monads (58 of them post-2000 localities). It would be interesting to have confirmation that this spread is replicated in other coastal counties in Wales and is a worthy subject of a separate article.

During the year, David Morris, who surveyed possible mitigation wetland sites for Horizon plc, kindly passed on his plant records. Among the welcome lists of mire species was an unexpected record of *Bryonia dioica* (White Bryony) scrambling through willow scrub at the edge of one of the basin mires between Cemaes and Burwen, (SH39.94). Although a widespread plant in England and into east Wales, there are no historic records of this species from Anglesey and only two other records. The first by John Hawksford in 1992 when he noted it as a probable introduction at the edge of a caravan site just north of Benllech (SH522.833) and the other from the Gallow's Point area of Beaumaris (SH59.75) in 2006.

Henry Cook, Living Landscapes Officer, Anglesey Fens for the North Wales Wildlife Trust (NWWT) on habitat management, also kindly supplied lists from various sites. Of particular interest was finding *Viola lactea* (Pale Dog-violet) on an area recently cleared of heather on Penrhoslligwy SSSI (SH48.85), the first record from this SSSI in the Flora Database.

Other interesting finds include a second county record of *Crassula tillaea* (Mossy Stonecrop) (see image 9 on back page). Chris Dixon recorded numerous plants along one of the Newborough Forest rides at SH400.644. The first record was as recent as 2015 from a car-park in Rhosneigr (SH32.73) but it is surely lurking elsewhere on the Island.

Another second and, indeed, third record was of the hybrid between two widespread orchids, *Dactylorhiza x transiens*, the hybrid between *D. fuchsii* (Common Spotted-orchid) and *D. maculata* (Heath Spotted-orchid). Nigel Brown noted this with both parents on the coastal slopes near Porth y Corwgl, Llaneilian (SH48.92) and from a hay meadow in Talwrn (SH49.80). The only other record in the Database is by R.H. Roberts in 1962, who noted that this was a rare hybrid.

Jane Stevens found *Senecio vulgaris* var. *hibernicus* (Rayed Groundsel) between paving slabs in Llangefni (SH45.75) this autumn almost exactly where her late husband, David, reported the plant in 1999. Rayed Groundsel is either overlooked or surprisingly scarce as there have been only five other records since the first in 1986 and one of these was also from this summer when Jane & Ivor Rees noted it on the station platform at Ty Croes (SH34.72). Also, in Llangefni Market Place, Jane found the first record of *Erigeron (Conyza) floribundus* (Bilbao's Fleabane) where five flowering stems were growing among about 60 plants between paving slabs by the Afon Cefni and, in November, Nigel Brown found further plants nearby, outside the Aldi store.

Of course, this year has seen the conclusion of recording for Atlas 2020. A much better coverage has been achieved for all the hectads than for the 2000 Atlas – the coverage can be viewed on the BSBI website. Disappointingly though, each hectad has about 10-13% of taxa not refound since before 2000. The reasons are varied, sometimes just the difference between aggregate and segregate species or that the early record was of some unusual casual or hybrid. Alternatively it could be gaps in our expertise, *Agrostis gigantea* (Black Bent) seems to be overlooked. We are also weak on several of the “critical” groups like *Rosa* (roses), *Rubus* (brambles) and *Taraxacum* (dandelions). There may also be genuine declines like less *Campanula rotundifolia* (Harebell), but for many we were not looking in the right place at the right time!

However, to offset this, every hectad has many additional taxa never recorded before, amounting to an impressive average of 203 new taxa per hectad.

Special thanks this year to Pat Denne and Jane Stevens who have each adopted a group of monads around where they live and, with repeated visits throughout the seasons, have made many additions and useful updates of earlier records. Also, to Ivor & Jane Rees for the steady flow of new and updated records from all over the county.

Many thanks to all those who have supplied records, or photographs this year, or attended Flora Group field meetings and for their company in the field.

Especial thanks to Nigel Brown, my co-recorder, for all our deliberations and for organising all 20 of the field meetings.

A full list of the over 20 new First County Records and hectad additions will appear in Plant Records in the next Welsh Bulletin.

