Botanical Society of Britain & Ireland

English Botanical News

No.3

2022 May

Neotinea ustulata (**Burnt Orchid**), a Wiltshire specialist on Salisbury Plain, in an especially dense and lush group (Sharon Pilkington)

Contents	

Topics that the newsletter will aim to include are:

- Reports from the England Annual Meeting
- Reports from other England meetings
- Annual reports from England vice-county recorders
- Any items of general vice-county news
- Reports of any new vice-county records of native species, or re-finds of native or alien species thought long extinct – with illustrations. New **country** records of aliens or other county records of aliens showing a significant change in range.
- Hints, tips and keys

It will not duplicate material that should appear in BSBI News or the BSBI Yearbook. It is aimed at all BSBI members, particularly those resident in England. A printable booklet version of the pdf is available on request.

News from the President: Lynne Farrell

For the previous edition published in May 2021 I noted that it had been a cold, dry spring and that plants were just springing into life. This spring has not been that different but there were storms and strong winds interspersed with warm spells and not much rain again. Now in late May rain has arrived, it is still windy and the growth has been exponential, although the bright colours have yet to burst on to the scene.

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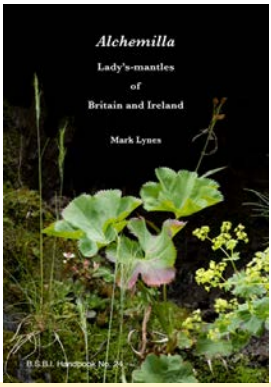
We are holding outdoor field meetings and a few committees have met in person, and people are delighted to see each other and botanise together again. It seems to have been a good year for early-flowering species despite the weather and counts of several orchids here in Cumbria and N. Lancashire have shown increased numbers of Early Purple, Green-winged and Fly to date. Will later-flowering species follow suite?

Dandelions have certainly blossomed and flowered prolifically on the roadside verges. The latest BSBI Field Handbook to British and Irish Dandelions by John Richards, No. 23 in the series has proved very popular and useful. This volume was followed quickly by No.24 Alchemilla -Lady's-mantles of Britain and Ireland by Mark Lynes. Both are very well illustrated, clearly



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presented and will encourage members to tackle these 'difficult' groups.

Elsewhere in this edition you will find updates on initiatives including the publication of the New Atlas.

Best wishes to you all from Lynne Farrell.

News from the Chair: Jonathan Shanklin

In many ways 2021 has been a continuation of 2020, with lockdown creating opportunities for much local recording at the start of the year. Following relaxation of the guidelines from late March, local meetings resumed, followed by BSBI national meetings. It was great to welcome BSBI members to Cambridgeshire at three separate meetings.

I continued visiting my sister in Cheshire and once visiting Wales was permitted started to visit local sites in Denbighshire and Flintshire as part of a project to extensively record the hectad where she lives. One surprise result from "no mow May" was the appearance of *Stellaria graminea* (Lesser Stitchwort) in a lawn that had probably been cut continuously for over 100 years. In transit there and back I usually stopped to record a few monads in Shropshire and also had two longer holidays in the county.

A Shropshire Bluebell wood

BSBI tasks continue to keep me pretty busy. The Committee for England work is outlined in the report on

page 9. In addition, as Hon. Field Meetings Secretary I collate and format the meetings organised by the four country field meetings secretaries for the Yearbook. The reports of field meetings also need editing into standard format and I created a full colour version that is available as a pdf. Over the last few months I've also been organising the 2022 Annual Summer Meeting, which will be held at the FSC Malham Tarn centre. I've been helping B&IB with proof-reading of papers, making some suggestions on their scientific content and extracting the abstracts for the Yearbook. Then there is also my role of VCR for Cambridgeshire (v.c.29). A VCR has many calls on their time and these will vary from county to county. Things that I have done as VCR over the last twelve months include:

Cambridgeshire Flora Group members (including the present VCR and two past ones) in Balsham Wood (Peter Leonard)

- Updated the county RPR and RPCC, which are now just one document following revision of the BSBI guidelines
- Sat on the County Wildlife Sites panel, making suggestions for new sites and improving guidelines for site selection
- Did rather a lot of recording (the DDb says 41,924 records in 2021)
- Provided botanical records on request
- Gave advice and made reports to site managers
- Organised and lead local group meetings
- Edited the local group newsletter (and wrote much of it)
- Sat on the editorial board, wrote and reviewed papers for the local journal, *Nature in Cambridgeshire*

- Carried out practical conservation work as part of the local Wildlife Trust volunteer team

Thanks are due to all those who have contributed to this newsletter. I would particularly like to acknowledge the VCRs, who make such a big contribution to the work of the BSBI. I would like to extend a warm welcome to the following new England VCRs: James Harding-Morris for North Lincolnshire (v.c.54) and John Martin and Mags Cousins for Shropshire (v.c.40). There are also the many photographers, whose images of plants in England, submitted to the BSBI photographic competition, are scattered throughout the newsletter, often near a mention of the relevant county.

Iris pseudacorus (**Yellow Iris**), Shropshire (Sarah Freeman)

Do let us have feedback on EBN as this will help improve content. It might also provide interest to have a letters page, so do send in controversial viewpoints for publication.

News from the England Field Meetings Secretary: Mary Dean

It was a pleasure to restart our Field Meetings programme in 2021. Nine meetings, consisting of ten field days, were successfully run and I thank all those who organised and

led field meetings. Meeting reports can be found in the Yearbook 2022 and my report on the 2021 meetings at the BSBI England AGM 2022 can be found on page 13.

We have ten field meetings in the 2022 programme with details and booking information in the Yearbook 2022 and on the Events webpage. At time of writing in May, one of these, Mark Spencer's meeting at Limehouse recording for the London Natural History Society's London Flora Project, has already taken place.

Heracleum sphondylium (**Hogweed**), Greater London (Lucia Chmurova)

Four meetings are due to be held in June. Mike Porter is leading a sedge training meeting in Cumbria on the 11th June and a two-day general meeting 11th / 12th June in North Somerset with leaders Helena Crouch and Liz McDonnell. The following weekend Mark Spencer is leading a recording meeting in Middlesex and on the last weekend in June a general meeting in Hertfordshire is led by Ian Denholm, Alla Mashanova and Astrid Biddle. Details and booking information for all meetings is on the Events page of the BSBI website.

If you prefer to botanise closer to your home, there will be a number of local botany group meetings over the summer and contact details for these are on the Local Botany webpages.

If you would like to lead a meeting in 2023 or know of someone who might be persuaded to run one, please get in

touch. It's not too early to start getting permissions for next year.

News from the England Officer: Pete Stroh

Pete produces a regular England roundup for BSBI News, so information given there is not duplicated here. Most of his work has been revolving around Atlas 2020 and you will have seen the regular updates in BSBI News. A sub-committee including representatives from all the country and standing committees is discussing the launch plans. Pete has also been supporting the England VCRs, answering email queries and uploading records on spreadsheets to the DDb. He notes that VCR vacancies for West Gloucestershire (v.c.34) and Sussex (v.cc.13,14) may be filled before too long. There are still vacancies for Surrey (v.c.17), Essex (v.cc.18,19), Bucks (v.c.24), and Sark (v.c.113) so if you are interested do contact Pete for further details of what the role might involve. Further news is given in his report to the EAM, which is on page 11.

Stellaria holostea (**Greater Stitchwort**), Surrey (Lucy Morley)

The Committee for England 2022 – 2023

The following members were elected to the Committee at the AGM. The posts of Secretary and Newsletter Editor are currently vacant.

Jonathan Shanklin (Chair, Hon. Field Meetings Secretary and VCR for Cambridgeshire)
Mary Dean (Trustee, England Field Meetings Secretary)
Ian Denholm (Trustee, Editor-in-Chief *British & Irish Botany*, VCR for Hertfordshire)
Mark Duffell (Botanical consultant and tutor)
Anne Haden (VCR for Jersey)
Chris Metherell (VCR for North Northumberland)
David Morris (VCR for Oxfordshire)
Jo Parmenter (Secretary of S&D)
Fred Rumsey (Referee)
John Swindells (Wild Flower Society)
Thomas Ward
Lizzie Cooke (Plantlife Representative)

Dryopteris filix-mas (**Male-fern**), National Trust Clumber Park (Dene Wood)

As noted in the AGM minutes, there have been some changes to the Constitutionand the revised version is on the BSBI Governance page for England. The Trustees will be producing a Governance Handbook and material relevant to the CfE that is in it will be published in EBN when available.

If you would like to get involved with the committee do get in touch with the Chair, who currently acts as Secretary and

Editor as well. The Committee has to hold at least two meetings a year, but they can take place by Zoom. When we resume in person meetings we will endeavour to hold one at a convenient location, perhaps in association with another event.

Anemone nemorosa (**Wood Anemone**), Rugby (Jade Lake)

The Committee minutes are on the password protected BSBI Governance pages, which are accessible to all BSBI Members. The next CfE meeting will be held on October 17 by Zoom, and if you have any suggestions for the Committee to consider do get in touch with the Chair.

Annual Report for 2021 from the Chair of the Committee for England: Jonathan Shanklin

The second England Annual Meeting was held via Zoom in 2021 February and attracted a good attendance. Further sets of meetings for England recorders were held via Zoom in 2021 October and 2022 February. Another edition of the Newsletter *English Botanical News* was published in May. It included a report of the Annual Meeting and the Zoom meetings held with England recorders in 2021 February. Contributions for the next newsletter would be welcome as would an editor. Field meetings took place again across England. The CfE met in October and in January, again by Zoom. An updated poster describing the Committee, together with a flash talk, were produced for the AEM and can be seen on the AEM web page. The Committee has continued to discuss the possibility of an England wide project. Several issues concerning England have taken up

time: the vexed question of access to the BSBI DDb has polarised opinion, and although there is a BSBI working group on the topic, it has rather surprisingly not consulted with the Chair. As mentioned at the last AGM, the programme of winter talks has gone ahead, with four interesting presentations.

Looking forward we hope that members will be encouraged to participate in the England Project and will get out in the field and hunt for “lost” plants in much the same way that they hunt for flowering plants on New Year’s Day. There are the results from Atlas 2020 to look forward to, and you can expect to see more on this in future issues of BSBI News. We also hope that it will be possible to hold indoor meetings where a large group of botanists can gather together.

Annual Report for 2021 from the England Officer: Pete Stroh

The England Officer role has been almost completely overtaken by my Scientific Officer (SO) role as I continue to focus on atlas work. It is probable that this ‘balance’ of duties will continue for the rest of the year, and, depending on the work programme for 2023, work as SO is likely to dominate my working day for the foreseeable future. The atlas is proceeding well, if not as rapidly as I had hoped. All maps for

Nonea lutea (**Yellow Nonea**), East Norfolk (Simon Harrap)

native, alien and hybrid taxa tagged for inclusion in the atlas have been finalised, and draft results are days away from being scrutinised. All alien captions have been drafted, checked and completed, hybrid captions to accompany the maps have been written, and we are beginning the final round of checking native captions. I have just started to check, format and standardise references, which is not an insignificant task! Following the completion of maps and captions, I will be focusing on writing and coordinating the writing of the introductory chapters for the book. We will then move on to the Summary Report for Britain. Princeton University Press will be publishing the book (as a joint imprint with BSBI); the online atlas, Summary Report and the book will all be published at the same time, in March 2023. The online atlas design is proceeding well, with many new features that I hope members will find useful, including information concerning phenology, altitudes, and distribution by latitude, based on the validated data held in the DDb. The site also holds a gallery of many thousands of photos provided by Rob Still at WILDguides, which I will be checking in the coming months. I continue to have regular contact with VCRs in England, and further afield, and hope to be able to visit at least a few this summer, if I can manage to escape from my desk.

Cuscuta europaea (**Greater Dodder**), Cambridgeshire (Simon Harrap)

Annual Report for 2021 from the England Field Meetings Secretary: Mary Dean

It is a pleasure to be able to report a successful season of BSBI England Field Meetings in 2021 after the gap in 2020 due to covid restrictions. All 2021 field meetings followed the covid guidance in place at the time, including social distancing measures, and all ran safely. I thank all meeting organisers and leaders for inviting members to visit 'their patch' so that, after a difficult year, botanists again had opportunities to meet fellow botanists, enjoy good company, have fun, see some lovely plants, learn and share knowledge, and make new friends.

Dactylorhiza fuchsii (**Common Spotted-orchid**), Surrey (Lucy Morley)

I also thank organisers and leaders of local groups who have put on meetings for local botanists. Local meetings are important for encouraging local networks and recording, and for providing meetings for those who cannot or do not wish to travel longer distances.

Nine national meetings were run: three were training meetings for sedges, Elms and Cotoneasters; the remaining six covered beginners, recording and general meetings and all welcomed beginners.

The first meeting of the season, Trumpington Meadows, Cambridgeshire (v.c.29), on 22 May, was aimed mainly for

beginners and led by Jonathan Shanklin. Two surprise finds at this site were rosettes of *Dactylorhiza fuchsii* (**Common Spotted-orchid**) and one *Neottia ovata* (**Common Twayblade**). Also in May, Mark Spencer led a recording meeting suitable for beginners at Staines Moor, Middlesex (v.c.21) on the 29th, to record for the London Natural History Society's London Flora Project. Although the targeted rarities were not found, other v.c. rarities, *Anthriscus caucalis* (**Bur Chervil**) and *Verbascum nigrum* (**Dark Mullein**), were seen.

Into June and Mike Porter led one of his ever-popular Sedges Training meeting, this time at Tarn Moss and Eycott Hill, Cumberland (v.c.70) on 5 June, where participants enjoyed a warm, sunny day and studied ten or more *Carex* species, including the scarce *Carex magellanica* (**Tall Bog-sedge**). Louise Hill (leader) and Kay McDowell's meeting was at Fishlake, South-west Yorkshire (v.c.63) on 27th and they successfully refound the rare *Carex vulpina* (**True Fox-sedge**) and also found it in a new site. The next site they visited was a traditional hay meadow called Fen Carr which is managed by the Yorkshire Wildlife Trust, where they saw *Genista tinctoria* (**Dyer's Greenweed**) and *Silaum silaus* (**Pepper-saxifrage**) amongst others.

