2017 Welsh Annual Reports

Monmouthshire (VC35): Steph Tyler & Elsa Wood

Over 19,500 records entered in 2017 by us, some the records of other observers as Heather Colls, Sam Bosanquet, Mike Ogden and Steve Williams, on MapMate and synced to Centre

Highlights (e.g. nice finds; contact with other local botanists; etc.)

- Good attendance at monthly botanical meetings
- Good turn-out of people for the New Year flower hunt, held in Abergavenny in 2017
- First Welsh record of *Oenanthe silaifolia* (Fine-leaved Water Dropwort) as well as the neophyte *Allium scorodoprasum* (Sand Leek)
- First VC record of *Diphasiastrum alpinum* Alpine Clubmoss by Steve Williams
- More than 50 new hectad records mainly of scarce or rare neophytes as Geranium purpureum (Little Robin), *Cuscuta campestris* (Yellow Dodder), *Panicum capillare* (Witch grass) and *Echinochloa crus-galli* (Cockspur) but also of some native species as *Galium parisiene* (Wall Bedstraw) and *Ceratophyllum submersum* (Soft Hornwort).
- Finding three new sites for *Pyrola rotundifolia* (Round-leaved Wintergreen) and a possible fourth site (species now moved from LR to LS in RPR).
- Productive searches along trunk roads for halophytes with resulting new records for Catapodium marinum (Sea Fern-grass), Lepidium heterophyllum (Narrow-leaved Pepperwort), Plantago coronopus (Buckshorn Plantain) and Puccinellia distans (Reflexed Saltmarsh-grass).
- Attendance at MOD Caerwent Conservation Committee meetings
- Articles produced for SEWBReC newsletter

Glamorgan (VC41): Julian Woodman (East Glamorgan) & Barry Stewart (West Glamorgan)

13,895 records were added to the MapMate database during 2017, bringing to total for the county since the start of 2000 to 253,511. There are more in iRecord that are from Glamorgan Botany Group recording days, waiting to transfer to the DDb. In 2017 possibly the most noteworthy event was the reestablishment of Fen Orchid at Whiteford, which with the recovering population at Kenfig NNR (>1,000 counted) provide optimism for the future. Other dune species found to be faring well at the other Witford dune system (i.e. that part of Baglan Burrows) include Matthiola sinuata, Parentucellia viscosa and Polygonum oxyspermum subsp. raii, though Carex punctata has declined to a critical level. Charles & Hilary Hipkin's discovery of Epipactis phyllanthes at Red Jacket is a significant find, and their close scrutiny of *Dryopteris* has shown *cambrensis* to be frequent in the South Wales Coalfield. CRH & HH also rediscovered of Baldellia ranunculoides in a small Chara pool on Jersey Marine Golf Course. The Glamorgan Botany Group focusses mainly on recording in East Glamorgan and we managed 6 visits through the year focussing on areas that have been highlighted in the DDb as poorly recorded since 2000. Excursion report here GBG 2017 Some nice finds include Trifolium micranthum (Slender Trefoil) near Brynna, and in Barry a patch of Ceratochloa carinata (California Brome) was an exciting find. Some nice populations of marshy grassland / bog species at Pontycymmer and Gelligaer including a big population of Drosera rotundifolia (Round-leaved Sundew) at the former and Vaccinium oxycoccos (Cranberry) at the latter. Also of note, spotted by Tim Rich on the Gelligaer visit, was a population of *Juncus foliosus* (Leafy rush).

Breconshire (VC42): Mike Porter & John Crellin

The Brecknock Botany Group had 27 outings in 2017 with a first sighting for the county of *Lepidium ruderale* (Narrow-leaved Pepperwort) (NCR) growing by the side of the A40 and the discovery of new

sites for *Equisetum hyemale* (Rough Horsetail) and *Sambucus ebulus* (Dwarf Elder), both of which are rare in the county with no more than three sites.

A major achievement for the year was the transfer of a large number of records held by Mike Porter to the DDb. These had been digitised by the Biodiversity Information Service for Powys & Brecon Beacons National Park (BIS) and checked by myself and Mike. This has resulted in 146833 new records being added for the year and the Atlas 2020 Coverage tab on the DDb now gives an accurate picture of the challenge for completing Atlas surveying in the next two years. There are two western border hectads that require significant work!

An analysis of other gaps in coverage for the Atlas has been turned into an ambitious plan of meetings for 2018 including several interesting upland areas.

Cooperation with the Brecknock Wildlife Trust has worked to our mutual benefit as always and for 2018 we plan to visit several sites previously identified by the trust as significant wildlife sites; particularly around Llanwyrtyd Wells which is in one of the neglected hectads.

Carmarthenshire (VC44): Richard & Kath Pryce

The first highlight of the year was the discovery of an extensive population of *Saxifraga granulata* (Meadow Saxifrage) on 7th May on Banc Melyn, Mynydd Du (SN707190 & SN707191) where we found many non-flowering patches over a c.100m x 50m area of north-facing, heavily sheep-grazed, sloping limestone grassland. After some time searching we managed to find two flowers that had been missed by the sheep but these were sufficient to confirm the identification of the leaf patches. Although a very well-established population, this was a new hectad (10km square) record, but obviously overlooked in the past. It is the first to have been discovered growing in open grassland, most other Carmarthenshire populations being on river banks (eg by the Cennen and Sawdde) or in calcareous woodland (eg Carmel Woods). Also at Banc Melyn, we were able to document several previously unrecorded patches of *Antennaria dioica* (Mountain Everlasting), a nationally threatened species which has received special recording effort in recent years but has been found to be quite widespread in the limestone grassland of Mynydd Du.

On 12th May we teamed-up with Arthur Chater in the Teifi valley at Graigwrtheyrn, near Llandysul (SN4340) where on the remarkably well-preserved chevaux de frise of the impressively situated medieval hill fort, we found *Galium saxatile* (Heath Bedstraw) and *Aira praecox* (Early Hairgrass). Down on the riverside pastures, there were a few plants of *Ranunculus bulbosus* (Bulbous Buttercup), whilst on the river's bank we found a 2m x 1m stand of *Carex aquatilis* (Water Sedge) with three flowering stems, and not far away, a 10m x 1.5m stand of *Scirpus sylvaticus* (Wood Club-rush) with Carex laevigata (Smooth-stalked Sedge), all growing with *Oenanthe crocata* (Hemlock Water-dropwort). All were new records for the Carms part of SN44.