Native or Neophyte? *Euphrasia stricta*, the Tintern Spurge

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The valley of the lower Wye is an important ‘hotspot’ for rare and scarce British plants and must have had a very interesting past. Apart from endemic Whitebeams and Brambles (*Sorbus* and *Rubus* spp.) etc., it has or had a variety of more widespread taxa, such as the western Wood Stitchwort (*Stellaria nemorum* subsp. *montana*), Wood Barley (*Hordelymus europaeus*) and Purple Gromwell (*Aegonychon purpleocaeruleum*) at the edge of the ranges of their main populations. These plants most likely arrived here by natural means but others, such as Service-tree (*Sorbus domestica*), Mezereon (*Daphne mezereum*) and Monk’s-hood (*Aconitum napellus*), not to mention Martagon Lily (*Lilium martagon*), perhaps had some human help. Without any written records, however, this needs other kinds of evidence.

A key reference here (Pearman, 2007) identifies several characteristics of recent immigrants, such as dynamism (erratic trends); first date in cultivation much earlier than in the wild, and an adherence to artificial or man-made habitats. Additionally, the lack of “spatial coherence” (or absence from other suitable habitat) could also be indicative: “Thus *Stachys alpina*, restricted to two copses when it could occur anywhere, has no coherence whatsoever... [whereas] *Galanthus nivalis*, omnipresent, has.” But, first it is necessary to select a potential native range: “Where a species, such as *Euphorbia serrulata* [= *E. stricta*], has a core “native” range and other more scattered records elsewhere, only that alleged “native” range is taken into account.”

But this perhaps risks adopting a circular logic: if we first need to establish an “alleged native range” before seeing how far it is occupied by a questionably native plant. And *E. stricta* (Upright Spurge) certainly illustrates this point because, leaving out the idea of a “core native range” in the lower Wye, it seems to have other traits that are very much like a neophyte.

To begin with, the species was first recorded as a “presumed casual” (Pearman, 2017) prior to 1696, from York and Essex (Ray, 2nd edn. *Synopsis Methodica Stirpium Britannicarum*) and over 75 years before it was found, as a presumed native, near Tintern, v.c.35 “by the Brook Side, going from the Abbey to the

Forge where they make wires” (Riddelsdell, 1905). By 1897, *E. stricta* was “plentiful from above Tintern down the river for several miles” (Wade, 1970) and it has since been found elsewhere in Monmouthshire, especially on tracks and footpaths (Evans, 2007), and also more widely across southern England (Preston et al, 2002).

Whilst many of these records are accidental or deliberate introductions (Preston et al, 2002) the ‘native’ range does not seem very well-defined beyond “limestone woods of the Lower Wye Valley” (Evans, 2007), and the species is accepted as “well naturalised in some places” in v.c.35 and a vigorous garden weed (Evans, 1999 & 2007). Surveys of the supposedly native sites also found them to be generally small and erratic and strongly associated with human disturbance (Morgan, 1987), unlike the other nearby more naturally open habitats for undoubtedly native plants (e.g. Fingered Sedge (*Carex digitata*) and Wood Vetch (*Ervilia sylvatica*). And, unlike these other species, *E. stricta* lacks any distribution pattern outside this ‘core’ locality (as Pearman, 2007 pointed out), which is a curious disjunction in its European range (Fitter, 1978).

It might also be significant that several other *Euphorbia* species seem to have had problematic native statuses in Britain and Ireland. *E. villosa* (Hairy Spurge) has been called “? Native” (Clapham et al, 1952); *E. cyparissias* var. *cyparissias* (Cypress Spurge) is “possibly native in Kent and East Anglia on calcareous grassland” (Sell & Murrell, 2009) and *E. hyberna* (Irish Spurge) is either “native” in England (Stace, 2019) or “introduced” (Lucey, 2019). And a large proportion of the genus in Britain and Ireland is present here as archaeophytes and neophytes. The criteria for distinguishing native and non-native species (Pearman, 2007) do not specifically address life-strategies but a great many Spurges (including *E. stricta*) are archetypally ruderal – with corresponding difficulties over their supposedly ‘native’ range.