Silene dichotoma (**Forked Catchfly**), Hampshire (Tristan Norton)

Searches for some Nottinghamshire rare and scarce species at Toton Sidings (v.c.56), led by Mark Woods and Dave Wood on 3 July, were successful with *Verbascum*

lychnitis (**White Mullein**), *Linaria sepium* (*L. vulgaris* x *L. repens*) (hybrid **Toadflax**) and other hybrids attracting most interest. A two-day meeting, based around Great Yarmouth, East Norfolk (v.c.27) was held the same weekend (3 / 4 July) and led by Bob Ellis. Beginners were particularly welcomed at the meeting, which visited the diverse dune flora of North Denes SSSI on the first day and one of the finest fen sites in western Europe at Catfield on the 4th. Highlights of privately-owned part of Catfield included *Liparis loeselii* (**Fen Orchid**) and a large flowering patch of *Cirsium dissectum* (**Meadow Thistle**) which had attracted *Papilio machaon* (**Swallowtail butterflies**). John & Monika Walton's Warwickshire (v.c.38) meeting on 4 July explored the very rich woodland of Warwickshire Wildlife Trust's Clowes Wood reserve. Local scarce plants seen included *Melampyrum pratense* (**Common Cow-wheat**) in full flower and the grass *Agrostis vinealis* (**Brown Bent**).

Lycopsis arvensis (**Bugloss**), East Norfolk (Simon Harrap)

An Elms Training Workshop, led by Brian Eversham, was held at Cambourne, Cambridgeshire (v.c.29) on 24 July, combining an indoor workshop at the headquarters of Bedfordshire, Cambridgeshire & Northamptonshire Wildlife Trust and a visit to the Trust's reserve at Hayley Wood. Brian introduced the group to his new Elm keys and then used the nearby Oaks Wood to examine some specimens including *Ulmus* x *vegeta* (**Huntingdon Elm**) and the county's nominative Elm *U. cantabrigiensis* (**Woodland Elm**). In Hayley Wood the group saw one of the new Elm species *U. sylvatica* (**Hatley Elm**), named for the village south of the wood.

The last meeting of the season on 18 September was Alan Leslie's Cotoneaster training meeting at Cherry Hinton, Cambridgeshire (v.c.29). Alan started with a Cotoneaster that most are familiar with: *Cotoneaster horizontalis* (**Wall Cotoneaster**) and finished with a Cotoneaster which had first been noted at a previous meeting, since determined as *C. insculptus* (**Engraved Cotoneaster**). The meeting also looked at other species finding a few plants of *Seseli libanotis* (**Moon Carrot**) still in flower.

Looking ahead to this field season, the programme for 2022 is in the Yearbook and on the website. There are ten meetings on the programme and others may be added if site permissions are granted. There are two training meetings, sedges (Cumberland (v.c.70) and a *Rubus* study week based in North Somerset (v.c.6). Eight general meetings are planned welcoming botanists of all standards. These are in Middlesex (v.c.21) (two meetings), North Somerset (v.c.6), Hertfordshire (v.c.20), Kent (v.c.15), Durham (v.c.66), Shropshire (v.c.40) and Northamptonshire (v.c.32).

Erythranthe guttata (**Monkeyflower**) Bucks Mills (Mary Breeds)

Have you got a fabulous site in your area that you want to show to members? Do you have interest and expertise in a specialist group? It's never too early to think about organising a meeting for next year and the organiser doesn't have to be the v.c. recorder, everyone is welcome to organise. If you are unsure about leading on the day, we

might be able to persuade someone to do this for you, if you can do the meeting organisation.

England Annual Meeting 2022 February 27

Draft Minutes of the 3rd AGM

1. The chair, Jonathan Shanklin, began the meeting promptly at 2pm and welcomed members and participants. He reported that he aimed to conduct the AGM as quickly as possible in order to maximise the time available for the speakers. 66 members were present, so the meeting was quorate.
2. Phyl Abbott, Philip Oswald, Yvonne Leonard, Anne Horsfall, David Larner, Norman Robson, M J Tuit and Gordon Hanson, who had passed away since the last AGM and were resident in England, were remembered in a short period of silence.
3. Apologies were received from Pete Stroh, Ian Denholm and Lynne Farrell
4. The minutes of the 2021 Annual Meeting were approved as correct.
5. There were no matters arising.
6. The existing members of CfE were first formally elected for a three year term at the AGM in 2021 as

Umbilicus rupestris (**Navelwort**), Shropshire (Sarah Freeman)

the first AGM was not quorate. Chair: Jonathan Shanklin; Committee Members: Mary Dean, Ian Denholm, Anne Haden, Chris Metherell, David Morris, Jo Parmenter, Fred Rumsey, John Swindells. [At this point I should have thanked Martin Godfrey, who was retiring from the Committee, for his support and help in getting the Committee underway.] Thomas Ward was formally elected to the Committee.

7. The England Officer's report from Pete Stroh see page 11.
8. The Chair's report from Jonathan Shanklin see page 10. There were no questions.
9. The Field Meetings report from Mary Dean see page 13. Mary introduced it and there were no questions.
10. The Trustees had asked the CfE to look at its Constitution, with a view to amending some details to match those of the Trustees and Standing Committees. The Chair had drafted some amendments in consultation with the Committee and England VCRs and this was tabled at appendix 5, with changed paragraphs highlighted. There were no objections, so it will be forwarded to the Trustees. [Subsequently the Trustees requested the addition of "a Trustee" to those invited to participate in CfE meetings]

Borago officinalis (**Borage**), Surrey (Lucy Morley)

11. The England Project was launched at the meeting. The Chair gave those present a rough outline of the project, emphasising that it was one that all botanists could take part in. Entitled Project LORE (LOst Rarities in England), the basic aim was to search for plants apparently lost from hectads, which could be rarities in many different senses of the word. The full project guidance is on the England web page and is given later in the EBN. It is hoped that results on all levels will be published in EBN.
12. There was no AoB.
13. The 2023 Annual Meeting will again take place by Zoom with a preliminary date of 2023 February 26. If the opportunity permits it might be possible to get together at the launch of Atlas 2020.
14. The formal AGM closed at 14:20, which gave additional time for the speakers.

Neottia nidus-avis (**Bird's-nest Orchid**) Powerstock, Dorset (Mark Pike). For some counties it will be a LORE target.

The meeting was then treated to three short talks: Conservation of Juniper from Matt Pitts (Plantlife), Resources for botanists from Chris Metherell and How to enthuse recording networks from Michael Philip. After a short tea/comfort break the Chair gave an address on "How I became a botanist: a journey from North Wales to Cambridge and the Antarctic". All the talks can be seen on the BSBI YouTube channel with summaries given here. The EAM closed at 16:40.

Jonathan Shanklin
Acting Secretary

Conservation of Juniper **Matt Pitts (Plantlife)**

Matt began by showing the distribution of Juniper in England according to BSBI records. He then focussed on the south of England where there is a strong connection between the plant and chalk landscapes but where there is a massive population decline. Zooming in to Wiltshire, he showed an image overlain with the Juniper records, SSSI boundaries and priority habitat designations. He noted that Juniper needs disturbed ground to regenerate, so it is associated with old quarries and trackways. Former sites are now often ploughed or scrubbed over. An experiment in conservation was carried out where some secondary woodland (with a few surviving Junipers) was cleared. Most of the surviving trees were old (60+) and at that age they are not very fertile. Within a year some chalk grassland plants were returning. In other areas, where there was still relatively species poor grassland, topsoil was removed and dispersed of on nearby arable land Juniper berries were collected, the epicarp removed to reveal the seed and sown in winter. Germination can take two or three years. No other species were sown in the scrapes, but within a decade they developed into high diversity chalk grassland, with young Juniper bushes. Subsequently the areas are managed with low intensity late summer grazing. [For the

Creating a scrape

The results

full talk see the online video and there is further information on the Plantlife webpage].

Resources for botanists **Chris Metherell**

Chris recommended using the A-Z listing on the BSBI web page to help find resources, as there was a lot of material buried in various tabs. Most vice-counties have a local page, which often details the local flora. Local Floras are a valuable introduction to your local flora, ecology and botanists and some are available online. BSBI Handbooks are a valuable resource and don't forget PlantCrib (both printed and online). Alien plants can be particularly difficult for beginners and there is a BSBI web page for illustrations of alien plants. [*Another very useful resource is the Manual of the Alien Plants of Belgium. Ed.*] Do make use of herbaria as they allow valuable comparison between both identification keys and live plants [*though many will not allow live plants to come in without treatment Ed*.] There are back numbers of BSBI journals, some open access, but others only available to members. There is also the biodiversity heritage library. iSpot allows you to post photos and get ids, as does iNaturalist and other apps. Naturegate allows you to input features of the plant that you can see to produce an identification – essentially a multi-access key.

County web pages are a useful resource.

Several more Handbooks are in preparation.

iRecord allows you to input your records and get feedback from verifiers – Chris had good experience with this and it can become quite interactive. *Euphrasia* (**Eyebrights**) get a particularly quick response [*Chris is the referee. Ed.*]. [*A BSBI recording app is under development and should be released for general use next year. Ed.*] The NBN (and in future Atlas 2020) gives a good picture of where plants are, including rare species. Peter Llewellyn has a site for UK wildflowers with a good set of images that have been checked by the WFS. In response to a question Chris said that because many id apps had artificial intelligence behind them and so were continually improving. Many old picture books have good images for identification, but often their taxonomy is out of date. [View the talk].

There is a lot of information on the internet.

How to enthuse recording networks - The 'loose network model'

Michael Philip (VCR for Dunbartonshire, v.c.99 and joint VCR for Lanarkshire, v.c.77)

Following the 35-year tenure of Dr. Peter Macpherson as Vice-County Recorder for Lanarkshire was a daunting prospect. An eminent BSBI figure, he had built up an enviable herbarium and completed his 'Flora of Lanarkshire', having done most of the recording himself - aided by a few trusted individuals.

My own story could not be more different: a lifelong hobby botanist, yes, but a career in Music education.

There's a silly story about someone in Glasgow asking for directions to Sauchiehall Street, to which the reply was, "If I was going to Sauchiehall Street, I wouldn't start from here."

All we can do is start from where we are - so my approach to the VCR role was to build a team, which has now grown into a network of 79 people, known collectively as 'Team 77'. In the orchestra analogy, each player has a different sheet of music in front of them and a different instrument in their hands, and the conductor's job is to harness all those skills and give every person the opportunity to learn and to shine.

Michael guest-conducting the Kalamazoo Concert Band in Michigan, USA

In terms of botanical recording, this approach has proved remarkably effective and the resulting input into the DDb has consistently been roughly double that of any previous period.

On the basis of this momentum, Jim McIntosh (BSBI Scottish Officer), proposed adopting the 'loose network model' in two neighbouring vice-counties in 2021 - Renfrewshire (in co-operation with VCR Keith Watson) and Dunbartonshire (where the VCR post was vacant).

The story during lockdown had been one of inactivity in both cases, in Renfrewshire simply because the VCR had been obliged to work from home in England! The new Renfrewshire network grew in its first year to 37 people. 21 different people contributed to active fieldwork and 13 field outings were held. As a result, Renfrewshire gathered the

third-highest total of records in Scotland last year: over 15,000.

The Dunbartonshire experience can be used as a case study in network development.

Step 1: Be clear about your 'Why' In our case it was to encourage lots of interest in field botany locally, building skills and increasing recording activity.

Step 2: Set a specific goal In our case we published the aim, "to achieve a fresh record for every one of our 704 monads over ten years."

Step 3: Hype, Hype, Hype! We publicised the goal - "a big team is forming . . ." making it sound irresistibly attractive ("I want to be part of that.")

Step 4: Be encouraging Every individual matters and can contribute. A lively Newsletter celebrates progress - making everyone feel good. "People are drawn towards the source of their encouragement."

Step 5: Be organised We have an attractive and ambitious Outings Programme, we handle incoming data swiftly, and we respond promptly and positively to every email. **If you're not prepared to give significant time to being really organised, don't even consider starting a network!**


Michael presenting the talk

Step 6: Man management As in a football team, or an orchestra, each individual should be developed.

Set each person appropriate challenges from time to time; use all available gifts and skills; take time to listen; offer training or mentorship opportunities; encourage personal initiative and action.

So what has been the result of this approach in Dunbartonshire in the first year?

54 people joined the network

28 people took part in fieldwork

19 field outings were held (and **12** experienced people also worked on their own)

20,493 records were gathered (highest number in Scotland in 2021)

10,738 of these were New Monad Records

Saxifraga hypnoides (**Mossy Saxifrage**), The Cairnwell, Glenshee (Alex Scott Fairley)

884 species recorded

83 monads 'well-recorded' according to our criteria

We're therefore on track to record every monad afresh in ten years. So we've asked the killer question in our spring Newsletter: **"Can we do it in nine?"**

Conclusion

The **'loose network model'** has enormous potential for motivating people with an interest in wild plants to enjoy

the company of colleagues, improve their skills, and feel part of a common cause.

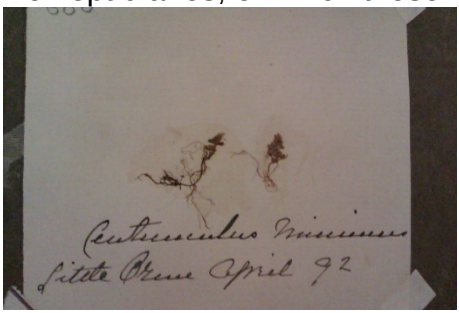
It also holds the promise of **increased BSBI membership**, and offers an obvious vehicle to develop and mentor **potential new VCRs** over time.

We need to adopt the **network** concept into our thinking, planning and vocabulary: a structured and well-resourced network of 122 people across three vice-counties is something quite different from a 'local group'!

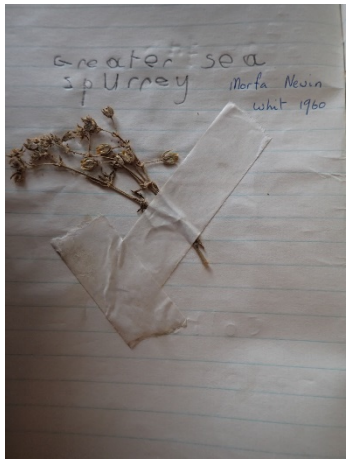
Anyone interested in exploring network development in other parts of Great Britain and Ireland is welcome to get in touch. A network training resource is now available and we're looking forward to trialling this with any brand new network initiative! We now have six years of experience and are happy to offer advice and support. [View the talk]

How I became a botanist Jonathan Shanklin

Interest in botany runs in the family. My great-grandfather, Harry Thomas, was a noted natural historian in Llandudno. He kept diaries, of which those from around the start of the Great War remain, which include mention of local plants. He also kept a volume of pressed flowers "found in the neighbourhood of Llandudno". Many of these are first county records, though have yet to find their way into the DDb. He also had an interest in Antarctic exploration, of which more later.