The Glynhir recording week was held from Monday 26th June to Monday 2nd July. The afternoon visit to the upland Carboniferous Limestone grassland area at Banc Wern Wgan, Mynydd Du (SN7818) proved to be very rich despite the heavy sheep grazing and amongst the small crags and lime spoil heaps were eight previously unrecorded patches of *Antennaria dioica*, together with some areas with *Wahlenbergia hederacea* (Ivy-leaved Bellflower) and *Anagallis tenella* (Bog Pimpernel), although we failed to find any *Gentianella amarella* (Autumn Gentian) on this occasion. One patch of *Antennaria* was found to have several dried flowering stems left unmolested by the sheep and, very unusually, included a few with seed, credit for this discovery going to Arthur Chater. Later, members of the party were also convinced by the differences between *Trifolium dubium* (Lesser Trefoil) and *T. micranthum* (Slender Trefoil) when undoubted plants of the latter were discovered juxtaposed with the much more common *T. dubium*! One feature noted was the central leaf stalk – a definite stalk on *T. dubium* which is absent in *T. micranthum*. Referring to the *T. micranthum* population the Cheshire County Recorder was heard to say "disgusting amounts – there's more here than in the whole of Cheshire!"

Paul Aubrey and Simeon Jones led the BSBI group on 27th June at the Pembrey Burrows Local Nature Reserve (SS4199). Paul is the volunteer ranger and knows the site like the back of his hand and was able to lead us to the most diverse areas. Despite being well recorded in the past, new populations of *Epipactis palustris* (Marsh Helleborine) were found in the vicinity of the first pond which holds large stands of *Ranunculus lingua* (Greater Spearwort) and *Thalictrum flavum* (Common Meadow-rue), both

presumably originally introduced as the pond is of man-made origin near the site of some long-gone factory buildings. Carex disticha (Brown Sedge) was also found here, new to the Carms part of SS49. Orobanche minor (Common Broomrape), past its flowering best, was found in various locations in small populations whilst Erodium lebelii (Sticky Stork's-bill) was seen at the edge of the abandoned car park. Also, only one plant of Botrichium lunaria (Moonwort) was found - this species is seen at this site in relatively large numbers in association with the thousands of Anacamptis morio (Greenwinged Orchid) in the spring of some years. Of particular interest was *Parapholis strigosa* (Hard-grass) which was (relatively) prominent on the upper saltmarsh in the eastern part of the monad as, by chance, we had timed our visit just right for the anthers to be extended and easily seen. This was a new record for the LNR and a new tetrad record. Having subsequently examined our photos, it would appear that some plants fit the description of *P. incurva* (Curved Hard-grass), being much shorter with very curved culms and the flower spikes not fully exerted from the sheaths. A repeat visit is called for in 2018! In addition to occasional plants of the widespread Centaurium erythraea (Common Centaury), several patches of the diminutive C. pulchellum (Lesser Centaury) were also seen in the top-most saltmarsh together with a few C. littorale (Seaside Centaury). On the way back to the cars, Sagina nodosa (Knotted Pearlwort) and S. maritima (Sea Pearlwort) were found growing together and afforded an opportunity for their comparison with Samolus valerandi (Brookweed) nearby, the latter two species being new hectad records for the Carms section of SS49. Rather surprisingly, considering how intensively the Burrows have been examined in the past, additional new records for the Carms part of the hectad included Senecio aquaticus (Marsh Ragwort), Persicaria hydropiper (Water-pepper), Hippuris vulgaris (Mare's-tail), Potamogeton crispus (Curled Pondweed) and P. pectinatus (Fennel Pondweed) in one of the cattle ponds, whilst Lithospermum officinale (Common Gromwell) was seen at two locations on the dunes. Later in the year, whilst doing consultancy work in the SS49 part of Pembrey Country Park, I came across Stellaria neglecta (Greater Chickweed), Glechoma hederacea (Ground-ivy), Iris foetidissima (Stinking Iris) and Brachypodium pinnatum (Tor-grass) also new records for the Carms section of SS49.

Wednesday 28th, a day of intermittent drizzle and low cloud, saw the whole of the party visiting part of the Coedydd Capel Dyddgen SSSI (SN4612). The land visited included ash/hazel-dominated woodland and unimproved and semi-improved grassland on the Carboniferous Limestone as well as oak woodland and a bracken/bluebell-dominated area on acid Millstone Grit and flushed rush pastures, *Molinia*-dominated grassland and *Agrostis capillaris* (Common Bent)-dominated, dry acid grassland.

Although the numerous Orchis mascula (Early Purple-orchid) and sheets of white Allium ursinum (Ramsons) and blue Hyacinthoides non-scripta (Bluebell) clothing the limestone woodland floor were well over, there was plenty of interest in the grassland established on the dry, shallow, stony soil, apparently the only small area of NVC MG5b Cynosurus cristatus – Centaurea nigra grassland, Galium verum sub-community, in Carmarthenshire. Here, abundant Sanguisorba minor ssp. minor (Salad Burnet), Betonica officinalis (Betony), Dactylorhiza fuchsii (Common Spotted-orchid), Briza media (Quaking-grass) and several yellow composites, together with Carex caryophyllea (Spring Sedge) and C. flacca (Glaucous Sedge) and rare Geranium columbinum (Long-stalked Crane's-bill) were seen. Succisa pratensis (Devil's-bit Scabious) is also very abundant in this community but we would have had to wait until September to see it at its flowering best! Also, Arthur Copping identified Schedonorus pratensis (Meadow Fescue) new to the site. Comarum palustre (Marsh Cinquefoil) was frequent in parts of the largest flushed field (SN4712) where close to the small stand of Salix repens (Creeping Willow), two flowering plants of Triglochin palustris (Marsh Arrow-grass) were discovered by Martyn. This was also a new species for both the site and tetrad. Other plants in the flushes included locally abundant Valeriana dioica (Marsh Valerian), Carex echinata (Star Sedge) and C. panicea (Carnation Sedge), occasional Eriophorum angustifolium (Common Cotton-grass), Hydrocotyle vulgaris (Marsh Pennywort) and Equisetum fluviatile (Water Horsetail) and a small patch of Anagallis tenella (Bog Pimpernel). The Molinia field, where, in May, we discovered Marsh Fritillary butterflies, has Carex pulicaris (Flea Sedge), C. hostiana (Tawny Sedge) and Carum verticillatum (Whorled Caraway) in unusual abundance. However, we haven't yet found the hybrid sedge Carex x fulva (C. hostiana x C. demissa), perhaps because the latter parent is particularly scarce with only three plants having been seen to date. Neottia ovata (Common Twayblade), although locally abundant in the limestone woodland and, in places, dominant, sometimes forming a continuous herb layer, was past flowering and was starting to die-down. However, the few plants of *Botrichium lunaria* discovered by

Kath the previous weekend proved to be of particular interest as no-one present was able to recall having previously seen this species growing in woodland. Being in the shade, the plants were up to about 30cm tall, in contrast to the single plant seen on the Pembrey dunes couple of days previously, where plants generally only attain a height of 2cm to 10cm. Also, on a few woodland outcrops, the hybrid shield-fern *Polystichum* x *bicknellii* are present, a new hectad record.