Currently, most Floras (e.g. Sell & Murrell, 2009; Stace, 1991 & 1997) describe *E. stricta* as straightforwardly a “native” in the lower Wye valley, although the latest ‘New Flora’ (Stace, 2019) takes a more nuanced view (“probably native”) and the New Atlas account (Cox, 2002) described *E. stricta* as a “native or alien”. But the relatively late discovery here – long after other early records –, unstable trends, its largely man-made habitats around Tintern and curiously disjunct range all seem far more like a neophyte than an anciently-established plant.

But change from a supposed native (or even archaeophyte) status should not necessarily be a downgrade or a loss in conservation terms. As recent commentaries point out (e.g. Marren, 2019), certain well-established neophytes can represent their time and place as well as any rare or valued “native” (itself a very relative term). And in Monmouthshire the presence of *Euphorbia stricta*

could in fact reflect one of its most fascinating episodes: the flourishing of Tintern and the lower Wye over 200 years ago as a centre of early industry, with trade links to the wider world. Whilst most of this has long since disappeared (along with all the once-mighty docks and mines and foundries of south Wales) this plant persists: maybe as living archaeology from the first Industrial Revolution. And if this is true, then is *E. stricta* any less interesting or conservation-worthy than a rare post-Glacial relict or survival from later forest clearance?

One way of answering such an unscientific question is subjectively: in how we address this plant. The common names for *Euphorbia stricta* are usually given as either ‘Upright Spurge’ or ‘Llaethlys Syth’ (in Welsh): both inexpressive terms, transcribed without much thought from the Latin – or a Latin – name. But, locally, it is called ‘Tintern Spurge’ (Evans, 2007) and elsewhere ‘Llaethlys Mynwy’ (Monmouth Spurge) has been offered for the plant in Welsh (Evans, 1999). Such local coinages – like ‘Radnor Lily’ for *Gagea bohemica* (Woods, 1993 etc.) – are far more descriptive and helpful in public understanding. And, in this sense, it doesn’t matter very much whether *Euphorbia stricta* is a native or an alien along the lower Wye; if people call it ‘Tintern Spurge’ or ‘Llaethlys Mynwy’ then it probably belongs here in the end.

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Plant Families Training in Wales 2019

Barbara Brown

One of the aims for “The Plants & their place in Wales 2019” project was to hold beginner plant training workshops. Initially it was thought that three should be scheduled but owing to demand and as they were kindly hosted by local environmental record centres and societies, seven beginner training workshops took place, spanning Lampeter to Guilsfield (see image 4, page 2).

The problem with a one-day introduction to botany is how to define and deliver a bite sized chunk of the enormous and fascinating field of knowledge of botanical science. You also need to do this in a way which engages people and enables them to progress further independently. The Plant Families approach was chosen as it aims to help learners use books like *Collins Wildflower Guide* (Streeter, 2009) and *The Wild Flower Key* (Rose, 2006). Dr Faith Anstey’s *Pocket Guide to Wildflower Families* provides an introduction to a suite of botanical terms and cross references both of the above books, so learners can find their way to the right plant family more easily - the route to making progress and enabling more analytical identification.

The workshops started with a presentation about “Great Plants in Wales” – a series of short stories to inspire botanists and celebrate some wonderful plants. It then followed with introductions to botanical terms and then some quick revision games using flash cards. The project officer had previously been introduced to these when teaching English and they are a tried and tested way to teach people vocabulary. The simple pairing and snap games are also fun and get attendees working together quickly. It was then definitely time to look at some plants, which we did using sets of plant samples and following the *Wildflower Families* book flowchart to direct us to the correct family. After all of this intense brainwork we needed our lunch!

The afternoon was gently eased into with another short presentation about plant citizen science to encourage beginners to get involved as a great way to progress learning. This section flagged up many further sources of information including #Wildflowerhour, the National Plant Monitoring Scheme and of course Atlas 2020 recording field days. We then visited one or two nearby habitats applying the Plant Families method to the flora we found and starting on the family keys in the Collins and Streeter books. In all, 69 people took part, 86% of whom rated the course as very good with many favourable comments about the flashcards, stories, organisation and field experience.

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Looking for Old Friends

A series of botanical forays around Cadair Idris

Barbara Brown

As changes sweep across our human world at an ever-increasing rate, it's wonderful to revisit those plants which show fidelity to their haunts. In this spirit I recently decided to retrace a botanical walk described by William Condry in his essay *Plant hunting on Cader Idris* (1960). This outlines a route to a site for Hairy Greenweed (*Genista pilosa*) hailing it's perch as "one of the finest positions of any plant in Wales".