My parents were both geologists, with my father becoming the consulting geologist for Sir Alfred McAlpine. They were both involved in the Liverpool Geological Society, and organised field trips to interesting sites; the Society also held a Conversazione (the equivalent of the AEM/BIBConf). One of these trips was to Hendre Quarry in Flintshire and I remember the excitement of finding *Ophrys apifera* (Bee Orchid) on the quarry scree slopes – which as children my brother and I thought were great for climbing.



We initially lived on the outskirts of Wrexham, near Watt's Dyke and I went to Acton Park primary school. Here we were asked to make books of pressed flowers and I still have these – the earliest useful record was made when I was aged six. My mother was a rather better record keeper and also kept books of pressed flowers. One book from a holiday to Ireland included a lot of plants from around Schull and Barley Cove. All the records have been digitised and most are now in the DDb. Quite a few of those from Ireland turned out to be first county records, showing how useful it can be to digitise old accounts.

Other resources that generated interest in the natural world at that time included Brooke Bond tea packets, which included a card in each packet in a series of interesting subjects from astronomy to wildlife. Shell petrol stations also produced beautiful guides, which are now collectors items.

We gained places at King's School, Chester for secondary education and my parents purchased The Old Rectory in

Dodleston in order to be closer to school. With the church being next door it was perhaps inevitable that I was attracted to church bell-ringing, something that I still practice. Bell-ringers have excursions too, and today I quite often search the churchyard for plants, particularly if I have previously rung at the church. A further aside here is that the house lawns have been cut continuously for over 100 years. Last year my sister left part of one, which historically had been regarded as the croquet lawn, uncut for "no mow May". Much to our surprise up popped *Stellaria graminea* (Lesser Stitchwort), presumably having survived since the lawn was first laid.

From King's I went on to Magdalene College to study natural sciences at Cambridge. My area was physical sciences, which included geology but I specialised in physics wanting to become an astronomer. My maths wasn't good enough for a PhD in that, so I did a teacher training course with a view to becoming a teacher. However I saw an advert for a physicist with the British Antarctic Survey and succeeded in gaining the post. During these early Cambridge days I had only a passing interest in botany, sometimes counting the number of flowers that I could recognise, though not necessarily name, on the walk along the Coton Footpath between BAS and the canteen at the Cavendish Laboratory. I did however join the Cambridge Natural History Society (CNHS) as a student, as at that time they had a geology section, which organised field trips.

CNHS geology section Fenland excursion at the Holme Fen Post.

My work at BAS involved analysis of records coming back from the Antarctic stations. This included weather and ozone data. One of the primary roles was supervising the digitisation of the ozone records, writing computer programs to reduce the manual readings to derive ozone amounts and verification of the resulting records. This was a time consuming process as there was a large backlog of data to work through. One year we had an open day at the Survey and I thought it would be reassuring to public visitors if I showed them the latest ozone data, comparing it with the late 1960s which my boss had previously worked up. Then they wouldn't be worried about using aerosol spray cans or flying on Concord. However when I plotted up the graphs they were anything but reassuring, with springtime values much below what my boss had found. Eventually I was able to work through all the backlog and was then able to show that there was a systematic decline in the spring ozone values. This was the discovery of the Antarctic ozone hole.

Jonathan at the BAS Halley station measuring ozone

The CNHS also held an annual Conversazione and BAS was invited to exhibit at one of these, so I prepared a poster describing the ozone hole discovery. As a life member I thought that I should go along to the AGM and they mentioned that they were looking to encourage greater membership. I made the

Max Walters on Magog Down

mistake of asking whether they had a web page and so was immediately brought onto their Council as webmaster! They still had a few field excursions, so I thought I should go on these to learn a bit more. One, on Magog Down, an area of restored chalk downland near Cambridge, was led by Max Walters. A tip that he gave was to learn the Latin names of plants, as this would enable you to converse with foreign scientists even if you didn't know their language.

The Coton Footpath around 2004. It is very different today as the young hedge has grown and the right hand verge, which supported *Lathyrus aphaca* (**Yellow Vetchling**), has largely scrubbed up.

The following year the President approached me saying that he thought that they should have someone a bit younger as the next President. I pointed out that I really didn't know much about natural history as I was a physical scientist, but had my arm twisted. One initiative that I started was to organise a series of what were initially phenological walks along the footpath between BAS and the Cavendish. The idea of this was that if the walks were repeated over many years we could build up a picture that would help illustrate climate change. It turned out that the footpath ran through one of the tetrads that the BSBI was studying for its local change project, so the focus gradually changed to recording the botany. I joined the BSBI and much of the rest is history.

As a beginner botanist I was always (mistakenly) finding rare plants and it took patience from mentors like Alan Leslie and Charles Turner to improve my id skills and for me to realise that most plants are not rare. For a long time my

walks were weighed down by Stace's *Field Flora*, Blamey & Fitters' *Wild Flowers of Britain & Ireland* and then John Poland's *Vegetative Key*. Slowly my skills improved, particularly by working through keys on my own and beginning to understand what they actually meant, supported by the mentors explaining where I had gone wrong. It is however very important to continue learning and BSBI field meetings are a great way to do this.

Jonathan at the Cambridge University Eddington site (Peter Leonard)

The recording will tell you much more than summarised here, about climate change, the Antarctic ozone hole and the Antarctic and sub-Antarctic flora, so do pay a visit to the BSBI YouTube channel.

Regional Recorders' Zoom Meetings

The chair organised Zoom meetings for England recorders in October and February, each split into three groups to keep numbers in each session manageable. Notes from the meetings were circulated to all the recorders. These notes provide some feedback for the wider membership.

The focus at the February meeting was on discussion of the England Project, but a few other issues were also aired. The project discussion resulted in several improvements to the draft document and resulted in the guidance which is printed in this EBN on page 104. We do encourage all those who would like to, to take part.

The question of access to the DDb records continues to be a thorny one, with firmly held and often polarised views. At one end of the spectrum is a desire to have full open access to all botanical records, whilst at the other there is a wish to restrict access to hectad species lists. Those most strongly in favour of open access are generally those where the law allows freedom of access to the land. Those most strongly in favour of restricted access are often those in southern England, where there is heavy population preasure on fragile sites and many landowners with private estates do not want public access. Most VCRs are however quite content to authorise full access to members with whom they have personal contact and hence are "trusted". Something to look forward to are the new graphics associated with Atlas 2020, which will give stunning views of plant distributions. For the moment the DDb maps page provides species distribution maps at tetrad resolution.

Silene flos-cuculi (**Ragged-Robin**), Rugby (Jade Lake)

Allied to this is the BSBI's relation with Local Record Centres (LRCs), who often make records available to VCRs and vice-versa. For some, their business model may be affected if there is widespread public access to records,

although the LRCs do provide considerable “added value” to the raw records.

Recording

Be aware that whilst many GPS units give a precision of 10-digits, unless you have a very expensive differential GPS this is only accurate to 8 figures at best and often only 6, for example in woods. Some GPS can display a map showing where you are, and if this includes the OS 1:25,000 maps then you can cross check the apparent GPS position with where you know you are on the ground. An alternative is to make notes and then use an online map to derive the exact position to use when logging the record.

Caltha palustris (**Marsh-marigold**), Banbury (Nicholas Barber)

An issue, almost certainly insoluble, is that boundaries are often differently defined by different groups. This applies at county level, where v.c., admin county and LRC boundaries may all be different, and also with sites where NNR, SSSI, LWS and management unit boundaries may all differ. It is helpful to use consistent names and boundaries as for example, it makes compiling site species lists much more straightforward. This can become important if sites are being considered for designation as part of a local nature recovery network. If you are unsure about a local site do consult your local VCR.

Tom Humphrey has been working on a new BSBI data entry app, which may be ready for testing over the summer, perhaps at the ASM.

Atlas 2020

A mock-up of the new online Atlas 2020 has been demonstrated at several meetings and it looks stunning being able to display information in a multitude of ways. As you will have read in the BSBI News and in the enewsletter, publication of the Atlas will now be in 2023 and the online version will be publicly available. A summary report is being written covering Britain & Ireland. There will be a couple of pages devoted to each of the four countries. The Trustees have set up a task group to plan the launch and this will include representatives from all the country committees.

Good use of apps

What, where, who and when are the important components of a record. Species naming in iNaturalist is (was?) poor in part because of a bias towards American species, though as an AI system it has the potential to learn. iRecord should check whether a species has been recorded in the hectad previously (using the NBN) and offer a likelihood on this basis. Many records have photos and often a correct id, though grid references are sometimes poor. Some are at 10 km resolution as the contributor didn't zoom into a location map, or are clearly in the wrong place. Pseudonyms of recorders on iRecord often arise because the recorder hasn't logged in. For botanical records it is important that the VCR should know who the recorder

Lamium album (**White Dead-nettle**), Swaffham (Jennifer Jones)

is as this helps understand the probability of the record being correct.

Verification is a big job and it is often difficult for the verifier to go beyond saying that the record is plausible, particularly if there is no associated image. Some VCs have a team of accredited verifiers who direct possibly contentious or interesting records to the VCR. They may set rules, for example rejecting all records from pseudonyms. Some VCRs spend an hour a night on verification. S&D have formed a working group that will investigate problems and draw up new guidelines for members and VCRs.

iRecord is easy to use for casual use and for compiling site lists. We should be aware that some botanical records are not made for botanical reasons, but for example mapping species used by pollinators at fine detail. Often records are made in gardens and many of these would not be acceptable as botanical records. It is not always realised by the original recorder how the records will be used and they may not be aware that botanical records will go to the BSBI.

BTO have added orchids to their bird-track app, with records assumed to be going into iRecord. Other apps that some VCRs have tried are PlantNet and Google Lens. Both of these only work on line. Instant id is fine, but the evidence shows that it leads to poor recall, whereas manual id using keys gives better recall.

Erigeron acris (**Blue Fleabane**), Braunton Burrows (Mary Breeds)

Record transfer

Understanding how a record you have made in the field eventually gets to your VCR is quite important. In the old days, these would have been written down on paper and sent in the post to the VCR. Most now come electronically in a variety of forms, from simple text to spreadsheets. Increasingly records are being logged via apps on mobile phones.

Ervum tetraspermum (**Smooth Tare**), Binstead (Andrew Platt)

Records are transferred from iNaturalist to iRecord. Some LRCs get downloads from iRecord, as does the DDb. Records may be verified in iRecord or on the DDb. It may be better if the local LRC does the initial verification (eg checking site names/grid references), as they will also be handling many non botanical records from similar sources. It is preferable not to have duplication of records as they may be in different stages of verification. The BSBI needs to be involved at a national level – it may lead to unnecessary duplication of records if VCRs make local arrangements, either with LRCs or members.

Geoffrey Hall is on his LRC advisory group and had drawn up a useful diagram showing the myriad ways in which data was transferred, often with duplication. He has writen a note on the subject, which you can find on page 36. Interestingly his LRC is based within the law department of the local council as it is deemed to be a matter for planning.

Some records are getting into the DDb that haven't been through the appropriate gateway. They do need to go via the VCR (or referee) as otherwise the VCR (or referee) is not able to be a gatekeeper and the quality of the DDb will degrade. An example is where many horticultural records (*e.g.* from gardens) have been added to the DDb. When the Invasive Species Secretariat checked the DDb for records of invasive or potentially invasive species they found frequent occurrences, until it was pointed out that these were not escapes, but still in gardens. There can be significant impact on UK science when data is misleading.

Seed sowing campaigns

One risk with creating new "wilderness areas" is the introduction of non-native species (non-native at both at the local and national level). We wondered whether prairie style mixes actually counted as a net biodiversity gain, though sometimes the associated disturbance allows interesting local arable weeds to germinate. A national scale "Billion Seeds Project", run by the Rotary Club, is in the air, where seed mixes would be sown at random across the country. Peterborough has a "John Clare County" project (and many other local authorities have similar plans), but local knowledge of habitat just isn't there.

Onobrychis viciifolia (**Sainfoin**), Martin Down (Mark Pike)

Confusing plants

It was thought worthwhile having a meeting, perhaps as part of a future Spring Conference, to review species pairs where ids changed at county borders. Fred Rumsey confirmed *Lemna minor* (**Common Duckweed**) and *L. gibba* (**Fat Duckweed**) were one such pair. Another was *Centaurea nigra* (**Common Knapweed**) and *C. debeauxii* (**Chalk Knapweed**), although Ian Denholm noted that a student genetics project had shown that the entire Hertfordshire population was introgressed. The NHM is going through their herbarium specimens and it might be possible to include other herbaria. It might then be possible to see how populations have changed over time. Continental seed, which includes rayed forms is often sown, and taller more robust plants are often harvested for seed. *Symphytum officinale* (**Common Comfrey**) and *S. x uplandicum* (**Russian Comfrey** (*S. asperum x officinale*)) were another pair, although Norfolk noted that as they had the referee, they were right! We often record what we know and steer away from hybrids. *Arctium minus* (**Lesser Burdock**) and *A. nemorosum* (**Wood Burdock**) were also confusing and the definition of what constitutes *Polygonum aviculare* agg. (**Knotgrass**) is clearly a moveable feast. [For the former pair, the illustrations in Rothmaler suggests that they can be distinguished by the petiole cross-section. There certainly seems to be distinctive variation in the shape of the petiole channel. Ed.]

Centaurea nigra (**Common Knapweed**), Bodicote, Oxfordshire (Amber Fraser)

Plant names

The DDb has now been updated with Stace 4 names. In the 2nd reprint of Stace 4 there are some further name changes. For example *Polygonum depressum* has reverted to *P. arenastrum* (**Equal-leaved Knotgrass**). This is to be the last set of updates to the "big" Stace, however a new Stace field edition should be published this summer. One problem with changing names in reprints is when it comes to referencing the publication – you will need to include the reprint number amongst the details.

David Pearman and Martin Rand created a spreadsheet of the name changes, which I updated with the latest amendments. Alex Lockton has further improved it by incorporating a look-up table for all taxa and once hybrids and subspecies are checked this will be placed on the BSBI Taxon lists page.