Thursday 29th saw most of the group visiting the Wildlife Trust's Talley Lakes Nature Reserve (SN63G) where we were met by Becca Killa and Vaughn Matthews of the Trust, Rosie Carmichael of Carmarthenshire County Council Countryside Unit and Stephen and Ann Coker. The fields adjoining the southern, Upper Lake were either rank and rush-dominated in the vicinity of the lake shore or improved and species-poor where favoured by the grazing sheep. The wet, rushy parts were rather poached in some areas. This detracted from the botanical interest and prompted discussion about the wisdom of employing sheep to manage this type of wet, marshy habitat. The problem here is that the Trust only controls a narrow margin of bank around the lakes and has no input to the management of the surrounding fields. The southern-most stand (in the world) of Carex aquatilis was re-found on the southern shore of the Upper Lake and seemed to be in good health although the water quality appears to have deteriorated alarmingly in recent years, speculated to be due to the increasing numbers of Canada Geese. Although Andy Jones found Littorella uniflora (Shoreweed) by the southern shore, the poor water quality may have been the reason for not finding either Elatine hexandra (Six-stamened Waterwort) or Isoetes echinospora (Spring Quillwort), both recorded here during the previous BSBI visits in 2001 and 2004. The Sparganium (bur-reed) dragged out by Andy probably matches the vegetative plant that keyed out as probably S. angustifolium Floating Bur-reed recorded here by Sam Bosanquet in 2012, the only county record, and the *Typha* that Martyn Stead suspected might be *T*. angustifolia (Lesser Bulrush) could well be the same species as that which Sam noted on the western bank in 2012. So another visit is required! The Salix daphnoides (European Violet-willow) found by Polly Spencer-Vellacott in the hedge on the east side of the lake was a new hectad record.

We had been invited by Mr & Mrs Colin Law, members of the Carmarthenshire Meadows Group, to visit his land near Ffarmers (SN6645) on Friday 30th where we found a well-established *Sorbus torminalis* (Wild Service) tree growing in his boundary hedge (a new hectad and the 12th VC record). Various common species were new for SN64 including *Euphorbia peplus* (Petty Spurge), *Vicia hirsuta* (Hairy Tare), *Centaurium erythraea*, *Linaria repens* (Pale Toadlfax), *Dipsacus fullonum* (Wild Teasel), *Carex sylvatica* (Wood-sedge) and *Vulpia myuros* (Rat's-tail Fescue), whilst in their polytunnel were self-sown *Nicandra physalodes* (Apple-of-Peru) and a few plants of *Cardamine corymbosa* (New Zealand Bitter-cress), the second VC record. However, of particular interest was the great abundance of *Polypogon viridis* (Water Bent), only the third record in the county away from Llanelli where it is now very well established. In the afternoon, in the vicinity of Cae Caradog near Ffarmers, SN6445, we found a prominent plant of *Trisetum flavescens* (Yellow Oat-grass) on a roadside verge which was the first post-2000 hectad record. The following day, a small group led by Graeme Kay made a second record of *T. flavescens* from another roadside verge Llettyrhaflaeth, near Cynghordy (SN7839) which was also a new hectad record.

Saturday 1st July was fine and sunny and Andy and Martyn returned to Laugharne with Delyth Williams who found *Papaver lecoqii* (Yellow-juiced Poppy) in SN3010, a new hectad record and only the 4th VC record (2nd post-2000), whilst, on the saltmarsh, during their unsuccessful search for *Puccinellia rupestris* (Stiff Saltmarsh-grass), previously recorded in 2009, found *Parapholis strigosa*, the first post-2000 hectad record. Martyn and Delyth also found *Geranium columbinum* on both sides of a gateway in Llansadurnen (SN2810) and went on to find a very large population of *Scleranthus annuus* (Annual Knawel) extending along 230m of a track over Hugden Hill, one of the hundred-acre enclosures of the medieval Laugharne Corporation three-field system (SN2810 & SN2910). This was the first record for the hectad and only the second post-2000 VC record and prompted Richard and Kath to visit the site a few weeks later to photograph the plants which formed a dense carpet over much of the length of track, extending into the field headlands in places.

Saturday was National Meadows Day and Ruth Watkins of Pen-y-graig-goch near Llanddeusant (SN7422) had invited us to take part. Most of the party spent the morning in the ravine grassland and woodland where a large *Tilia cordata* (Small-leaved Lime) tree grows on the lip of the gorge leaning over the Sawdde Fechan river. After lunch in the shade of the woodland we emerged to examine the fen meadows of the SSSI where *Platanthera bifolia* (Lesser Butterfly-orchid) was not as

plentiful as on previous visits although *Genista anglica* (Petty-whin) seemed to be somewhat more frequent. A few *Serratula tinctoria* (Saw-wort) and *Genista tinctoria* (Dyer's-greenweed) were also seen before we walked over to the NVC M10 *Carex dioica – Pinguicula vulgaris* flush where five plants of *Epipactis palustris* were in flower this year amongst the base-loving plant community including *Eriophorum latifolium* (Broad-leaved Cotton-grass), *Carex pulicaris, Eleocharis multicaulis* (Many-stalked Spike-rush), *Anagallis tenella*, *Valeriana dioica* and *Pinguicula vulgaris* (Common Butterwort). *Platanthera bifolia* is now confined to no more than five sites in the county, down from eighteen recorded before1986, whilst *G. anglica* is down to just eight sites from 84 pre-2000. Similarly, *G. tinctoria* is down to nine sites from 47 pre-2000 and *Serratula* to 24, down from 124.