The route connects the uplands of Tir Stent in Merionnydd to the eastern peak of Cadair Idris and I knew the going was likely to be tough. Not for nothing does Bill describe this route as "the least likely to get you to the top" It starts easily enough though as you turn off from the Cross Foxes pub near Dolgellau.

On the first day of June I met up with Jack and Selina Grasse near the pub. Bill's widow, Penny Condry had put me in touch with these two old friends of Bill's. Bill had called on the climbing skills of Jack and Selina to carry out botanical surveys.

Jack and Selina had become good friends of Bill's through Selina's interest in weaving and a quest for dye plants. Jack knew Cadair very well having worked in the local Outward Bound centre and then as a park warden. He reckons he has climbed the mountain over 1100 times. As the couple learnt more from Bill and other botanists, they started to attend Merionnydd Naturalist field days including a yearly walk across Tir Stent. This led to Jack keeping ledgers of plant lists and surveys.

Jack proposed acting as guide across Tir Stent. As I had paid a quick visit to the area previously and had seen the confusing series of boggy and woody ledges, I gratefully took up his offer. Cuckoos called as we wondered through glades and floundered among the purple moorgrass tussocks, until eventually, finding the right stream which led down from basic rocks, we came across Globeflowers (*Trollius europaeus*), Lesser Butterfly-orchid (*Platanthera bifolia*), Early-purple Orchids (*Orchis mascula*) and Twayblade (*Neottia*).

Where the land dried out, we stopped to have lunch, chatting about Bill. His regular consumption of all of Jack's hot chocolate, his excitement and call of "Bring me a bit" whenever they found an interesting plant clinging to a crag and his love of the wild places of Wales.

Although Bill's account leads straight on from Tir Stent to the North East Ridge of Cadair, I needed a second visit to tackle this section. I took advantage of a golden afternoon a couple of weeks later when the Snowdon Arête cut cleanly across the freshly rainwashed skyline.

After much contouring around scree and crag I came to a streamlet running along the base of the lowest crag which was bordered by drifts of Mossy Saxifrage (*Saxifraga hypnoides*), Roseroot (*Rhodiola rosea*) and Lesser Meadow-rue (*Thalictrum minus*), just as Bill had described 60 years earlier.

I was scolded by Ring Ouzels, showered by cliff fed rivulets and finally nearly dived on by a Peregrine but I kept on up to the exit gully. As I looked skywards I could see the first pale horn of the new Moon framed in a rock gap straight ahead.

Despite all this effort, I realised that the Hairy Greenweed was too high for me to view from this gully with safety. So, on the longest day, Selina and I set out one more time to search the crags from the top. Jack warned us the Greenweed was unlikely to be in flower by now, but I maintained some hope, as the spring had been so wet and cold.

We walked round the top of the gullies trying to interpret a sketch map drawn by Vicky Morgan in 1987 as part of her postgraduate Cambridge University studies. Selina had helped Vicky to find the Greenweed plants located by the map during two days they spent together here. Selina found most of the plants by scrambling but relied on Vicky to belay her on the second day.

Even as late as 1995 some authorities still doubted these Hairy Greenweed records from Cadair as the habitat is so different from either the dry heaths or coastal cliffs of its other sites, but now they are accepted.

We had no recent information of the plants on these cliffs though. One of Bill's habits was to make almost yearly trips to see special plants in the region. He would ring someone in a circle of botanically minded friends, invite them to accompany him, and go and pay a visit. These visits also recorded early signs of possible site deterioration and so had conservation importance. These pilgrimages, – often referred to when he wrote for The Guardian's "Country Diary" – were brought to a halt with his death in 1998.

After searching for an hour in the morning without result, I called Selina over from peering round another rock face so we could eat lunch. Whilst eating, Selina pondered over the 32 year old sketch map one more time. She was becoming anxious that we had missed some of the sites or that they were no longer there.