Roemeria hybrida (**Rough Poppy**), Hampshire (Tristan Norton)

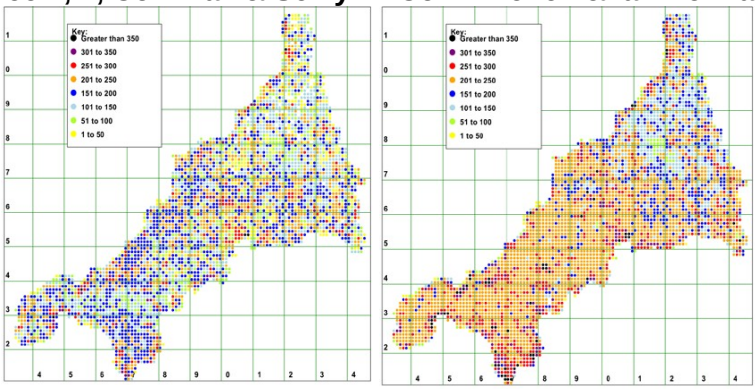
Projects

To an extent project LORE (page 104) is about looking back, but there are other BSBI projects that look forward. The NPMS is designed to measure change over a long period and is suitable for all botanists. Possibly in 2024 there will be a repeat of the local change project, which will measure what new plants have appeared in previously well recorded tetrads.

Vice-county reports for 2021

Thanks to Jim McIntosh for providing these reports, which have been edited into a common format by the Editor. Individual styles have been retained in some cases. Any mistakes arising as a consequence of the editing are the Editor's fault. Lists of interesting species, which were provided with some reports, are in the following section. Illustrations come from the VCRs, their web pages, entries to the BSBI photographic competition and myself.

v.cc.1, 2, Cornwall & Scilly **Colin French & Ian Bennallick**

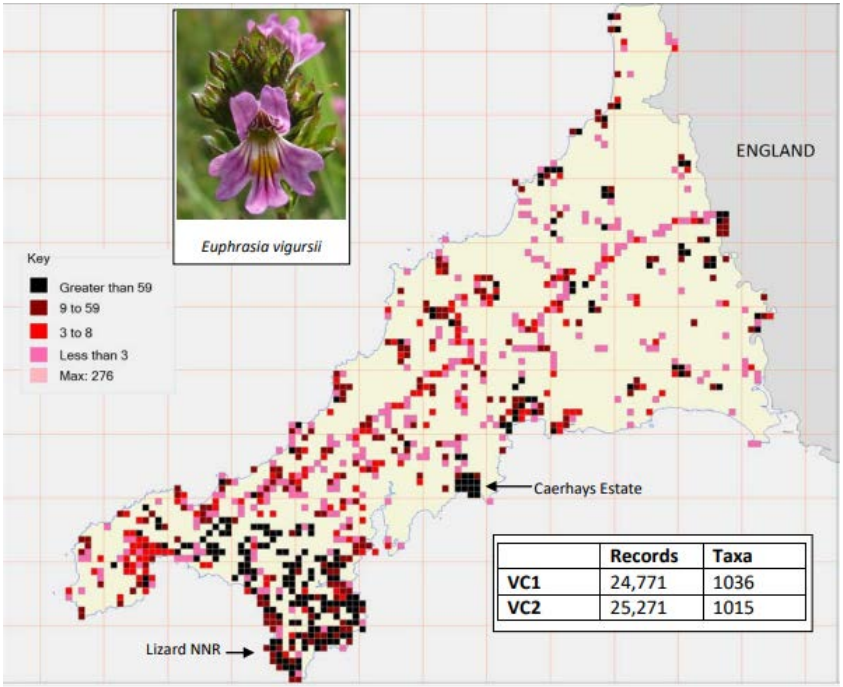


Left: Number of Flowering Plants and Ferns since 2009.
Right. Number of Flowering Plants and Ferns since 1999.

When the *Flora of Cornwall* was published in 1999 there followed a significant lull in the amount of botanical recording as the volunteer surveyors took a well earned rest. This respite lasted about five years. The 2020 publication of *A Flora of Cornwall* has not seen the same reduction in recording as the Botanical Cornwall Group decided to continue systematically surveying every one kilometre square whilst moving the date class forward a decade. Thus for the 2020 Flora we were recording the number of plants since 1999. We are now recording plants seen since 2009, and as a consequence are targeting 1 km

squares that were well recorded between 1999 and 2009 but not since.

In Cornwall we use the ERICA database to hold the botanical records alongside the records of many other taxonomic groups. Currently the ERICA database holds 4,572,797 biological records, covering 29,436 taxa, of which 2,380,014 are flowering plant and fern records (3139 taxa). In 2021 the database grew by 217137 records including 70,994 flowering plant and ferns (99 people contributed the plant records). In total 50,042 flowering plant and fern records were actually made in 2021 (the remainder – 20,952 – were made in previous years). The number of 1km records and number of taxa reported for each Vice County that were actually recorded in 2021 are shown on the hotspot map



Hotspot map showing the number of Flowering Plants and Fern records made in 2021.

The 1999 *Flora of Cornwall* was a tetrad atlas and a significant proportion of the records for East Cornwall were recorded at that scale. Ian Bennallick has an ongoing project to improve the grid reference from tetrad to 1 km for many of those records. Thousands of those records were so converted in 2021. It is now the case that 94% of the vascular plant records have a one kilometre square grid reference or better. The most productive recorders use handheld GPS devices and as a result an increasing proportion of the records made are submitted with hectare or 10 metre square grid references. This increase in precision greatly enhances what can be done with the records for wildlife conservation and other purposes.

Grid reference scale	Number of records	%
One kilometre	927,406	38.96
Hectare	784,272	32.95
Ten metre square	528,634	22.21

The number of plant records according to grid reference scale.

The covid pandemic did adversely affected recording activities in 2021. No formal Botanical Cornwall Group meetings (field meetings or AGM) were organised for the year. Instead some of the recorders met up informally and continued square bashing whilst others, such as Colin Wild, preferred to survey on their own. An intensive survey was undertaken of the Caerhays Estate in 2021 and a rapid, wide ranging survey took place of the Lizard NNR in the early spring, which discovered new sites for some of the key Lizard rarities.

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v.c.5, South Somerset **Stephen Parker & Simon Leach**

During the early part of 2021 the Somerset Rare Plants Group (SPRG) organised a Mistletoe survey, this was very

popular with members and generated many records. Members were asked to collect data on host trees and abundance of mistletoe. The SRPG also encourage members to search for a selection of somewhat under recorded species such as *Anemone nemorosa* (**Wood Anemone**) and *Oxalis acetosella* (**Wood-sorrel**). Most records collected during the year were collected by botanists working independently of in small groups.

Equisetum variegatum (**Variegated Horsetail**) was found by James McGill and confirmed by Pat Acock and deposited in **TTN**, first record v.c.5 and second Somerset. Graham Lavender has been researching *Dryopteris* on and around Exmoor and has generated many new records. Our knowledge of some of the problematic *D. affinis* (**Scaly Male-fern**) group has increased hugely thanks to this work: *D. cambrensis* and *D. paleaceolobata*, especially.

There is continuing interest in recording Dandelions with Graham Lavender, Simon Leach and Jeanne Webb and others actively recording this complex group. There were 57 new hectad records, ten taxa new to v.c.5 and also new to Somerset as a whole. Graham recorded *Taraxacum subnaevosum*, *T. spiculatum* and *T. inopinatum* the first two being more northerly and westerly species, the third a plant that's frequent in S. Wales but much less so in SW England. Jeanne Webb records included *T. wallonicum* and *T. lambinonii*.

Taraxacum agg. (**Dandelion**), Rotherham, Yorkshire (Dene Wood)

Simon Leach recorded *T. lambinonii* and *T. speciosiflorum*. The *T. lambinonii* is the outstanding find of the year, being the first for GB, and Jeanne's being the second!

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v.c.6, North Somerset **Helena Crouch & Liz McDonnell**

In 2021 over 46,000 records were made in v.c.6, input to MapMate (mostly by the VCRs), and sent to the BSBI.

As the year started, restrictions were in place, with another lockdown looming, but members of SRPG participated individually in New Year Plant Hunts. Members of Bath Natural History Society (BNHS) also contributed.

Once lockdown eased, various groups resumed botanical meetings in Somerset. SRPG organised thirteen field meetings, seven in v.c.6, mostly led by the VCRs. These included a Fern Workshop I ran with Fred Rumsey. Somerset Botany Group (SBG) met weekly nineteen times, carrying out surveys of reserves for Somerset Wildlife Trust and others. SBG have continued weekly winter recording meetings organised by Liz. I led 17 weekly botany walks for Cam Valley Wildlife Group and one botanical walk for BNHS, co-led two fungal forays, and led a walk for a group of Mendip AONB volunteers.

Pilosella aurantiaca (**Fox-and-cubs**), Witheridge, Devon (Mary Breeds)

Members of SBG volunteered to do churchyard surveys for the Wilder Churches project developed by SWT and the Diocese of Bath and Wells. I carried out and wrote reports for seven of these, and helped with two others; altogether

the group visited 24 churchyards, receiving the SWT Volunteer Award as a result. I also wrote a survey report for Mendip Golf Course, and gave talks to two local groups, on Flora of the Cam Valley and Ferns of Somerset.

The Rare Plant Register remains an ongoing project. I wrote seventeen new species accounts in 2021.

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v.cc.7, 8, Wiltshire **Richard Aisbitt & Kat Newsbert**

Keeping in touch Most of our botanical activities happen through the Wiltshire Botanical Society. We cautiously re-started outdoor meetings; these were increasingly well attended. Dave Green (Emeritus Recorder for v.c.7) established a WhatsApp group to keep members in touch. This attracted spirited exchanges, often about unusual plants or "what can you spot in this photograph?".

Kat Newbert photographing *Hypopitys monotropa* (Yellow Bird's-nest)

Training Four WBS members completed the Identiplant course with local tutors. We hope for more in 2022.

Recording Filling gaps in Atlas recording, individuals and small groups have added 100 or more taxa to 60 monads over the year, and made smaller additions to many others. We sent out seasonal lists of "Seven Good Plants", encouraging members to search for them and record them. The lists gave descriptions, distribution maps, and photos. Our last (just five plants) is "Asplenium Wall-ferns in Wiltshire".

Rare Plant Register Sharon Pilkington published an RPR for Wiltshire in 2007. Since then, recording for Atlas 2020

has made some species much less rare and has introduced new rarities, so we need an update. Martin Buckland has taken this on and has it almost ready for publication.

Things move on Sadly, Sharon Pilkington is retiring as v.c.7 and v.c.8 Recorder after almost twenty star-studded years, but I welcome Kat Newbert, who is joining me as a new Co-recorder.

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v.c.10, Wight **Colin Pope**

We have managed a few field meetings this year. The New Year Plant Hunt was carried out individually but a few of us were able to meet up for the first time on 24th April to survey a small privately owned ancient woodland where the owner was delighted to be shown a single *Sorbus torminalis* (**Wild Service-tree**) which we discovered. Following this meeting, those held in May, June, July, August and September were better attended; we were generally blessed with good weather and we were able to carry out both recording and assisting members with developing their identification skills.

Most recording was carried out by individuals. No outstanding new records were made although quite a few under-recorded hybrids and non-native casual species were recorded. Many people commented on the abundant flowering of a wide range of orchid species and *Epipactis helleborine* (**Broad-leaved Helleborine**) was recorded from several new sites, some of these being scruffy urban and rural sites where the plant must have recently colonised. It was particularly gratifying to record an excellent, previously un-recorded, coastal herb-rich neutral

An Isle of Wight field meeting

grassland supporting an impressive population of thousands of *Ophioglossum vulgatum* (**Adder's-tongue**) and a previously un-recorded site for *Phelipanche purpurea* (**Yarrow Broomrape**) supporting an estimate of 118 flowering plants.

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v.c.11, South Hampshire **Martin Rand**

Despite a lack of direction towards any single recording project, many botanists did a lot of recording. Bob Wardell continued to build thorough coverage for the SE; highlights included extensions to the coastal range of *Anisantha madritensis* (**Compact Brome**) and a large new population of *Silene nutans* (**Nottingham Catchfly**). Phil Collier and others did likewise in the SW, Mike Rowe getting many verified records of *Cotoneaster* and various hybrids.

Drosera intermedia (**Oblong-leaved Sundew**)

My team and I surveyed local authority sites, adding substantially to localised records. An exceptional refind was *Drosera intermedia* (**Oblong-leaved Sundew**) on a mire near Southampton that is being restored following undergrazing – now one of only two localities outside the New Forest and Avon catchment. An expedition to a private estate in the Avon Valley to chase up historical *Leersia* records failed to find any but turned up new localities for *Pulicaria vulgaris* (**Small Fleabane**) and some good records of aquatics including unusual riverine mats of *Chara globularis* (**Fragile Stonewort**).

Other outstanding records included the first *Himantoglossum hircinum* (**Lizard Orchid**) for 90 years, and a new site for *Fumaria reuteri* (**Martin's Ramping-fumitory**). Lists of interesting finds are published yearly in Hampshire Flora Group (HFG)'s *Flora News*.

The *Himantoglossum hircinum* (**Lizard Orchid**)

During the year I held several online ID workshops, which continue in 2022 together with some follow-up field trips. Coming up are HFG surveys of public and private sites, some repeated during the year. 2022 also marks the start of a collaboration with Wessex Rivers Trust to survey the catchments of our two largest chalk streams (Test and Itchen) for invasive non-natives and several native species thought to be declining.

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v.c.12, North Hampshire **Tony Mundell**

In spite of the pandemic restrictions, I still managed to conduct various plant surveys with a few other botanists. This included a meadow at Hatch Warren and Diamond Wood at East Anton. Another small group of us helped at a Bioblitz at Alton.

I led three field meetings for the Hampshire Flora Group; at Itchen Stoke Mill, at Barton Meadows Reserve and at Edenbrook Country Park. At the latter we saw *Hypochaeris glabra* (**Smooth Cat's-ear**) and its very rare hybrid with *H. radicata* (**Cat's-ear**), growing with much *Scleranthus annuus* (**Annual Knawel**). Specimens of a willow from Itchen Stoke Mill, that I originally suspected were the hybrid between *Salix viminalis* (**Osier**) and *S. caprea* (**Goat Willow**) were identified as *S. gmelinii* by the BSBI Referee.

This species has been confirmed at several v.c.12 sites, but it gets no mention in Stace 4, so it is probably sometimes mistaken as a hybrid of *S. viminalis*. I see that there are 30 records for it on the DDb.