Back at Glynhir, many tiny plants of *Cardamine corymbosa* were seen growing in the cobbles of the courtyard, the third VC record of the species, the others being, firstly, under the cover of the Great Glasshouse at the National Botanic Garden of Wales and, secondly, near Ffarmers, recorded the previous day! Even more remarkable was the single, rather mangled plant of *Filago vulgaris* (Common Cudweed) growing in the Glynhir cobbles with the *Cardamine* - the fifth post-2000 county record!

On the Sunday (2nd July), in a distant and apparently unpromising tetrad south of Newcastle Emlyn, Mary, Arthur Copping, Bron and David refound the *Thalictrum flavum* on the roadside near Allt Rhyddgoed-fawr (SN3239) first recorded by Frank Webb in the 1970s, the first post-2000 hectad record.

Graeme, Delyth and Kath visited the Llanpumsaint tetrad SN42E where they found the first post-2000 hectad record of *Knautia arvensis* (Field Scabious), as well as a field with *Carum, Lythrum portula* (Water Purslane), *Isolepis setacea* (Bristle Club-rush) and *Veronica scutellata* (Marsh Speedwell), the last three being first tetrad records. Elsewhere in the tetrad they had *Rorippa islandica, Lathyrus linifolius* (Bitter-vetch) and *Hypericum humifusum* (Trailing St.John's-wort), all also first tetrad records. Kath commented on the day's recording that the company was excellent with some good plants having been found but recording monads on cards became increasingly tedious as the day wore-on. Furthermore, recording the majority of species to this low precision may have serious limitations as far as conservation objectives are concerned, together with presenting unnecessary difficulties to future botanists should they wish to refind species which, although common today, may become rare in coming years. (Kath has become accustomed over the years to Richard's detailed target note (or "point-recording") method of giving precise grid references to all record samples).

Andy and Martyn visited the summit of Mynydd Llanybydder (SN53J) where near the source and in the upper valley of the Nant Garedig they found some very diverse mire vegetation and, in Andy's words, "the largest population of Hypericum elodes [Marsh St.John's-wort] I've ever seen!" They also recorded Eleogiton fluitans (Floating Club-rush), Wahlenbergia and Eleocharis multicaulis, (all these last recorded here in 1993), together with Carex hostiana (a new tetrad record) and C. x fulva (new to the hectad). On the roadside near their parking place, they had Spergularia rubra (Sand Spurrey), only the second post-2000 hectad record. Arthur Chater visited the site in mid-October in search of the root smut on Eleogiton, which he found, and, although apparently widespread in mid-Wales, is new to Britain. But, as Arthur commented, "clearly no one has bothered to look for it".

On the final day (20th June) of the Glynhir meeting, at Edwinsford, north of Talley (SN63H), an abundance of *Poa nemoralis* (Wood Meadow-grass) was found by Arthur Chater and me on the roadside estate wall, the first hectad record since 1995, whilst a single plant of *Epilobium roseum* (Pale Willowherb) growing at the wall-base was the first, all-time hectad record. In the currently disused Pen-y-Ddinas Quarry, *Euphrasia nemorosa* x *confusa* (a hybrid eyebright) was a new hectad record (it would appear that there are very few *Euphrasia* records anywhere in SN63). Also in the quarry, some *Elodea nuttalli* (Nuttall's Waterweed) was found in a small ephemeral "pond" collected at a low point across a scrub-lined track used as wheel-wash, but the highlight was the discovery of thousands of small plants of *Elatine hexandra* in shallow pools at the upper quarry level, the third VC record. Although Arthur refound the stand of *Brachypodium pinnatum* on the eastern side of Pen-y-Ddinas hill that he had discovered there in 1995, there was no sign of the hybrid willowherb *Epilobium* x *brunnatum* (*E. brunnescens* x *ciliatum*) found on the same visit, although both parents were still present.

Several new records for the Carms part of SS59 were made during the Llanelli Naturalists' urban Llanelli meeting led by Ian Morgan on 20th September which included *Epilobium roseum* in Bigyn Park Terrace and Coronation Road Allotments, *Persicaria amplexicaulis* (Red Bistort) escaped into a back-lane south of Coronation Road and a few plants of *Erodium cicutarium* (Common Stork's-

bill) on a verge at the east end of Ann Street. Also in Llanelli and environs, Ian Morgan reported one tall plant of *Lactuca virosa* (Great Lettuce) growing at South Avenue, Trostre (SS5299) on 12th June and on 14th July, Barry Stewart recorded *Anagallis tenella* growing by the attenuation pond adjacent to the WWT Penclacwydd entrance roundabout (SS5398). Both were first hectad records for the Carms part of SS59.

Also in September, Kath and I discovered a robust flowering plant of *Clinopodium ascendens* (Common Calamint) in a gravel-surfaced track off Crescent Road, Llandeilo (SN631224), a new hectad record, and also, when visiting Ivor and Jane Stokes' garden near Bethlehem (SN6423), we found their ornamental pool to contain several patches of *Lemna valdeviana* (Valdivia Duckweed), the third VC record, previous records being from NBGW and WWT Penclacwydd.

Finally, our enthusiasm for extending the knowledge of *Taraxacum* (dandelion) distribution in the county has not waned with the 183 specimens collected between mid-March and mid-May being subsequently dispatched to John Richards in Newcastle for identification. Amongst our material were five first county records (*T. kernianum*, *T. pietii-oosterveldii* (3 specimens), *T. procerisquameum*, *T. pulchrifolium* and *T. subericinum*), ten second records and 65 new hectad records! Of particular interest to John were *T. subericinum* which was only the third British record, the others having been in Devon and Somerset, whilst his comment on *T. pietii-oosterveldii* was "*I had originally identified this plant as* T. saxorum *H. Ollgaard inedit, an undescribed species which has appeared on-line with pictures of material cultivated by Ollgaard. Les Tucker has cultivated material from E. Scotland which has been identified as this and rather doubtful, poorly developed plants from Bute were seen by the BSBI Taraxacum excursion in 2017. However. seeing Pryce specimen 17061 has changed my mind. This is clearly T. pietii-oosterveldii Ollgaard which is known from numerous Irish stations where Tucker first found it (Richards & Doogue) and Pryce specimen 17032 is also this although much bigger than seen before. There is also material from Colemere, Shropshire (T. Edmonson, NMW)".*

The full list of new county and hectad records for 2017 will appear in Welsh Plant Records (BSBI Welsh Bul. 102 (in press).