Eventually we found the iron post and boulder mapped at the entrance to one of the gullies. As I edged round a buttress and looked up for overhangs, I suddenly

saw the Hairy Greenweed's perch from its yellow pea-like flowers. It felt as if the plant breathed an acknowledgement. We stopped to wonder at it (see image 1 on front cover). Why should it grow so high on Cadair when most other populations live in view of the sea? Is this population significantly genetically different from those on the Pembrokeshire coast, and if so, which variations play a role in adapting it to life on Cadair? Plans are in place to collect seeds from these plants in a special Wales seedbank at the National Botanic Gardens of Wales in case there is a consequential difference. For now though, all we could do was admire it's tenacity against the Welsh weather and climate change.

After trying to take a reasonable photo we skirted further around the broad ledge. Here we quickly found more plants, reassuring us that there was a significant population. This satisfied, we clambered up to the ridge crest via the almost accurately named "Easy access gully".

Having completed our pilgrimage and perhaps an unspoken tryst with old friends, we turned for home. The whole of Merionnydd from Aran Fawddry to the Rhinogydd lay spread before us. The landscape below would change in years to come, but I had a feeling that this strange population of Hairy Greenweed would survive, keeping its seat on Giant Idris's chair for some time to come.

Reference

Condry, W. (1960) Plant Hunting on Cadair Idris. *In* (1996) *Welsh Country Essays*. Gomer Press

Correction from Welsh Bulletin issue 104

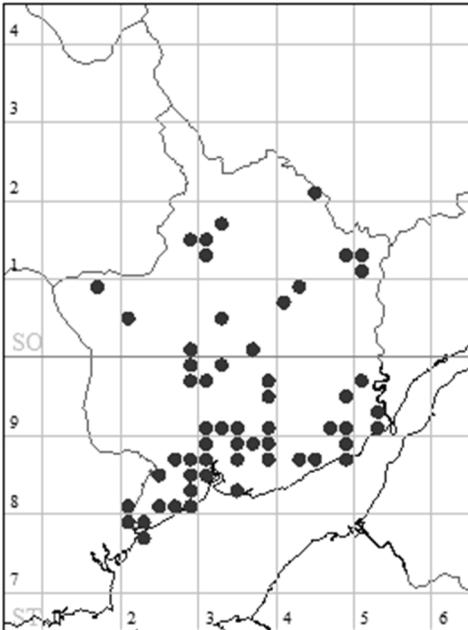
The front cover photo of *Linaria supina* at Carmarthen Bay Power Station was taken by John Crellin and not Barbara Brown as stated incorrectly in the issue.

Marked change in status of *Polypogon viridis* in v.c.35

Stephanie J. Tyler and Elsa Wood

Polypogon viridis (Water Bent) was introduced into Britain in 1800 and was first recorded in the wild in Cardiff in 1876 and in Somerset in 1989. Preston *et al.* (2002) noted that up to 1999, this alien grass was well naturalised in the Channel Isles and southern England on tips and waste ground and a weed of nurseries, gardens and pavement cracks. These authors reported presence in 64 hectads between 1987 and 1999 with one in Ireland, in eleven hectads 1970 to 1997 and in 19 hectads pre-1970.

In Monmouthshire v.c.35, Evans (2002) recorded it at only one location – the rubbish tip The Level of Mendalgief in Newport in SO3085 from 1980 to 1982. Then Peter Sturgess in 2011 reported a plant from Ebbw Vale in SO1608 (SO10U) and in 2012 Dave Green reported plants from Millbrook Nursery near Monmouth in SO5011 (SO51A) and also from Nash in ST3482 (ST38L). Since then we have recorded it from numerous other locations. The spread of the alien grass has been rapid.



Map: *Polypogon viridis* records in Monmouthshire, v.c.35

We had 67 records in 56 tetrads on Mapmate as of 10 October 2019. These tetrads are mainly in the south of the county around Newport and towns and villages along the Gwent Levels but there is a good scattering of occupied tetrads elsewhere (see map left). Most records come from pavements and waste ground. All records on our Mapmate dataset are from between 2011 and 2019.

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Tower Mustard in Monmouthshire, v.c.35

Steph J. Tyler and Elsa Wood

In early June 2019, a plant of Tower Mustard (*Turritis glabra*) was found and photographed by Jo Jarrett along a bank by a new track through pastures at Springfield Farm in Llangovan, SO4505. This photo was seen on Facebook by Julian Woodman who forwarded the information to SJT and EW.