In all 2,795 records of 839 species dated within 2021 were added. These include 12 that were new to v.c.12. With others I spent some time searching for earlier records of various *Hieracium* species. Sadly *H. rigens* (**Rigid Hawkweed**) is now definitely lost from both its former sites. An unsuccessful search at a former site for *H. anglorum* (**Anglian Hawkweed**) did add expertly determined records for *H. cheriense* (**Cher Hawkweed**), *H. grandidens* (**Grand-toothed Hawkweed**) *and H. triviale* (**Grey-headed Hawkweed**).

Galinsoga parviflora (**Gallant Soldier**), Farnham (Andrew Platt)

See also botanical activities in Hampshire.

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v.cc.15, 16, Kent Geoffrey Kitchener & Sue Buckingham

This report covers Kent as a whole, fuller reports (Kent Botany) are provided each year on the Kent webpage. After a covid-induced break for 2020 and early 2021, the Kent Botanical Recording Group (KBRG) resumed field meetings, holding five from mid-July onwards. These were reported in a newsletter in October; find lists were provided to all KBRG members.

2021 saw a total of 27,709 Kent records added to the BSBI database, nearly all being for that year.

We sought to encourage a focus on rare plant register (RPR) species, for which we received over 1,300 records. Three of these, Kent Biodiversity Species, were surveyed and reported specially: *Orchis purpurea* (**Lady Orchid** or **Fair Maid of Kent**), *Polygala amarella* (**Dwarf or Kentish Milkwort**) and *Carex vulpina* (**True Fox-sedge**). The year's Lady Orchid survey covered 5,780 plants in 32 locations. Drafting of RPR online species accounts reached the end of Part S with 16 more accounts added; all earlier parts were updated to cover 2020 records.

The online version of Francis Rose's manuscript county Flora was reissued, with 148 further pages transcribed.

Centaurium erythraea (**Common Centaury**), Badbury Rings, Dorset (Mark Pike)

Our population of *Lythrum hyssopifolia* (**Grass-poly**), discovered in 2020 in a brownfield habitat at Betteshanger, was reassessed at 3,000 plants in 2021 but planning permission was granted for residential development which will destroy the site, despite representations made. On the other hand, the brownfield habitat of Swanscombe peninsula was afforded SSSI protection by Natural England (for which we made supporting representations), although an application for a Development Consent Order for a theme park, bypassing the standard planning process, remains current.

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v.c.17, Surrey **Ann Sankey**

Some key points about botanical life in Surrey:

- Feb/March 2021 – I was invited to check seed mixes for proposed landscape specifications for Highways England M25 J10 improvement adjacent to Wisley & Ockham Commons /protected sites by Atkins. They were very grateful for my expertise & suggested this checking with VCRs should be standard practice.
- April 2021 – a few of us joined with NE & EA to discuss the restoration potential of the wetland units at Reigate Heath SSSI, resulting in NE setting up an SSSI improvement project.
- Also in April, we were again invited to survey some grassland fields on a private estate. These resulted in yet more significant finds and a general boost to the records of this area.
- Unfortunately, a mild brain haemorrhage then curtailed my recording activities but others were able to continue.
- A few field meetings were arranged.
- One of these was a joint one with the Wildlife Trust on an estate now run as a charitable trust that wishes to manage the area sympathetically with wildlife.
- Another large private estate wanted information on its woodlands, some on heathland, also with the aim of sympathetic management. The advantage of these large estates having laudable aims is that of linking good habitats.
- One member worked with her local authority on a site with good populations of *Chamaemelum nobile* (**Chamomile**). She has also encouraged good management of road verges in her area.
- Two of us have been working with NT on the management of two adjacent fields that support Surrey's only remaining sites for

Viola tricolor subsp. *curtisii* (**Seaside Pansy**), Braunton Burrows (Mary Breeds)

Ranunculus arvensis (Corn Buttercup)

To date, about 260 new hectad records were made in 2021.

This is my final Annual Report as VCR for v.c.17.

v.c.20, Hertfordshire

Ian Denholm, Alla Mashanova & Astrid Biddle

Alongside the more routine aspects of a VCR role, it is rewarding to participate in broader initiatives aimed at documenting and conserving the local flora. Three recent examples of such activity are summarised in this report.

Firstly, one field meeting of the Herts Flora Group in 2021 was to Woodoaks Farm near Maple Cross (TQ0393). This had recently been gifted by the elderly owner to the Soil Association (SA), who intend to develop it as a showcase sustainable farming practices. Results of our botanical survey included the discovery of over 100 flowering plants of *Torilis arvensis* (**Spreading Hedge-parsley**) in a conservation field margin! The local SA officer is keen to work with BSBI to protect the *Torilis* but also implement ways of enhancing the flora as a whole.

Plantago lanceolata (**Ribwort Plantain**), Swaffham (Jennifer Jones)

Secondly, we continue to work with the Herts and Middlesex Wildlife Trust (HMWT) and the Herts Environmental Records Centre (HERC) to update information on the status of scarcer species highlighted in a recent State of Nature report for the county. The aim is to fill as many knowledge gaps as possible to inform conservation priorities.

Thirdly, we support the annual botanical surveys of Local Wildlife Sites led by HMWT and HERC through participating in field surveys, scrutinising the resulting reports and recommending management options. This work has recently been expanded to encompass riverine sites and we have produced a list of indicator species to be used alongside other physical, topographical and ecological data to assess the overall quality of river-courses and to identify where remedial measures are required.

v.c.21, Middlesex **Mark Spencer**

Unsurprisingly, 2021 was another quiet year for fieldwork - urbanised areas such as Middlesex are particularly problematic to move around in these times. Nevertheless, the joint BSBI and London Natural History Society recording trip to Staines Moor SSSI went ahead in May.

I am hoping to soon start on a dual project with our local biological records centre, Greenspace Information for Greater London (GIGL), Salix Ecology and a volunteer. This project aims to produce a London-wide Rare Plant Register and an axiophyte species list.

Cirsium palustre (**Marsh Thistle**), Banks of the River Eye, Melton Mowbray (Richard Mabbutt)

Nationally, one of 2021's most interesting botanical discoveries was made on the green roof of a private office block in central London; *Serapias parviflora* (**Small-flowered Tongue-orchid**), was found on the 4th June by Mark Patterson. This is only the 2nd location (the other being in v.c.2) in Great Britain and Ireland for this largely Mediterranean species. Another notable discovery in the county was the non-native grass *Ehrharta*

erecta (**Panic Veldtgrass**), which was found by Mario Maculan growing alongside the Grand Union Canal. Mario also found this potentially invasive plant growing in Wimbledon (v.c.17).

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v.c.29, Cambridgeshire, Jonathan Shanklin

Covid did not prevent the Cambridgeshire Flora Group from holding any local meetings, though the first was delayed by a few days to take it out of the lockdown period. In addition, the Cambridge Natural History Society (CNHS) field meetings, when they were permitted, invariably included botanical recording. Three BSBI national meetings took place in the county.

A misty October morning for the final local group meeting of the year.

Once again a combination of Covid restrictions and the new date class encouraged a lot of recording, particularly in the area around Cambridge. Across the county over 40,000 records were logged in MapMate, with a few additional records of species not in MapMate having to be logged directly to the DDb. The usual annual updates of the RPR and Register of Plants of Conservation Concern (RPCC) were made at the beginning of the year, informed by these records.

Alan Leslie (Emeritus Recorder) compiled a report on the more interesting finds for the local journal Nature in Cambridgeshire. He highlights the re-finding of *Triglochin maritima* (**Sea Arrowgrass**) on the bank of the River Nene,

with its only previous record being in 1930. In addition Alan has been finding or re-finding many records of Roses, and also found many new hybrids for the county and GB.

Thorough surveys were made of two sites: Madingley Hall and Park, and the Gog Magog Golf Course SSSI and in addition the CNHS covered Trumpington Meadows Country Park and Byron's Pool LNR. Few of the plants reported from Madingley Park in 1990 were re-found, as the grassland of the University Farm, which might have been considered as SSSI quality in 1990, was "improved" shortly afterwards. The Gog Magog Golf Course SSSI is an absolute jewel of chalk grassland, with abundant *Linum perenne* (**Perennial Flax**) and our only extant site for *Prunella laciniata* (**Cut-leaved Selfheal**) and its hybrid with *Prunella vulgaris* (**Selfheal**).

The 2021 county newsletter circulated news, meeting reports and excursion plans to the local botanical community. A county web page was maintained, and emails were sent to local botanists in advance of meetings. I took part in two County Wildlife Sites panel meetings as the botanical expert. Locally we were saddened by the passing of Philip Oswald, whose obituary appeared in BSBI News.

Prunella laciniata (**Cut-leaved Selfheal**)

I have provided records in response to several inquiries. It seems to be increasingly the case that people want botanical data to argue against planning applications, even when the botany has no relevance to the application.

v.c.30, Bedfordshire **Jan & John Wakely**

The Beds Flora Group managed a total of 14 field trips during the year. 3 of these were to private sites which had not been previously surveyed and which yielded some impressive records. One of these was to a large meadow recently acquired by the Wildlife Trust. Formerly horse-grazed it is adjacent to Flitwick Moor, a wetland site of national importance. Several specialities of the SSSI were recorded together with some unexpected finds.

Capsella bursa-pastoris (**Shepherd's-purse**), Oxfordshire (Terry Swainbank)

I gave my first lecture on the county flora to a study group and realized that it was not as daunting as anticipated and represents a good means of 'spreading the word'. It will not be my last.

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v.c.33, East Gloucestershire **Christopher Dixon**

Despite the lack of organised meetings, over 24,000 records were collected in 2021 in v.c.33. Some 221 monads produced at least 40 records each, representing about one-eighth of the area of the vice-county. A Rare Plant Register was completed, to be published shortly by the Gloucestershire Naturalists' Society.

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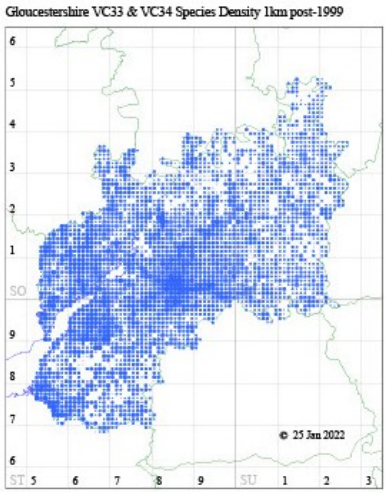
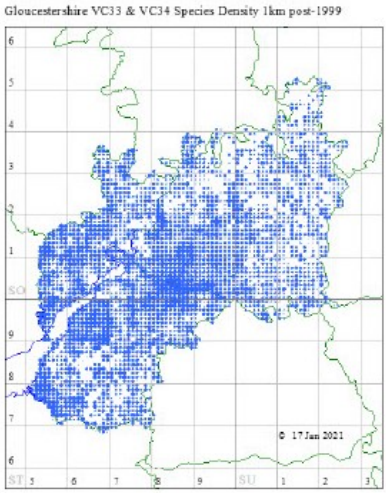
v.c.34, West Gloucestershire **Clive Lovatt**

Covid-19 restrictions were fewer than in 2020 and all but fell away mid-year before the resurgence caused by variants. The Plant Group of the Gloucestershire Naturalists' Society

again did not hold open meetings, but its Bristol equivalent had a few in 2021. Work on *Hieracium* will be picked up after a workshop can be held in 2022.

21,620 records (2020, 26,870) were added to the BSBI database for 2021. 38% were made in SO60. The impact can be seen on the coverage maps below.





My Avon Gorge Flora reached 561 pages of draft typescript (2020: 282). My draft list for a v.c.34 rare plant register needs to be re-thought, to make it compatible with the RPR recently drafted for v.c.33 by the VCR Chris Dixon.

As reported in BSBI News a single flowering stem of *Cephalanthera rubra* (**Red Helleborine**) was discovered at a site in v.c.34. As VCR I was asked to verify this unmistakable orchid. A local author has drafted an account of the plant's history in Britain for eventual publication. *Oxybasis glauca* (**Oak-leaved Goosefoot**), unknown in the county since 1956, and then discovered in both v.c.33 and

v.c.34 by the respective VCRs within a week, created less excitement.

The 2020 Gloucestershire plant report was published in 2021 in *The Gloucestershire Naturalist*. A PDF offprint is available. The *Bristol Naturalists' Society Bulletin* (10 issues), available online, has reports of the meetings held near Bristol in 2021, some new plant records, and notes on Bristol botanists written by myself.

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v.c.38, Warwickshire **John & Monika Walton**

We started Field Meetings in May the moment outdoor meetings were allowed again, and held 14 others during the Summer. We chose not to run any indoor meetings or workshops this year because of the threat of Covid infection. We continued to visit the Wildlife Trust reserves to provide a baseline for their planning decisions and supported various other conservation groups such as the Friends of Studley Common and the Friends of Brandon Wood. Professor Ian Trueman, who is writing a new Flora of Sutton Park, showed the group some of the rarities at this fantastic NNR, and we pointed out the important species to the warden at Castle Bromwich Gardens.

Betonica officinalis (**Betony**), Alnwick (John Dalrymple)

We have only published one Newsletter this year, as we have also taken responsibility for running the local Fungus Group between September and January.

We ran a BSBI Field Meeting at Clowes Wood, which was a great success although one member managed to come a

day early and there were significant problems with road closures.

We added eight new or rediscovered species to the county list.

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v.c.39, Staffordshire John Hawksford & Ian Hopkins

13,598 new monad records for the current decade were made. They were entered into MapMate and, hence, the BSBI Distribution database.

Once again, Covid restrictions seriously reduced the amount of recording that could be undertaken. The previously two most prolific recorders were particularly affected by travel and/or health problems. 27 individuals were able to supply lists.

Details of the most significant records are given in The Annual Plant Report, posted on the Staffordshire page of the BSBI website.

Drosera rotundifolia (**Round-leaved Sundew**), Snelsmore Common, Newbury (Adrian Wallington)

The County Checklist has been completely revised to include the most recent details; presented according to the taxonomy and name changes of the Stace Flora 4th Edition. Plant identification and other queries received in e-mails and the post have all been answered in detail.

Comparisons and collaboration has been undertaken with the work of Staffordshire Wildlife Trust's Survey Teams.

v.c.53, South Lincolnshire Sarah Lambert & Malcolm Pool

Covid-19 and the end of recording for Atlas 2020 depressed recording activity in v.c.53. Nevertheless, the South Lincolnshire Flora Group (SLFG) has continued to thrive with 84 members of the Facebook group, a 35% increase since 2019.