Pembrokeshire (VC45): Stephen Evans

Continued progress was made with Atlas 2020 but there will need to be a more targeted effort during the remaining two seasons as woodland species are still inadequately covered. 7,925 (8,313 in 2016) records have been compiled from 235 (298 in 2016) monads during 1,054 (1,277 in 2016) 'visits' in 2017 but some records are yet to be received. The totals since the start of the Atlas recording period are 166,514 records from 1,273 monads collected during 29,605 'visits'. 'Visits' are defined as records made from a location and can vary from full species lists to individual records of notable species or missing species not found in the hectad since 2000. Howard Williams sought out such 'missing' species in 3 hectads in the north of the county and Jane Hodges went to many under-recorded monads in mid-Pembrokeshire. Jan Wilder, from Plantlife, added more arable weed records for the second year running. All records are entered into the BIORECS programme and await transfer into the BSBI database- this was last done in October 2015.

As usual annual survey reports for *Rumex rupestris* (Shore Dock), *Melittis melissophyllum* (Bastard Balm), *Hammarbya paludosa* (Bog Orchid) and *Platanthera bifolia* (Lesser Butterfly-orchid) were circulated.

In February a final draft of the Pembrokeshire Rare Plant Register was prepared in electronic format with the help of Stephen Coker and Howard Williams. Its length, at ca.250 pages, has meant that a reduced version needs to be prepared before a hard copy can be printed.

Cardiganshire (VC46): Steve Chambers

Recording progress remained steady at around the same rate as in previous years. Six hectads now have >500 species recorded post-2000. Polly Spencer-Vellacott helped sync records in the autumn just before moving on, for which I am exceedingly grateful. The bulk of my own records for 2017 still need uploading. In 2018 three main meetings are planned, viz. Mwnt (3 May; Paul Green), the Welsh AGM at Aberystwyth (10-12 August) and the Dyfi estuary (15 September; Andy Jones).

In 2017 group excursions involving members of the Aberystwyth Botanical Society (ABS) to Cwm Rheidol mine (30 April), Coed Cwm Cletwr (21 May), Carn Owen (13 August) and recorders

days arranged by the West Wales Biodiversity Information Centre generated many useful records for Atlas 2020.

In the SW of the county Howard Williams (HW) targeting Atlas 2020 updates from the DDb for SN15 & 24 in the process also added >20 new hectad records, which is no mean feat in such a well surveyed VC.

Standout new sites for natives (inc. archaeophytes) for the year include *Alchemilla glabra* (Dolchenog farm, SN77W), *Kickxia elatine* (winter stubble, SN24U), *Myriophyllum alterniflorum* (Craig Fawr quarry pool, Pen-uwch), *Polystichum aculeatum* (roadside bank near Ciliau Aeron), *Rhynchospora alba* (Nant Milwyn flushes, discovered by Chris Forster-Brown c. 2015), *Scrophularia auriculata* (currently spreading for unfathomable reasons into synanthropic habitats, e.g. track sides), *Stellaria pallida* (SN56, Matt Sutton) & both *Sanguisorba officinalis* & abundant *Carum verticillatum* in a small set of undamaged rich rhos parcels, where neither appears to have been seen before, near Capel-y-Groes in SN54E - a case of miraculous survival outside the protected sites network.

On the alien front *Geum macrophyllum* continues to spread and expand its range in the process. In January it was found to have reached the N-end of the county at RSPB Ynys-hir, where many plants from seed, almost certainly originally advertently imported and then spread by canine and human visitors, extended for hundreds of metres along the track to the Ynys Eidiol hide. On the flood terrace of the Afon Teifi at Coedmor NNR extensive patches of *Tolmiea menziesii* (new for SN14) were found some 30 km downstream from the nearest known site on the river at Highmead. Other interesting finds of aliens include *Cortaderia selloana* (3rd VCR, nr. Tre Taliesin), *Crepis rubra* (2nd VCR, Aberystwyth), *Gypsophila muralis* (2nd VCR, disturbed lawn at Llanerchaeron), *Helleborus foetidus* (discovered in the S of the VC for the first time ruining the previously neat 'north-south VC Hellebore divide', by HW in SN24H near Llechryd), *Lonicera henryi* (1st VC & possibly Welsh record, in a hedgebank nr. Plwmp, SN35Q, by AOC), *L.pileata* (2nd VCR; Afon Aeron riverbank), *Geranium phaeum* (disturbed road verge by Pont Newydd in the same general area where it was 1st noted in the county and where it was last collected c.1919, i.e. suggesting seed bank viability approaching a century) & *Polypogon monspeliensis* (under a bench on North Road, Aberystwyth, Danny Ardeshir, & a plant at Trefechan, AOC; 3rd & 4th VCRs).

Updates of VC 'special interest' plants include *Atriplex portulacoides* (Dyfi NNR saltmarsh, where originally introduced), *Carex lasiocarpa* (Twyi source), *C.limosa* (SN76X), *Cirsium dissectum* (Cwm Mwyro, both colonies extant, SN76S & X), *Euonymus europaeus* (seedlings, several treelets and one large tree on upper edge of Coed Allt Ty-mawr, SN55E, where 1st recorded in 1961 but thought destroyed by afforestation pre-1970), *Filago vulgaris* (Llanrhystud), *Lathraea squamaria* (Afon Mydr) & *Subularia aquatica* (Llyn Gynon).

The year's prize plant came right at the start in January in the depths of winter while lichen surveying at Coedmor NNR with Alan Orange when a few tufts of *Carex strigosa* were spotted growing most conveniently, for visual comparison and detection, next to young *C.pendula* and *Luzula sylvatica* on a riverside flood terrace of the Afon Teifi, only the 2nd VCR of the sedge. Coedmor is c. 18 km downriver from the 1st site near Tynbedw where *C. strigosa* was found new for the VC in 2009. A potential disjunct 3rd site is being followed up this year.

Montgomeryshire (VC47): Kate Thorne & Gillian Foulkes

At the end of 2017, 8 hectads have >500 species recorded; 9 have 400-499; 8 have 300-399; and 9 have <300. 99 tetrads have < 10 species recorded. We will be focusing efforts on recording gaps as well as on under-recorded species. All records have been input to Mapmate and submitted to the BSBI Ddb. Verification of records still needs to be tackled.

Over 12,000 records were made. These came from Flora Group outings (seven 1-day meetings plus a 3-day intensive session), from Field Society trips, as well as from individuals.