On 19 June, SJT and EW visited the farm and met Jo Jarrett, the owner, and were shown the plant which was in flower and fruit (see image 12 on back page). We then found a total of six plants along the bank along with other local rarities or uncommon species such as Weld (*Reseda luteola*) and Wild Mignonette (*R. lutea*). There was also Fodder Burnet (*Poterium sanguisorba* subsp. *balearicum*) and Bristly Oxtongue (*Helminthotheca echioides*).

The track had recently been constructed with stone from Clearwell Quarry in Gloucestershire. We wondered if seed of *T. glabra* could have come in from that quarry, but a search of the Distribution Database revealed no records of the species there. Also, a search around Clearwell Quarry failed to find the species. Could plants have germinated from an old seed bank in the pasture at Springfield Farm?

This record for *T. glabra* is the first in v.c.35 since 1909 when there was a record at Alexandra Dock in Newport in ST3185 (Evans 2007); it is also the first recent record from Wales.

In Britain *T. glabra* is rare, being recorded in 26 hectads between 1987 and 1999, 16 between 1970 and 1986, and 110 pre-1970 records (Preston *et al.* 2002). It was noted in the 'New Atlas' that the species needs disturbed ground and that the seed is long-lasting.

Postscript: The digitising of Mary Gilham's old records has revealed another record of Tower Mustard from Lamby just within VC35 on 11 June 2000 when Mary, Andy Kendall and Rob and Linda Nottage attended a Cardiff Naturalists' Society field meeting at Lamby. There is also a second record of Mary Gilham's that has just come to light from Cardiff Bay in ST1874 in VC41 on 4 May 2001. Sadly the Llangovan plants are not therefore the first recent records from Wales.

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Note from the Welsh National Herbarium, Amgueddfa Cymru - National Museum Wales

Sally Whyman, Botany Curator

Autumn 2019 saw the Welsh National Herbarium (NMW) receive a donation of dandelion (*Taraxacum*) and hawkweed (*Hieracium*) specimens from Mr. Vincent Jones. This had been organised by Mr. David Barlow who is Joint Vice-county Recorder with Vincent for North East Yorkshire, and also with the kind help of *Hieracium* expert Mr. D.J. McCosh and BSBI *Taraxacum* Referee, Prof. A.J. Richards.

These 405 dandelion specimens will join the 7,600 vouchers already housed at NMW which form the National *Taraxacum* Collection. The collection details from each herbarium sheet have been databased and specimens are stored alphabetically by section. This is an invaluable resource for any taraxacologist studying this rather difficult group as Dudman & Richards (1997:p10) point out ‘Dandelions are the most plastic of all plants...’.

Vincent built up his herbarium and knowledge of hawkweeds over 30 years. In 2014 he produced the acclaimed *Yorkshire Hawkweeds*, a book much used for Hawkweed identification by botanists much further afield than its Yorkshire remit. Tim Rich and David McCosh acknowledge they had ‘...liberally drawn from and referred to’ this book in their Atlas of British and Irish Hawkweeds.

Vincent’s hawkweed collection will join the 7,760 hawkweed specimens already housed in NMW. They are stored following Sell & Murrell’s (2006) comprehensive revision of British *Hieracia* and are all databased. The amalgamation of these important collections into the Welsh National Herbarium can only strengthen this resource, which is invaluable for studying these difficult groups.

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Jones V. (2014) *Yorkshire Hawkweeds*. Yorkshire Naturalists’ Union

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Arum italicum subsp. *neglectum*,

Rare Lords and Ladies in Glamorgan

Tim Rich, Karen Wilkinson and Julian Woodman

Arum italicum is represented by two subspecies in Wales, the introduced subsp. *italicum* which is often found as a garden escape, and the rare native subsp. *neglectum*.