Five SLFG meetings were held in 2021 with a focus on updating records for the Rare Plant Register, started in 2020.

Sites visited were:

- Skellingthorpe Old Wood in May
- Ancaster Valley and Moor Closes SSSIs in June, where work by Lincolnshire Wildlife Trust has boosted the population of *Armeria maritima* subsp. *elongata* (**Tall Thrift**)
- Stapleford Wood where several local *Hieracium* species were recorded

A SLFG meeting

- Frampton Marsh in August, where a change in management by RSPB has boosted the population of *Bupleurum tenuissimum* (**Slender-leaved Hare's-ear**)
- The non SSSI part of Swinstead Valley in September where a new population of *Genista tinctoria* (**Dyer's Greenweed**) was found.

Monad recording towards a new 'Flora of Lincolnshire' has continued in a rather *ad hoc* manner. Malcolm Pool and Richard O'Connor have visited 22 monads and updated records for many rare and local species. Jeremy Fraser and

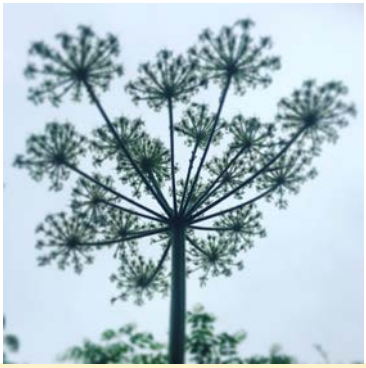
Jon Graham have also provided additional records for a number of fen drains.

v.c.55, Leicestershire

Geoffrey Hall, Russell Parry & Stephen Woodward

Progress towards our goal of making every tetrad at least 75% well-recorded was advanced by a botanical survey of the Belvoir Estate, mostly in the poorly recorded north-east of v.c.55. We made 14 visits and found 25 plants significant at local or country level, and 14 areas of high botanical interest.

Stephen Woodward surveyed the Beacon Hill Country Park for Leics. County Council (LCC), and Geoffrey Hall continued to survey some roadside verges for LCC's verge flora improvement project.



Heracleum mantegazzianum (**Giant Hogweed**), Bloxham, Oxfordshire (Emma Fraser)

A survey of six lagoons at Egleton Nature Reserve, Rutland Water, was undertaken for the Leics. & Rutland Wildlife Trust (LRWT).

Botanical surveys were made in several churchyards to support efforts to improve management regimes. At Peckleton, the usual mowing regime was suspended, and *Campanula rotundifolia* (**Harebell**) were spectacular in the summer, a plant that is becoming scarce elsewhere in the v.c..

We have continued working with botanists from Rutland Natural History Society, visiting Seaton Meadows this year.

Russell Parry did local street surveys that produced several new county records. He has been digitising historical records from the LCC 'field by field' surveys (1988-2000: over 100,000 completed so far) and many more six-figure grid references for some of the rarer taxa mentioned in the last Flora of Leicestershire.

Geoffrey Hall has added 25,240 records to the DDb and is working on a new RPR which should be finished in 2022.

Stephen Woodward and Geoffrey Hall contributed to the 2021 Recorders Conference for v.c.55, hosted by LRWT on Zoom, by presenting a summary (delayed by Covid) of the Atlas 2020 project.

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v.c.56, Nottinghamshire **Mark Woods**

The first field meeting that Dave Wood and I have organised, at Toton Sidings, was fully attended and feedback was very favourable.

Plantago lanceolata (**Ribwort Plantain**), Nottinghamshire (Helen Leaf)

There was a continuation with tetrad coverage of the county, albeit at a reduced intensity, because coverage is near comprehensive and what remains is gap-filling. Several sites including two SSSIs that have not been surveyed for several decades were visited and to date approximately 15,000 records have been submitted to the VPDB. As usual a significant proportion of the records came from Nottinghamshire Biological Records Centre. Hopefully, the number of records will significantly increase because not all recorders have submitted their records.

A significant amount of effort has been devoted to conservation work following completion of the third edition of the county Rare Plant Register. County Rare/Scarce species have been selected for conservation action in collaboration with Nottingham Trent University, Nottinghamshire Species Reintroduction Forum, Nottinghamshire Wildlife Trust and National Seedbank Network. It is early days, but much ground work has been completed.

First records this year include: *Rosa agrestis* (**Small-leaved Sweet-briar**) found on former colliery yards by Mark Woods (confirmed by R. Maskew). *Lotus hirsutus* (**Hairy Canary-clover**) found by Ken Balkow on a remediated colliery spoil tip. Juncus marginatus found by Dave Wood at Rufford Colliery - thanks to Mike Wilcox for assistance - awaiting confirmation of this taxon from the USA and if confirmed it is probably the first record for the UK. There is also an unconfirmed record for *Juncus x surrejanus* (*J. acutiflorus x articulatus*) at Bilsthorpe Colliery Yards.

Claytonia sibirica (**Pink Purslane**), Alnwick (John Dalrymple)

Second records this year include: *Persicaria capitata* (**Pink-headed Persicaria**) and *Taraxacum pseudohamatum*.

More details of these records will be posted on the annual newsletter for the county which will be posted on the county web-page early in the new year.

v.c.57, Derbyshire **Alan Willmot**

We were able to recommence our outdoor meetings in 2021 after having had to cancel all meetings in 2020 due to the covid pandemic. We did not manage a full series of sessions but we did hold five one-day outdoor meetings in Derbyshire to areas of general botanical interest which were all well attended. We continued to record on a monad basis at these meetings as for the third Atlas and submitted these records to the DDb. With other records submitted by individuals, we returned over 21,000 records to the DDb in 2021 of which about 17,500 were for 2021.

Stellaria holostea (**Greater Stitchwort**), Surrey (Lucy Morley)

v.c.59, South Lancashire **David Earl**

The ongoing pandemic resulted in the cancellation of most our planned field excursions for 2021 but many local naturalists continued to make botanical observations within the restrictions and over 32,000 records have been imported to Mapmate thus far with 1321 species having been recorded. In addition, there are probably in excess of 35,000 records (that includes around 1,500 species) entered to iNaturalist a proportion of which are steadily being transferred to iRecord. iNaturalist projects which generated significant amounts of vascular plant records were the City Nature Challenge 2021 (30th April to 3rd May), the European Bioblitz 2021 (24th to 25th September).

Efforts continue to be made to capture as many records as possible for the forthcoming Flora of South Lancashire especially pre 2020 recordings entered to iNaturalist and iRecord as well as records supplied to Local Record Centres. The draft species accounts continue to be modified and numerous additional images have been inserted within the text to accompany the distribution maps particularly for the initial sections covering Clubmosses, Horsetails and Ferns. Some imaging of herbarium specimens of species now extinct in v.c.59 was undertaken at Manchester Museum during 2021 and will hopefully continue at local museums during 2022. Note that it is intended that the flora will be made available as a series of downloadable pdfs from the North Western Naturalists Union website.

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v.c.60, West Lancashire **David Earl**

The ongoing pandemic resulted in the cancellation of most our planned field excursions for 2021 but many local naturalists continued to make botanical observations within the restrictions and over 7,300 records have been imported to Mapmate thus far with 903 species having been recorded. A limited amount of targeted 10 km recording was carried out during 2021 mainly in the south of the vice-county and along the coastal regions. Species monitoring included *Anacamptis morio* (**Green-winged Orchid**) counts at Silverdale as well as a trip to the former ironworks slagheaps at Warton where

Clinopodium acinos (**Basil Thyme**) at the former ironworks slagheaps.

several populations of *Clinopodium acinos* (**Basil Thyme**) and *Centaurium pulchellum* (**Lesser Centaury**) still occur.

In addition, there were probably in excess of 9,000 vascular records with over 1,000 species entered to iNaturalist for 2021 for v.c.60, thus far not all these records are being transferred to iRecord as records without images generally come under the casual record category. In addition to general recording, three major iNaturalist projects which generated vascular plant records were the City Nature Challenge 2021 (30th April to 3rd May), the European Bioblitz (24th to 25th September) and the Wyre Coastal Bioblitz (6th June to 31st July) with the latter capturing over 4,000 vascular plant records, around 600 species and a first record for *Tropaeolum ciliatum* (**Yellow Flame-flower**) when access to a disused railway was granted.

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v.c.61, S.E. Yorkshire **Rohan Lewis**

Records derived from the SE Yorkshire Botany Group's six field meetings in 2021 (an improvement on three in 2020) were much augmented by the efforts of individuals, and of the Hull Natural History Society, as well as visiting botanists entering finds on iRecord. The chalk grassland and arable flora, now eradicated from most of the landscape by agricultural intensification, still clings on in steep-sided coombs, abandoned railways and occasional road-verges. Exploration of some of these yielded a single site new this century for each of the following: *Legousia hybrida* (**Venus's Looking-glass**), *Picris hieracioides* (**Hawkweed Ox-tongue**), *Rosa rubiginosa* (**Sweet-briar**), *Serratula*

Serratula tinctoria (**Saw-wort**) (Clay Jones)

tinctoria (**Saw-wort**), and *Silaum silaus* (**Pepper-saxifrage**).

Oenanthe fluviatilis at probably its most northerly location in Britain.

Two of the sites surveyed were woodland, and following up an old record, not in the BSBI database, led to the discovery of a second population of *Paris quadrifolia* (**Herb-Paris**), previously believed to persist at only one site in the vice-county.

A meeting concentrating on aquatic plants of the River Hull produced no new records, but we were able to see *Oenanthe fluviatilis* (Floating Water-dropwort), blooming at probably its most northerly location in Britain.

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v.c.62, N.E. Yorkshire **David Barlow**

Although a better year than last it still wasn't back to normal with the number of field meetings we held being reduced. The lockdowns did enable me to finish the Rare Plant Register and also. Flora of South Gare both of which are available from the v.c.62 page on the BSBI website.

However, we did have some interesting finds throughout the year. We started off trying to re-find a colony of *Paris quadrifolia* (Herb-paris) in the most northerly site in the county and after two attempts we did find them after negotiating a very dodgy path that wouldn't have gone amiss in an Indiana Jones film.

Other great finds were *Orobanche minor* (**Common Broomrape**) (which is very rare in our county). A new

colony of *Dactylorhiza praetermissa* (**Southern Marsh-orchid**), which seems to be slowly moving north. A rather beautiful and strange find was an achlorophyllus *Epipactis helleborine* (**Broad-leaved Helleborine**) near Whitby.

Gentiana pneumonanthe (**Marsh Gentian**)

The achlorophyllus *Epipactis helleborine*

Perhaps the best three finds of the year were the rediscovery of a long lost colony of *Gentiana pneumonanthe* (Marsh Gentian), some 100+ flowers were seen at a site in the North York Moors National Park last seen there 60 years previously. Another amazing find after 80 years this time was a difficult to reach colony of some 350+ flowers of *Epipactis palustris* (**Marsh Helleborine**), which is another rare plant in the county. To finish the year off in style especially when you don't expect to find anything great in November. Ambroise Baker came up trumps in finding *Diphasiastrum alpinum* (**Alpine Clubmoss**), another plant not seen for a considerable time and never at this northern site. It was last recorded 33 years previously, I think it is probably the furthest east record in England if not the U.K.

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v.c.63, S.W. Yorkshire **Kay McDowell & Louise Hill**

John Scott and Kay went to check out a report of *Daphne mezereum* (**Mezereon**) from a conservation volunteer group working on the Trans Pennine Trail near Penistone on 9th April. John Scott and Kay went to Old Finningley and Brooks Wood, Hurst Plantation for early-flowering small plants on 28th April. Honley Old Woods meadow and heath survey for Kirklees Council with me, Jill Lucas and David Burton on 29th June. BSBI True Fox Sedge, Fishlake

Silene flos-cuculi (**Ragged-Robin**), Sheffield (Eleanor Lloyd)

meeting on 27th June lead by Louise Hill. The meeting was well attended with several folk travelling quite a fair distance to see a Red Data Book sedge. Featherbed Moss joint meeting with Saddleworth Nats to look at condition of moorland and looking for ferns and willow scrub since drain blocking and cessation of grazing on 8th September.

Alastair Fitter's Yorkshire Priority Plants Project. I emailed Alastair and suggested helping with this project. In March there will be a BBG talk on 16th March and then we'll talk about a collaboration with BBG and v.c.63 recording group.

v.c.66, Co. Durham **Keith Robson**

The Upper Teesdale Special Flora Recording and Conservation Project have been finding that when comparing current surveys for 19 of the special plants, to results from a survey from 1968 to 1975 of the same species in the same areas on Widdybank Fell, all 19 species have declined in extent. On average, these species were not found in over half of the areas they grew in 50 years ago. Most of the rare plants are declining in numbers and they are all light-demanding species. In 2021, trials started on different ways of managing the sward to see if they can find the best way of making conditions more suitable for them again.

Though it was a late start in 2021, Michael Wilcox will continue next year in looking at our coastal *Ononis*

Oxalis acetosella (**Wood-sorrel**), West Yorkshire (Alex Shuttleworth)

repens/spinosa (**Common** and **Spiny Restharrows**), which are treated as subspecies in Sell & Murrell. In Co. Durham *Ononis repens* is common all along the coast and *O. spinosa* occurs in four quite distinct coastal populations, often with *O. repens*. The hybrid between the two, *Ononis x pseudohircina* has also been reported. Michael will look at our populations as these species are not as easy to identify as you may think. See the BSBI crib sheet

The Durham Wildlife Trust (DWT) Botany group runs outings throughout the year, sometimes as often as twice a week in spring and summer. If you are interested have a look at the Durham Wildlife Trust Botany Group Facebook page

Several new populations and some refinds of both *Scutellaria* (**Skullcap**) species were found in 2021 but not by botanists. The micro moth *Prochoreutis myllerana* which mines the leaves of *Scutellaria* were discovered and represented the only record for the North East of England, though probably as no-one has looked for it and the host plants are uncommon in the north-east. A request for extant and former sites of the host plant by a number of 'moth-ers' resulted in the moth being found at several other locations, including on new or presumed extinct populations of the plant.

Among the interesting new finds in 2021, there were first records for the county for *Cuscuta campestris* (**Yellow Dodder**) and *Cyperus eragrostis* (**Pale Galingale**).

v.c.67, South Northumberland

John Richards & Megs Rogers


THE RARE AND SCARCE PLANTS OF SOUTH NORTHUMBERLAND 2020

SUMMARY

INTRODUCTION

Early in the year, a revised, updated and illustrated version of the vice-county RPR was published in *Northumbrian Naturalist* 90: 6-119, obtainable from the Natural History Society of Northumbria, Great North Museum: Hancock, Newcastle upon Tyne NE2 4PT.