KT ran a BSBI Roses workshop (August) and a meadows ID skills day for beginners (May).

The RPR was updated (January) with the Welsh Officer's help.

Recording highlights included:

Gymnocarpium robertianum (Limestone Fern) found at a new site; second record since 1860's.

Further records for RPR Priority species in Wales included:

Euphrasia officinalis ssp.anglica (English Eyebright) 3rd post-2000 record.

Potentilla rupestris (Rock Cinquefoil) 2nd-post-2000 record.

Several species of conservation concern were recorded including a new site for *Platanthera chlorantha* (Greater Butterfly-orchid).

Other interesting finds included:

Ophioglossum vulgatum (Adder's-tongue) -2 new sites (one with 100-120 plants in species-poor grassland).

Refinds as well as some new sites for *Dryopteris cambrensis* and *Dryopteris borreri* (Scaly Male Ferns) and *Dryopteris aemula* (Hay-scented Buckler Fern) (1st post-2000 records).

Carex acutiformis (Lesser Pond-sedge) 2nd post-2000 record.

Rorippa islandica (Northern Yellow-cress) 2nd County record.

Rubus scissus 1st post-2000 record.

Rubus caesius (Dewberry) 2nd post-2000 record.

Two Eyebrights were recorded for the first time - $Euphrasia\ arctica\ x\ nemorosa\ and\ E.\ micrantha\ x\ scottica = E.\ x\ electa.$

Epilobium tetragonum (Square-stalked Willowherb) 2nd post-2000 record.

Paris quadrifolia (Herb-Paris) at a new site.

Chenopodium bonus-henricus (Good-King-Henry) 1st post-2000 record.

Arctium lappa (Greater Burdock) 2nd post-2000 record.

Helminthotheca echioides (Bristly Oxtongue) 1st post-2000 record.

Acaena novae-zelandiae (Pirri-pirri-bur) recorded for the first time at three sites.

Merionethshire (VC48): Sarah Stille

Often-postponed knee surgery means special thanks due to all of our local group's leaders, Rhiannon, Heather, Jo and Andrew, for a full programme of field meetings, As a result our recording efforts surpassed those of 2016 with over 7000 records uploaded to the DDb.

The annual Caerdeon residential meeting was a great success with the highest turnout so far. We made well over 3000 records in 4 days, many of them in previously unvisited squares.

We found some interesting new plants, including *Echinochloa crus-galli*, Cockspur, a NCR, on a roadside in Maentwrog. We also found *Setaria viridis*, Green Bristle-grass, there, a new hectad record. Martyn Stead and Graeme Kay found *Rumex x dufftii*, the hybrid Dock between *R. obtusifolia x R. sanguinea* while staying at Caerdeon, Gethin Elias has continued to send sightings from his RSPB reserve: this year's star was *Galium boreale*, Northern Bedstraw, in a new site, on the sheer rocks of Craig Aderyn.

Sam Bosanquet enhanced his holiday with *Ruppia maritima*, Beaked Tasselweed, on the Artro estuary and Tom Knight made a new hectad record for *Dactylorhiza purpurella*, Northern Marshorchid, on the lower Rhinogs. Clive Lovatt, Andy Jones and Martyn Stead found *Amsinckia micrantha*, Common Fiddleneck, and *Polypogon monspeliensis*, Annual Beard-grass, at Aberdyfi– both are NCRs. I have made a start with validation and have also re-visited our Rare Plant Register first draft with a view to a revision when things ease up after 2020.

Caernarvonshire (VC49): Wendy McCarthy

All post-2000 records are kept on MapMate and 6748 new or updated tetrad records were made in 2017. All 31 hectads received at least one visit, mainly aimed at updating records for Atlas 2000 which were identified by consulting spreadsheets of missing species for each hectad. No significant gaps are

identified and coverage is considered generally good. Approximately 100 records have been prepared for Welsh Plant Records.

Updating of the CRPR is underway and is progressing when time allows.

Six recording meetings were held from April to September with an average of 6 participants, although the programme is circulated around approximately 30 people. Four wildflower identification walks were taken at Pensychnant Conservation Centre and I also tutored a grasses identification day there in June. I helped the local U3A with their Walking with Wild Plants walks. A Recorders' Day organized by Cofnod on land with previously restricted access was attended. I led the Wildflower Society weekend meeting which was held on the Great Orme and in the Gwydyr forest in September.

I organised and attended a recording and training weekend workshop on *Rubus* on the Llyn peninsula, the aim being not only for us to learn more about brambles but also to update records made pre-2000 by Ann Connolly and Alan Newton. This was very successful and we were able to re-find most of them and also add several which were new to a tetrad or hectad.

Highlights of the year were new hectad records for *Osmunda regalis* (Royal Fern) in SH57, *Glebionis segetum* (Corn Marigold) in SH67 and a surprising find of a dozen or so plants of *Plantago afra* (Glandular Plantain) on a disturbed highway verge in SH77.

Denbighshire (VC50): Delyth Williams

Progress with Atlas 2020 recording has been our main thrust. The Denbighshire Recording Group met on up to 30 occasions, numbers varying from two to ten. Recording was mostly in the un-visited upland areas to the west and south of the vice-county. A handful of loyal Recorders also sent in their data from all over, amassing in total over 24,500 records.

About ten records are new to the vice-county, none native but there were 490 new hectad records. We are optimistic that almost every tetrad will have had at least some coverage by 2020.

Digitising and synchronisation of records to the DDB are a regular occurrence although validation is still behind.

A Training Day on 'Know your Plant Families' was held in July and work to support the North Wales Wildlife Trust was carried out at Y Graig reserve.

New to the VC are *Oenothera stricta* (*Fragrant Evening-primrose*) found by Sue Swindells near Llanrhaeadr-ym-mochnant SJ1226, Panicum capillare (Witch-grass) found by John Palmer in Cilygroeslwyd Wood SJ1254 and *Persicaria capitata* (Pink-headed Persicaria) found by Martyn Stead in SJ3353. A tentative vegetative identification of the scarce Polygonatum multiflorum (Solomon's-seal) by Llyn Moelfre was confirmed by its first record at exactly the same site from 1973 by Ian Bonner. Most pleasing were new sites, in the torrential rain of August, of *Rhynchospora alba* (White Beak-sedge), *Wahlenbergia hederacea* (Ivy-leaved Bellflower) and *Hypericum elodes* (Marsh St John's-wort) in the uplands of Pen yr Orsedd SH8553.