Arum italicum subsp. *neglectum* was first found in Glamorgan by Eleanor Vachell in 1930 and confirmed in 1935 (manuscript in Amgueddfa Cymru-National Museum Wales' herbarium; Vachell 1936; see specimen (image 8) on page 31). Her locality was cited as Cwrt-yr-ala, and has generally been taken to refer to the generally well-known site in Cwm George which was once part of Cwrt-yr-ala Park (Wade et al. 1994 treat this as two sites but there is no evidence Vachell saw it in more than one site). In 2015, it was discovered in small quantity in the adjacent Coed Pen-llwynog by the Wrinstone Brook on a Glamorgan Botany Group meeting. It has always been regarded as a rare plant in Wales (Prime 1960, Prime et al. 1960) but remains fairly poorly documented, so recently surveys were carried out to estimate the population sizes.

Estimating the population size has proved surprisingly difficult. Although it has been recorded sporadically at Cwm George, previous population estimates seem to vary markedly (see table on page 33). Some of the variation is due to the time of year of survey but even so the estimates vary more than expected. This is largely due to the difficulty of being certain of the identification of subsp. *neglectum* due to the variation in both it and in *A. maculatum*, as it is far from easy to identify plants vegetatively or even in flower when the spadix has been eaten. Many visits have been carried out in spring before subsp. *neglectum* flowers; Julian Woodman found many plants flowering in June 2018 during the hot weather, significantly later than *A. maculatum*. Perhaps only the biggest, most robust plants were sufficiently different from *A. maculatum* and/or big enough to flower to be certainly identified and counted by those unfamiliar with subsp. *neglectum*, or maybe vegetative plants die down by late spring.

On 1 December 2018, the Glamorgan Botany Group carried out a survey of subsp. *neglectum* before *A. maculatum* had appeared (as advised by Prime 1960). The plants were very variable in leaf shape, some of which seems related to plant size but there were also several plants with marked white veins on the leaves and one plant with black leaf spots. There were no obvious hybrids, which have been recorded elsewhere (Stace *et al.* 2015), and given the variation in leaves the report of a vegetative hybrid plant in 1955 in Wade *et al.* (1994) requires

Date	Recorders	Population count	Source
18/06/1993	P. S. Jones & A. Jones	2 plants	Rare Plant Register
20/01/1997 and 30/01/1997	A. Peterken, M. Williams, L. Wilkinson, J. Woodman	13 plants	CCW South Area report “Rare Lords and ladies at Cwm George, Near Dinas Powis, South Glamorgan”
15/05/2011	T. Rich	10 plants	Field records
09/12/2011	T. Rich, J. Woodman, L. Cranmer and Bruce McDonald	90	Field records
13/01/2018	T. Rich & L. Moreton Jones	1 certain plant Cwm George, 5 Wrinstone Brook	Field records
1/12/2018	T. Rich, J. Woodman, D. Barden, K. Wilkinson, G. Barter, R. & L. Nottage	269 clumps Cwm George, 7 clumps Coed Pen-llwynog	Field records

Table: Counts of *Arum italicum* subsp. *neglectum* at Cwm George and Wrinstone Brook.

confirmation. The approximate number of clumps were counted, but it was often hard to decide where one plant ended and another started or whether some of the large patches were one fragmented individual spreading by rhizome growth. There were also numerous seedlings, some roots still with seed husks. The population estimate of 276 plants is thus a crude minimum (see table above and map on page 35). For future counts, it is recommended that systematic counts are done of vegetative plants in late November, and of flowering plants in June.

We would like to thank Sam Anstice for producing the map.

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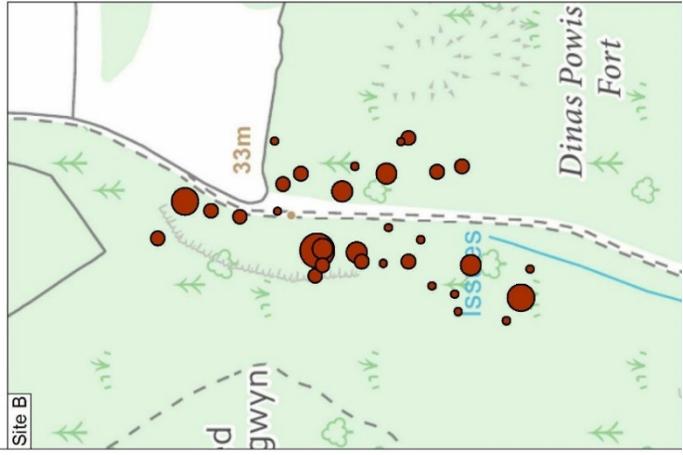
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- Wade, A. E., Kay, Q. O. N. & Ellis, R. G. (1994). *Flora of Glamorgan*. HMSO
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Inside back cover images (page 35):

- 7:** Distribution of *Arum italicum* subsp. *neglectum* 2018. Map by Sam Anstice. See article on page 32.
- 8:** Specimen of *Arum italicum* subsp. *neglectum* from NMW herbarium. See article on page 32.