Good progress has been made with creating new links with local organisations and community groups, and surveys of local sites at the request of the Northumberland Wildlife Trust have continued. Many Newcastle Parks have been surveyed for the new charity Urban Green Newcastle, resulting in re-finds of plants typical of ancient woodland. Regeneration sites of industrial areas and reclaimed meadowland have also been visited, and have yielded many interesting records.

Another new initiative within the county is habitat mapping which is going forward in conjunction with Natural England, the Natural History Society of Northumbria and local botanists.

v.cc.69, 70, Westmorland and Cumberland
Mike Porter, Jeremy Roberts & Phill Brown

Our year began with another successful New Year Plant Hunt with 43 people taking part and 109 species being recorded, exactly the same numbers as in 2020 but not the same people or species!

Cirsium dissectum (**Meadow Thistle**), Swindale, Cumbria (Leif Bersweden)

In March we held our first get-together of the season in the form of a zoom meeting, looking over the previous year and making plans for 2021. After years of hard monad-bashing and then a year of isolation, we felt we all deserved time together in some of our best Cumbrian sites (often visited but not always carefully recorded). Consequently we had a season of well-attended field meetings in botanically rich spots with some particularly attractive species recorded:

- Scout Scar – limestone grassland and crags (*Helianthemum oelandicum* (**Hoary Rock-rose**), *Carex ericetorum* (**Rare Spring-sedge**) and *C. ornithopoda* (**Bird's-foot Sedge**))
- Hodbarrow – former industrial site with a wide range of species (*Leontodon saxatilis* (**Lesser Hawkbit**), *Filago germanica* (**Common Cudweed**))
- Hutton Roof – limestone pavement (*Epipactis atrorubens* (**Dark-red Helleborine**) and hybrids)
- Tarn Moor – species-rich damp grassland (*Carex capillaris* (**Hair Sedge**), *C. diandra* (**Lesser Tussock-sedge**), *Botrychium lunaria* (**Moonwort**))

- Waitby- Greenriggs – limestone grassland (*Epipactis palustris* (**Marsh Helleborine**), *Brachypodium pinnatum* s.s. (**Heath False-brome**))
- Butterburn Flow – upland mire (*Carex pauciflora* (**Few-flowered Sedge**), *Drosera anglica* (**Great Sundew**))
- Mawbray and Silloth – coastal dunes (*Elytrigia* (**Couch**) species and hybrid)

During the season we held a national field meeting to look at sedges at Tarn Moss and Eycott Hill, made some progress on the updating of the RPR for Cumbria, encouraged interest in the plants of Cumbria through our Facebook site, Cumbria Botany, which now has more than 660 members, produced three Newsletters and processed many records, some of them significant, via iRecord. As a result of field meetings and individual efforts, to date 10654 new records have been entered in the DDb, 5742 from Cumberland and 4912 from Westmorland.

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v.c.113, Channel Islands (Guernsey) Helen Litchfield

It's been an exceptionally busy year for local botanists. I work with local organisation, La Société Guernesiaise, who hold regular meetings on the 1st Saturday in every month. These are open to anyone on the island and we have been able to capitalise on the surge of interest in the natural world with substantial increases in numbers at all of our events. We added **Evening Walks** and '**Food & Flowers'** events to our regular calendar and all were well attended.

Eriophorum angustifolium (**Common Cottongrass**), Alnwick (John Dalrymple)

Early in the year, I was invited to give a presentation on Guernsey's Rare Plants by the WEA. This I did. The event was attended by Raymond Evison, renowned Clematis grower. After the talk, Raymond approached me and offered his help in commencing a scheme to protect and preserve our rare plants. In this way, **Grow Guernsey Natives** was born. Using seed collected by local botanists in previous years, Raymond brought his considerable horticultural experience and extensive resources to bear. The result was the handing over, in Autumn, of 700 young plants of seven different species. These are to be grown on and retailed by our local sheltered workshop. The project will launch in April 2022. Seed collecting was carried out throughout the year and we anticipate raising thousands of plants of over 40 different species in 2022.

A '**Recording Group**' was set up and ventures out every Thursday morning. Each meeting is attended by six or so really keen botanists at all levels. It has been a pleasure to work through keys together and reach accurate identifications. I have been employed by Environment Guernsey to survey potential Areas of Biodiversity Importance and this has given us access to places that have not previously been surveyed. This has given rise to a number of under recorded species appearing in our records and their status updated accordingly in our Register of Guernsey Plants.

The Guernsey recording group

v.c.113, Channel Islands (Jersey) **Anne Haden**

Despite the pandemic it has been a busy year in Jersey. Over 3,000 records were sent to the BSBI. The morning weekday walks were so successful when restrictions were in place that it was decided to continue with these. Some of the less easy places to access were explored, such as coastal cliffs and steep woodland banks. The group were dismayed by the lack of management in some of our special habitats and volunteered to undertake conservation work such as clearing *Crassula helmsii* (**New Zealand Pigmyweed**) from the last remaining site for *Myosotis sicula* (**Jersey Forget-me-not**).

Notable finds this year include three new sites for *Anogramma leptophylla* (**Jersey Fern**), all on roadside banks, *Polypogon monspeliensis* (**Annual Beard-grass**) not recorded in Jersey before and another grass *Elymus caninus* (**Bearded Couch**) also not recorded on the island previously.

The Jersey gang at work clearing in the Dianthus galicus site

In October a group from Jersey paid a visit to Guernsey and met up with local botanists. We were delighted to see spikes on the *Ophioglossum lusitanicum* (**Least Adder's-tongue**) and also find *Asplenium x microdon* (**Moore's Spleenwort** (*A. scolopendrium x obovatum*)).

Members continued to record data from our three NPMS squares, we had workshops on Ferns and Conifers, hold fortnightly evening walks in the summer and we contributed

to the Jersey Tree Strategy consultation process which will hopefully result in greater protection for the islands trees. Members continued to provide support and help with habitat monitoring surveys for the Island's Environment department.

We had a very enjoyable New Year Plant Hunt and were delighted when Jersey topped the Longest List.

New and interesting County Records

Centaurea nigra (**Common Knapweed**), Bloxham, Oxfordshire (Emma Fraser)

This section aims to provide reports of new county records of native species, re-finds of species thought to be extinct for at least 50 years and finds of alien species that illustrate a significant range expansion or identification feature. Most accounts were taken from the county reports, whilst others were written as separate articles. Information on other county records, of local hectad records etc will be available from vice-county recorders or through the DDb. Contributions with images are welcome.

v.cc.1, 2, Cornwall & Scilly

Since the publication of the 2020 Flora the following plants have been added to the Cornish List.

Species name	Common name	Notes
Actininidia sp.	Kiwi Fruit	Growing in hedge
Apium graveolens var. *dulce*	Celery	Scilly on waste tip
Araucaria angustifolia	Parana Pine	
Betula x *aurata*	*Betula pendula* x *pubescens*	Native
Bidens pilosa	Black-jack	
Brachyglottis rotundifolia	Muttonbird Scrub	
Calandrinia menziesii	Red-maids	Isles of Scilly
Catapodium rigidum x *C. marinum*		Isles of Scilly
Celtica gigantea	Giant Feather Grass	
Centaurea debeauxii subsp. *thuillieri*	Radiate Slender Knapweed	Native
Crataegus laevigata	Midland Hawthorn	Probably planted
Crocus neapolitanus	Spring Crocus	
Cryptogramma crispa	Parsley Fern	1st confirmed record. Native
Cyperus ustulatus	Giant Umbrella-sedge	Isles of Scilly
Dittrichia viscosa	Woody Fleabane	Isles of Scilly
Erodium manescavii	Garden Stork's-bill	
Jubaea chilensis	Chilean Wine Palm	Locally spreading
Juglans ailantifolia	Japanese Walnut	
Knautia macedonica	Macedonian Scabious	
Lathyrus odoratus	Sweet Pea	
Lavandula angustifolia	Garden Lavender	
Linum perenne	Perennial Flax	Isles of Scilly
Lonicera henryi	Henry's Honeysuckle	
Lysimachia thyrsiflora	Tufted Loosestrife	Naturalised at one site
Musa basjoo	Hardy Banana	
Myoporum laetum	Mousehole Tree	Isles of Scilly
Olearia Talbot de Malahide		
Orchis simia	Monkey Orchid	Orig planted - naturalised
Orobanche minor var. *heliophila*	Brachyglottis Broomrape	Native
Orobanche minor var. *pseudoamethystea*	Sea Holly Broomrape	Native
Pseudognaphalium stramineum	Chilean Cudweed	Isles of Scilly
Salvia hispanica	Chia	
Sedum pallidum	Turkish Stonecrop	
Taraxacum pulchrifolium	Beautiful-leaved Dandelion	Native
Tradescantia fluminensis	Wandering-jew	Isles of Scilly
Viola riviniana var. *rosea*	Pink Common Dog- violet	Native

v.c.6, North Somerset

One clump of *Carex x boenninghausiana* (*C. paniculata x remota*) was found by Alex Lockton on stonework at the edge of the Kennet & Avon Canal in Bath, the identification confirmed by Mike Porter. Surprisingly this hybrid is new to v.c.6. Although *C. paniculata* is frequent on the Levels, only a couple of clumps are known by the canal.

Eryngium variifolium (**Variable-leaved Sea-Holly**)

Malva setigera (**Rough Marsh-mallow**)

Two plants of *Eryngium variifolium* (**Variable-leaved Sea-Holly**) were found by members of Somerset Rare Plants Group growing at the base of a low sea wall at Weston-super-Mare, one of them under a boat! Self-sown from a nearby flower-bed and new to Somerset.

Malva setigera (**Rough Marsh-mallow**) was found by Andrew Robinson and Georgina Shuckburgh at Rodney Stoke NNR, the first record for the Mendips and a new hectad record for this Schedule 8 neophyte.

Silene noctiflora (**Night-flowering Catchfly**) was found by John Bebbington in a garden in Langport the first record for this Vulnerable species in Somerset since 1991..

Silene noctiflora (**Night-flowering Catchfly**) (John Bebbington) v.c.6

Polycarpon tetraphyllum (**Four-leaved Allseed**) (Sharon Pilkington) v.cc.7,8

Hylotelephium telephium (**Orpine**) (Sharon Pilkington) v.cc.7,8

Lythrum hyssopifolia (**Grass-poly**) v.cc.7,8

Myosurus minimus (**Mousetail**) v.cc.15,16

v.cc.7, 8, Wiltshire
Part of the march of coastal plants inland, our star find was *Polycarpon tetraphyllum* (**Four-leaved Allseed**). First found by Sharon Pilkington in Trowbridge (2019), and found again in 2021 by Dave Green in Bradford-on-Avon.

Another unusual find, by Jenny Bennett: *Hylotelephium telephium* (**Orpine**) at a new woodland site near Fonthill.

Caroline Reid found *Lythrum hyssopifolia* (**Grass-poly**), a native rarity, on army land at Bourley, near Aldershot. The only other v.c.12 site for it was way back in 1966-72 as a 'wool-shodddy' alien at Blackmoor Apple Farm.

v.cc.15, 16, Kent
A population of c.22,500 plants of *Myosurus minimus* (**Mousetail**) came to light near Hoo St. Werburgh, the first Kent sighting for over 45 years; the last dated West Kent record was in the 1870s.

Thladiantha dubia (**Manchu Tubergourd**) was found naturalised at Lynsted, apparently only the second UK record.

Veronica cymbalaria (**Pale Speedwell**), a south European species, otherwise with a UK presence virtually limited to a Cornish site, seen well established in a cemetery at Faversham.


Veronica cymbalaria
(Pale Speedwell)

Wolffia columbiana (**Columbian Water-meal**) w as identified from various East Kent sites, worryingly where native *Wolffia arrhiza* (**Rootless Duckweed**) was previously recorded and it may have supplanted or been mistaken for that species.

Wolffia columbiana (**Columbian Water-meal**)

v.c.17, Surrey

Two good finds in April: while recording on a private estate, Ann Sankey and Bill Stanworth recorded a large colony of *Teesdalia nudicaulis* (**Shepherd's Cress**) in an old acid grassland lawn, much to the pleasure of the owners. Then *Crassula tillaea* (**Mossy Stonecrop**) found by a few members of Surrey Botanical Society by a path on Shalford Common in acid grassland. This was both a new hectad and a new habitat for this species.

Thladiantha dubia (**Manchu Tubergourd**) v.cc.15,16

Also in April Caroline Bateman recorded *Ranunculus parviflorus* (**Small-flowered Buttercup**) by the perimeter road around Gatwick Airport and then the same species turned up in Battersea Park a month later, recorded by Freedman, C. & Livingstone, B.. The latter is a new hectad

record. This species is showing a rapid increase in v.c.17. The origin of the plants is unknown.

In June Steve Mellor found a large colony of *Melampyrum pratense* subsp. *commutatum* (**Common Cow-wheat**) on the chalk at The Sheepleas in TQ05. This is a new v.c.17 record since 1932.
A disappointing note: annual counts of *Herminium monorchis* (**Musk Orchid**) at its two better sites in Surrey have shown a severe decline. At one site, there has been a decline from 450 to just 5 flowering spikes this year. At the other site, there is a very similar pattern. The reasons for this decline is not known but could be a combination of changing weather patterns, scrub encroachment plus loss of fine chalk turf to *Brachypodium pinnatum* agg. (**Tor-grass**) on at least one of the sites.

There is a record of *Dactylis polygama* (**Slender Cock's-foot**) at West Horsley Place in 1934 that has puzzled various people for some time. At the SBS meeting there in July Alan Leslie came back to his home turf on a quest to re-find it. He was apparently successful, finding it in several places. Because of the possibility of it being the hybrid, confirmation is pending.

George Hounsome found another site for *Oenanthe javanica* (**Water Celery**) on a ditch bank in a disused golf course at Pyrford, the subject of a rewilding project. It seems that this species is now being grown in gardens. George also found a tuft of X*Schedolium krasanii*, the hybrid between *Lolium multiflorum* (**Italian Rye-grass**) and *Schedonorus arundinaceus* (**Tall Fescue**), on a verge near Esher, confirmed by Arthur Copping.