Flintshire (VC51): Emily Meilleur

The highlight of the year was the Welsh ASM, which was held in Flintshire from the 5th June to 9th June 2017. This event was organized by Jonathan Shanklin and targeted recording in under-recorded tetrads. Over 7,125 records were made during the week, 866 different species were recorded, and 19 of those have a threatened status. The commonest species seen was *Ranunculus acris* (Meadow Buttercup), followed by *Geranium robertianum* (Herb Robert) and *Urtica dioica* (Nettle).

The field visit to Gornant sand dune was on an <u>extremely</u> windy day, but botanists were rewarded by the limestone loving plants at Graig Fawr.

Records of interest include *Coincya monensis* subsp. *monensis* (Isle of Man Cabbage) from the Dee breakwater, along with *Crithmum maritmum* (Rock Samphire) and *Salicornia dolichostachya* (Glasswort). Also *Pyrola rotundifolia* (Round-leaved Wintergreen) from the old quarry near Hendre.

Gail Quartly-Bishop held seven field meetings, for recording and plant monitoring. During a visit to Coed y Felin the group counted 35 flowering plants of *Dianthus armeria* (Deptford Pink). The group refound *Filipendula vulgaris* (Dropwort) in the same place it was last recorded 20 years ago at Caerwys.

Currently there are 57,717 post 2000 records held for VC Flintshire in our local record centre, Cofnod. In 2017 over 12,000 records were made.

All records for Flintshire have been downloaded to the BSBI Big Database.

The Rare Plant Register for Flintshire is available on the Flintshire page of the BSBI web site.

Anglesey (VC52): Ian Bonner & Nigel Brown

This year has seen changes in the Recordership with Hugh Knott retiring as Joint Recorder, but continuing as a field recorder and Nigel Brown welcomed back in his place.

2017 started with the New Year Plant Hunt, which included finding *Geranium columbinum* (Long-stalked Crane's-bill) in flower on the coast, just west of Aberffraw.

Confirmation was received from Ian Denholm & Richard Bateman of the June 2016 record of the hybrid between *Dactylorhiza purpurella* (Northern Marsh-orchid) and *Dactylorhiza traunsteineroides* (Narrow-leaved Marsh-orchid) on Cors Bodeilio NNR, SH5000.7755 by Nigel Brown. The single flowering plant was growing with both parents in a calcareous mire. This is a scarce hybrid, indeed this would appear to be the first confirmed record from Wales (Stace *et al.* 2015).

Also carried forward from 2016 was the inputting of several thousand additional monad records, mainly collected by Debbie Evans, who has contributed a truly formidable number of records to the data-base.

Another significant block of data came from Martyn Stead with his 2016/17 winter survey of *Polypodium* (Polypody), collecting some 650 specimens which he determined as follows:

Polypodium interjectum: 414 (62%), Polypodium vulgare: 178 (27%) Polypodium cambricum: 4 (0.6%) Polypodium vulgare x P. interjectum = P. x mantoniae: 63 (9.5%) Polypodium vulgare x P. cambricum = P. font-queri: 1 (0.15%) and Polypodium interjectum x P. cambricum = P. shivasiae: 1 (0.15%). Of particular interest were the 63 records of the hybrid P. x mantoniae, confirming RH Robert's view that, though easily overlooked, this was a common plant along roadside banks across the island.

Several visits have been to update details of some of the rarer and scarcer Anglesey species, especially those not seen since before 2000. Amongst these in April *Ranunculus tripartitus* (Three-lobed Crowfoot) was reconfirmed on the wet section of the coastal path near Rhoscolyn, SH26.75; at Tre Wilmot SSSI, Holyhead, SH22.81 and Salbri Bog SSSI, SH37.88 - all quite healthy populations; but at nearby Llyn Hafodol SSSI, SH39.88, only 1-2 plants were noted - probably due to the lack of the usual cattle trampled mud.

Still in April six plants of *Helleborus viridis* (Green Hellebore) were counted in the woods at Porthamel NWWT Reserve, SH50.68, at what is now its only Anglesey location.

Ranunculus auricomus (Goldilocks) was also still scattered through the small wood by the shore of the Menai Strait at Moel y Don, SH51.67 and along the mound at Lleiniog Castle, SH61.79, but could not be refound in the nearby woods by the Afon Lleiniog in Llangoed, the area now dominated by *Allium ursinum* (Ramsons) and *Lamiastrum galeobdolon ssp. argentatum* (Garden Yellow Archangel). The best population is still along the verge of the minor road from Cichle to Glan-yr-afon, SH598.793.

A visit to Fedwr Fawr refound the tiny population of *Antennaria dioica* (Mountain Everlasting) in SH60.82, about 50 inflorescences in an area of 40 x 20 sq. cm., but the small population on the National Trust's nearby Bryn Offa site, SH57.91, appeared to have been destroyed by gorse removal, despite the site being well known to the Trust and visited by two of their staff in 2012.

Encouragingly at Fedwr Fawr about 36 stems of *Huperzia selago* (Fir Clubmoss) were counted in a 10m x 10m. block of heathland, more than had been seen for many years – however it is easily overlooked and this visit benefited from many pairs of eyes during a Flora Group visit. Apart from a small population on Mynydd Bodafon Fir Clubmoss has disappeared from all its other Anglesey localities. Later in the year at Fedw Fawr some 30 plants of *Selaginella selaginoides* (Lesser Clubmoss) were counted on the wet heath, the last record from here was in 1961 – this was the last date here too for *Drosera rotundifolia* (Round-leaved Sundew), but this was not refound.

Both species were found later in September at Cors Goch Nature Reserve during a field meeting with members of the Wildflower Society, as part of their AGM in Llandudno.

On nearby Bwrydd Arthur SH58.81 *Helianthemum oelandicum* (Hoary Rockrose) was just coming into flower in early May on the south facing limestone outcrops, though invading Ivy and scrub

will threaten the site unless further management is undertaken fairly soon. Also seen were *Avenula pratensis* (Meadow Oat-grass) at what is probably its only Anglesey location and *Arabis hirsuta*, (Hairy Rock-cress) a plant that has declined markedly in recent years.

In early June a Flora Group visit to the limestone just west of the NWWT Mariandrys reserve refound the small population of *Potentilla neumanniana* (Spring Cinquefoil) at its only Anglesey locality in SH59.80 and intermixed with it about 20 plants of *Trifolium scabrum* (Rough Clover), the first record from the E side of Anglesey.