Back cover images (page 36):

- 9:** Second vice county record in Anglesey for *Crassula tillaea* (Mossy Stonecrop) found in Newborough Forest. © Chris Dixon. See article on page 15.
- 10:** *Botrychium lunaria* (Moonwort) was taken by Sue Southam when she visited the site near Dolanog (SJ01) following the find. © S.Southam. See article on page 12.
- 11:** *Gentiana pneumonanthe* (Marsh Gentian) showing exceptionally good numbers at Penrhoslligwy on Anglesey. © Hugh Knott. See article on page 15.
- 12:** *Turritis glabra* (Tower Mustard) in Llangovan, Monmouthshire. © E.Wood. See article on page 30.

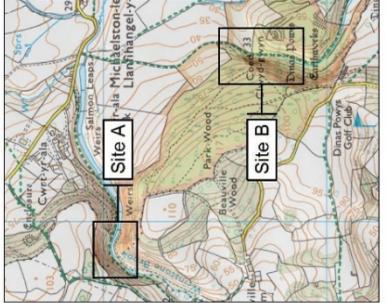
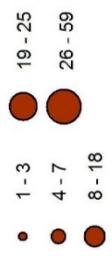


7



Cwm George
Arum italicum
Ssp. neglectum

Number of Clumps



© Hawfrainn a hawliau cronfa ddata r Goron 2016.
Rhiw Twydded yr Arolwg Ordnans 100019741.
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8



BOTANICAL SOCIETY AND EXCHANGE CLUB OF THE BRITISH ISLES.



VARIETY LOCAL. CRIB. ROAD. GUYRDA. ON 3.

John E. M. M. M. M.

They are among the plants in flower the I could be certain they I think you have seen at the summit of the Cwm George and since then it is not

Andrew G. Jones

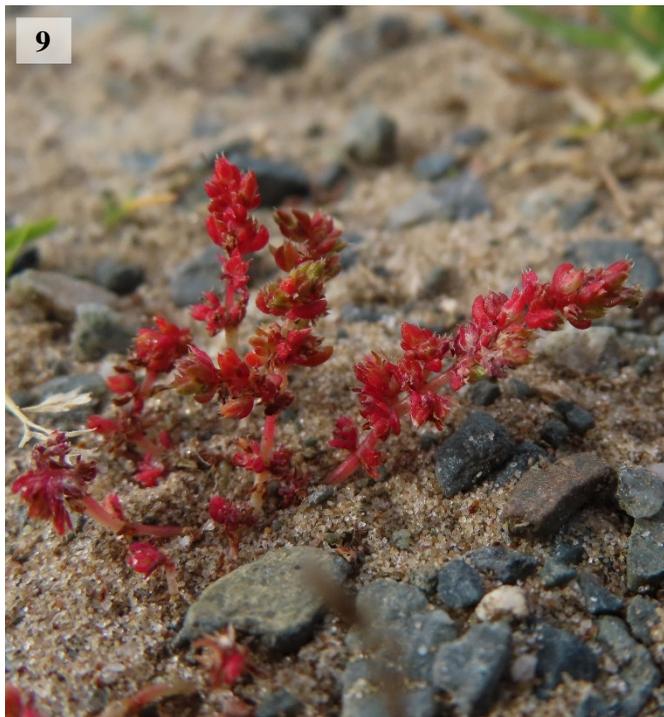
J. E. M. M. M.



HERBARIUM BRITANNICUM
G. T. & E. MACHELL, GARDIFF.
L.C. Et. N. No. 555. 25.5. 1930. No. 112
Species *Arum italicum* subsp. *neglectum*
Locality *Cwm George below Dinas Powis*
Date *October 1930*
Collector *George & E. Macell*

Sheet No. 1041

9



10



11



12