Continuing the search for plants with no post2000 record Jane and Ivor Rees refound *Calystegia soldanella* (Sea Bindweed) in small quantity in dunes at Glan Halen, near Llanddona, at the E end of Red Wharf Bay, the first record from this coast since 1970, and more excitingly, still on the E coast, in the small area of dune at Traeth Lligwy, Moelfre, SH49.87 – a new hectad record. Also in the dune at Lligwy was a single plant of *Eryngium maritimum* (Sea Holly) – another reconfirmation of a pre2000 record. In late June a large population of *Euphrasia officinalis* ssp *anglica* (English Eyebright) was found on Newborough Warren straddling SH41.64 & 42.64 close to the path from Llyn Rhos-ddu to the sea shore, the first confirmed record from Anglesey since 1956.

Publication in 2017 of the new BSBI Handbook on Violas has stimulated some new records. Several *Viola odorata* (Sweet Violet) clumps were determined to varietal level with both var. *dumetorum* and var. *imberbis* being noted. In the past there has been a reluctance to record the hybrid between *Viola riviniana* (Common Dog-violet) and *Viola reichenbachiana* (Early Dog-violet) because of the variability of the parents, but stimulated by the new book records of *Viola x bavarica* have been forthcoming this year. More significantly *Viola x scabra*, the hybrid between *Viola odorata* (Sweet Violet) and *Viola hirta* (Hairy Violet) was found by Jane & Ivor Rees near Llanidan in SH49.65. It was confirmed by both Michael Foley & Michael Porter and as well as a new VCR, may well be the first post2000 Welsh record.

Staying with violets - Ivor Rees has sent in two pictures of the results of heathland management on the RSPB's Penrhosfeilw Common reserve, near South Stack, Holyhead. The first from March 2015 shows a recent, rather drastic looking, scrub cleared area being viewed by Peter Marren, James Robertson & Ian Bonner, the second in May 2017 demonstrates the benefit – a healthy growth of Viola lactea (Pale Heath-violet).

A colony of *Allium ampeloprasum var ampeloprasum* (Wild Leek) has been known from the roadside at Ty Mawr, SH21.81 on Holy Island since at least 1970; but in 2017 a single flower spike of a Wild Leek found by J & I Rees amongst bramble and bracken near PorthTywyn-mawr, Llanfwrog, SH290.849 has been confirmed by Paul Green as the endemic *A. ampeloprasum var. babingtonii* – a first county record.

A surprise find on a Flora Group visit to the coast near Llandonna was a plant of Juniper, thought to be *Juniperus communis ssp communis* but a horticultural form. The only other Anglesey records are from Holyhead Mountain, though it does grow only some 12km away on the Great Orme.

An exciting Stonewort find by Tristan Hatton-Ellis of NRW was *Lamprothamnium papulosum* (Foxtail Stonewort) growing in the Inland Sea, just N of Four Mile Bridge, in shallow water with *Zostera noltei* and *Ruppia*, probably a 1st Welsh Record.

An end of season rediscovery by James Robertson was of *Hypericum hirsutum* (Hairy St John'swort) in a limestone field wall at the Cors Goch NWWT reserve, SH50.81. It had been noted in 2010 on limestone rocks in the grounds of Cae Trefor, Tynygongl, SH50.82, where it was inclined to spread and had probably been present for several years. Otherwise this was a plant only recorded on limestone ledges in a former quarry at Brynsiencyn, SH49.67 by RH Roberts in 1973 and thought to be lost due to quarry infilling.

Dactylorhiza praetermissa (Southern Marsh-orchid) was first confirmed in the vice-county at Plas Newydd in 2013 during the BSBI AGM. It has taken until 2017 for the second record - from Plas Cadnant, Menai Bridge, SH55.73, a single spike in the woodland garden found by Nigel Brown.

Another orchid of interest was *x Dactylodenia st-quintinii*, the intergeneric hybrid between *Dactylorhiza fuchsii* (Common Spotted-orchid) and *Gymnadenia borealis* (Heath Fragrant-orchid) found and determined by David Nelson at the foot of the limestone scarp on Cors Goch, SH50.81 in June. The only other recent record was from Cors Erddreiniog in 2002.

A hybrid new to Anglesey was *Galeopsis x ludwigii* the cross between *G. bifida* (Bifid Hempnettle) x *G. tetrahit* (Common Hemp-nettle) just a single plant, on a gravelly trackside near Cefni Reservoir, Llangefni, found by Nigel Brown.

Among new neophyte taxa were *Allium roseum* (Rosy Garlic) a clump by the coastal path, Red Wharf Bay, SH530.814, 2016 and a clump by the B5110 between Brynteg and Llangefni, SH476.783, 2017, both found by Nigel Brown. Also *Cyrtomium fortunei* (Fortune's Holly-fern) established in the forestry plantation to the SE of Mynydd Bodafon, SH47.84, Hugh Knott and *Eleagnus x submacrophylla* (Oleaster) *E. macrophylla x E. pungens*, Lleiniog, SH62.79, Nigel Brown, planted just above the shoreline.

Day lilies have been noted along the shoreline of Llyn Llywenan, SH34.82 before, but this year Debbie Evans determined them as *Hemerocallis lilioasphodelus* (Yellow Day-lily). Other Day-lily records have been of *H. fulva* (Orange Day-lily).

Frankenia laevis (Sea-heath) has been known on the silty/sandy shore of the Crigyll Estuary, Rhosneigr, since 1965 and has spread locally to occur in parts of 4 monads. However this year Chris Metherell has reported finding it at Newborough, SH39.63.

All the records received so far are in the BSBI database and in late November the BSBI has issued maps at monad and tetrad level to show progress towards Atlas 2020 for each vice-county. The Anglesey priority over the remaining two years of the Atlas project will be to refind native taxa that have not yet been recorded since before 2000 and to progress the validation of records in the Distribution Database (DDb). We will also continue to welcome any records at the monad level, especially for the scarcer taxa in the Rare Plant Register

More photographs of the Anglesey flora can be seen on Hugh Knott's website "A Flora of Anglesey" www.cambriaflora.net.

Thanks are due as always to all those who have supplied records in 2017 and especially to Nigel Brown for organising eight meetings of the Flora Group and to the Group members for their help in compiling this note,

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