In June, several plants of *Anthemis arvensis* (**Corn Chamomile**) were recorded by Peter Wakeham among a

crop of Field Beans in Northey Fields, near Ewell. This species was last recorded in the same field in 1961 and these plants are almost certainly native to the site rather than originating from a wildflower mix and, as such, are a rare occurrence in Surrey.

While monad-bashing in late October, George Hounsome and Caroline Bateman came across several colonies of *Clinopodium acinos* (**Basil Thyme**) in a 1970s/1980s housing development built on former chalk downland in the Epsom area. Some plants were growing in lawns or in the gaps between the lawn and the pavement. More were found in cracks in the paving and one small colony was growing in a gutter. Apart from being an unusual find in a built-up area, this is also a new record for TQ24.

And also in late October in an allotment in urban Redhill Caroline came across a patch of several *Misopates orontium* (**Weasel's-snout**). She has visited these allotments several times but this was the first time that this species was seen here. It is possible that they arrived in a "wild-flower" mix but there were no other tell-tale cornfield weeds in this or adjacent allotments.

v.c.30, Bedfordshire, Jan and John Wakely

A population of *Galium parisiense* (**Wall Bedstraw**) numbering thousands of plants was discovered on private land during an ecological survey by a Recorder from outside the county. This is a new county record. Frustratingly the site owner would not allow details to be released!

Myosurus minimus (**Mousetail**) was recorded in v.c.30 for the first time since I saw the species in 1995. Since then I have found it several times outside the county, including a large population on the verge of the IKEA car park in Milton Keynes!

Myosurus minimus (**Mousetail**)

v.c.33, East Gloucestershire

Three new populations of *Anacamptis morio* (**Green-winged Orchid**) were discovered in v.c.33 in May and June, raising the number of known sites in the vice-county to 20. One of these was close to Barnsley Warren, found by Clive Lovatt and myself; I found another in a damp, sloping meadow near Sevenhampton; the last was reported by Olga Krylova near Bisley.

Anacamptis morio (**Green-winged Orchid**)

In June, Anna Field of the Cotswolds AONB reported *Scleranthus annuus* (**Annual Knawel**) in an arable field near Ampney Crucis. Before this, the species had not been seen in v.c.33 since 1987.

Scleranthus annuus (**Annual Knawel**)

In August, Clare and Mark Kitchen, together with Clive Lovatt, discovered a population of *Bupleurum rotundifolium* (**Thorow-wax**) beside the A419 in Stonehouse.

In August, I found *Oxybasis glauca* (**Oak-leaved Goosefoot**) on an indistinct farm track near Broad Campden. This was only the 3rd record in v.c.33, the previous one dating to before 1969.

Oxybasis glauca (**Oak-leaved Goosefoot**)

Ludwigia grandiflora (**Water-primrose**)

In October, we received a report via iRecord of *Ludwigia grandiflora* (**Water-primrose**) in an amenity pond in a new housing development at Bourton-on-the-Water; further investigation revealed *Lagarosiphon major* (**Curly Waterweed**) was also present. The Environment Agency have been informed and are liaising with the housing developers.

v.c.36, Herefordshire **Stuart Hedley**

One of the most noteworthy finds of the year was *Carex muricata* subsp. *muricata* (**Large-fruited Prickly-sedge**). It is a nationally-rare taxon, new to the county and confirmed by Mike Porter. It was in a classic habitat, so unlikely to be a new colonist and probably overlooked in the past.

v.c.38, Warwickshire

Salvia hispanica (**Chia**)

Salvia hispanica (**Chia**), not in flower, had us foxed to start with when we saw a photo of it on Wild Flowers of Britain and Ireland Facebook page, (thanks to Paul Stanley for the ID) and we were very pleased to see *Potamogeton obtusifolius* (**Blunt-leaved Pondweed**) thriving in a pond at Brandon Marsh where it was last seen in 1985.

We also added *Marselia hirsuta* (**Bristly Water-clover**) to our county list, but more details of that find will hopefully be published on to the Adventives and Aliens page in BSBI News.

v.c.53, South Lincolnshire

Lathyrus linifolius (**Bitter-vetch**) was recorded from Skellingthorpe Old Wood in May 2021 (its only v.c.53 site), the first record since 2008.

Lathyrus linifolius (**Bitter-vetch**)

Taraxacum duplidentifrons (**Double-toothed Dandelion**) was recorded from Morkery Wood by Sarah Lambert in April 2021, first record since 1980. Conf. A.J. Richards

Taraxacum duplidentifrons (**Double-toothed Dandelion**) v.c.53

Malcolm Pool and Richard O'Connor found an established population of *Tulipa turkestanica* (**Turkestan Tulip**) in Folkingham churchyard on 31st March 2021, new to v.c.53.

Laphangium luteoalbum (**Jersey Cudweed**) v.c.55

v.c.55, Leicestershire

Several hundred plants of *Draba muralis* (**Wall Whitlowgrass**) were found along the edge of a roadside verge in Brooke, Rutland. First Rutland record since 1984.

A population of about 15 mature plants and seedlings of *Laphangium luteoalbum* (**Jersey Cudweed**) was found scattered along an urban street in Enderby. Second County record (first record in 2009).

A stand of *Carex rostrata* (**Bottle Sedge**) was found in marshland on the Belvoir Estate. It is an RPR species, the third site since 2000, and a new hectad record.

v.c.57, Derbyshire

Galium x pomeranicum (*G. verum x album*) was found on Highwood Lane near Cresswell (SK516760) by Mick Lacey on 10th July 2021 and at Whaley on wayside (SK527719) amongst the two parents on 14th July 2021. These were our first records since 1969.

Epipactis dunensis
(**Dune Helleborine**)

Galium x pomeranicum

Allium carinatum (**Keeled Garlic**)

Nine plants of *Epipactis dunensis* (**Dune Helleborine**), an under-recorded orchid, were found in scrubby woodland in Longdendale (SK0799) by Dave Mallon on 6th August 2021. This is only the second site for the species in the vice county.

The first county record of *Allium carinatum* (**Keeled Garlic**) was found by Maron Bryce growing by a stile at Thulston (SK407319) on the 1st August 2021.

v.c.59, South Lancashire

Malva trimestris (**Royal Mallow**)

Aponogeton distachyos
(**Cape Pondweed**)

Primula pulverulenta
(**Mealy Cowslip**)

Lunaria rediviva
(**Perennial Honesty**)

Prunus persica (**Peach**)

Malva trimestris (**Royal Mallow**) occurred as a pavement casual at Bamber Bridge SD5625 and was later found to be a feature of sown 'wildflower mixes' within the South Ribble Borough.

Aponogeton distachyos (**Cape Pondweed**) is long associated with the canal systems in v.c.59 but until recently considered scarce. A large patch is now well established along the Bridgwater Canal spanning the border with v.c.58 at Sale across Barford Bridge into Stretford with several smaller patches extending at least to Old Trafford. Several images on iNaturalist.

Lunaria rediviva (**Perennial Honesty**) was recorded as established in scrub beside Slipper Hill SD8741 Howard Beck 16/11/2021.

Primula pulverulenta (**Mealy Cowslip**)
At Heath Charnock 29/05/2021.

Prunus persica (**Peach**)
Peach at Ainsdale 17/07/2021.

A solitary plant of *Gilia capitata* (**Blue Thimble-flower**) as a pavement weed at Bamber Bridge SD5626 with perhaps a further patch of this species (again as pavement weeds) in the local area.

One plant of *Gazania rigens* (**Treasureflower**) discovered on at wall top by Wildflower Society members at Crosby Marine Park (SJ3098).

Dryopteris cycadina (**Shaggy Wood-fern**) was surviving and perhaps naturalised at Smithills SD7011, Yorkshire Fern Group.

v.c.60, West Lancashire

Tropaeolum ciliatum
(**Yellow Flame-flower**)

Laphangium luteoalbum
(**Jersey Cudweed**)

Rubus armipotens

Borago pygmaea
(**Slender Borago**)

Hieracium villosum
(**Shaggy Hawkweed**)

Tropaeolum ciliatum (**Yellow Flame-flower**) was found sprawling over bushes by DP Earl & Mike Clapham when access was granted to a disused railway at Thornton Cleveleys SD3441 for the Wyre Coastal Bioblitz 2021.

A few plants of a bramble thought to be *Rubus armipotens* were discovered by DP Earl & Mike Clapham when access was granted to a disused railway at Thornton Cleveleys SD3441 for the Wyre Coastal Bioblitz 2021.

Laphangium luteoalbum (**Jersey Cudweed**) was first discovered on a pavement by Preston railway station SD5328 by Peter Jepson in 2006 but the plants did not persist. Further populations have now been found on bare ground, pavements and paths at Fleetwood SD3146 & SD3246 by DP & J Earl, 2021.

A plant thought to be *Hieracium villosum* (**Shaggy Hawkweed**) was discovered at Silverdale SD4674 by Roger Spooner in 2020 growing between a pavement and a wall with two plants present in 2021.

Borago pygmaea (**Slender Borago**) was found at a hedgerow in cutting below a garden at Silverdale SD4575 by Julie Clarke 30/10/2021.

A patch of *Aponogeton distachyos* (**Cape Pondweed**) is now established along the Lancaster Canal Carnforth. One to look out for along the canal as this species may become invasive.

Plants resembling *Rubus cockburnianus* (**White-stemmed Raspberry**) were observed along the disused railway at Ribbleton, Preston in 2012 by DP & J Earl. On a return visit

Rubus x knappianus

in 2021 the plants were seen in flower and considered to be the hybrid of *Rubus cockburnianus* and *Rubus idaeus* (**Raspberry**) = *Rubus* x *knappianus*.

Rubus intensior was eventually found in 2020 along railway banks east of Blackpool Pleasure Beach SD3033

v.c.62, N.E. Yorkshire

Diphasiastrum alpinum (**Alpine Clubmoss**)

Epipactis palustris (**Marsh Helleborine**) was hiding in plain sight for 80 years near Scarborough in a large colony of over 350 spikes

Epipactis palustris (**Marsh Helleborine**)

Another great find in a new location was *Diphasiastrum alpinum* (**Alpine Clubmoss**). A plant not recorded in the county for 33 years. Most likely the furthest east in the U.K.

v.c.63, S.W. Yorkshire

A record for *Dittrichia graveolens* (**Stinking Fleabane**), a wool alien near Potteric Carr was emailed to Louise Hill at the beginning of January; this was last recorded in 1961 by David Pearman.

v.c.67, South Northumberland

Potentilla anglica (**Trailing Tormentil**)

Carex oederi (**Small-fruited Yellow-sedge**)

Carex limosa (**Bog-sedge**)

Perhaps the most interesting discoveries made during the year were two new sites (second and third extant) for *Potentilla anglica* (**Trailing Tormentil**), both found on

paths through two of our very few remnants of lowland heath.

Another interesting second site in the county was found for *Carex oederi* (**Small-fruited Yellow-sedge**) at the upper edge of reservoir drawn-down. The other site is also in a reservoir, not far away.

Close to the recent discovery of a new site for *Betula nana* (**Dwarf Birch**), the Wednesday Botany Group found an excellent new locality for *Carex limosa* (**Bog-sedge**) within a large stand of *Phragmites* (**Reed**).

A large stand of *Festuca heterophylla* (**Various-leaved Fescue**) was discovered at the entrance to Letah Wood, a Woodland Trust Reserve. This is only the second site in the county for this introduced grass. Several new sites were also reported for *Bromus racemosus* agg. (**Smooth/Meadow Brome**) which is being recorded more frequently.

Festuca heterophylla (**Various-leaved Fescue**)

v.cc.69, 70, Westmorland and Cumberland

Bromus secalinus (**Rye Brome**) was found by Roy Atkins in a wheat field. Second record this century for Cumbria and seventh record in the last 200 years.

Trifolium striatum (**Knotted Clover**) was Found by Lynne Farrell and Roger Holme at Barrow-in-Furness and by Wendy Nelson near Grange-over-Sands. A rare plant in Cumbria

Trifolium striatum
(Knotted Clover)

Pseudorchis albida
(**Small-white Orchid**)

Bromus secalinus ***(Rye Brome)***

Pseudorchis albida (**Small-white Orchid**) is another rare and declining plant in Cumbria, and was found in the far north of the county by Joe Dobinson.

v.c.113a, Channel Islands (Guernsey)

Euphorbia maculata (**Spotted Spurge**) was previously recorded in Jersey but is a first record for Guernsey. Found in two separate locations.

Euphorbia maculata
(**Spotted Spurge**)

v.c.113b, Channel Islands (Jersey)

Three new sites for *Anogramma leptophylla* (**Jersey Fern**) were found this year.

Hints & Tips

Rare Plant Registers or Registers of Plants of Conservation Concern ?

Jonathan Shanklin, *VCR for v.c.29 (Cambridgeshire)*

The BSBI Rare Plant Register guidelines changed in 2017 and now suggest that all species with an England or GB threat level of Near Threatened (NT) or greater, or are declining at country or local level should be included. I had compiled my RPR as a simple list just before this was

released and didn't appreciate that decline was now a consideration for inclusion. I had therefore independently compiled a list that also included all such declining plants in my county, which I called a Register of Plants of Conservation Concern (RPCC).

Many RPRs are mini Floras focussing mostly on rarity, but perhaps more useful for planning local nature recovery networks is a simple list of of plants that includes all those that are under threat in the county. For this reason I advocate compilation of RPCCs more widely. Some counties have already done this, but perhaps given them a different name. These RPCC will include many species where it should be possible to reverse declines by 2030 in order to meet the legal obligation that the Government has entered into. Local Government needs to know what and where these are in order to take local action. This is an area where BSBI can make a difference.

Rare plants don't always grow in nice habitats. This is the only site for *Eryngium campestre* (**Field Eryngo**) in Cambridgeshire.

For VCRs it is quite easy to generate a query to create a list of native and archaeophyte species for a county and to use this to produce an RPCC. Adding to the basic listing, for example adding the true date of first county records, or comments about introductions takes longer and usually requires cross-referencing with a Flora.

Does this matter to the ordinary member? It certainly should! Whilst many of the species are still relatively common, many are delining. As a local you may know

were they grow and could tell your local council or land manager when and where to avoid cutting in order to give the plants time to set seed. Equally cutting may be required to prevent areas becoming overgrown. Together everyone can make a difference.

See also my talk at the Spring Conference.

Sloes, Cherry Plums and Plums

Sometimes it can be difficult to decide exactly what you are looking at when it comes to members of the Prunus family. Stuart Hedley provides some tips for v.c.36 on his web site.

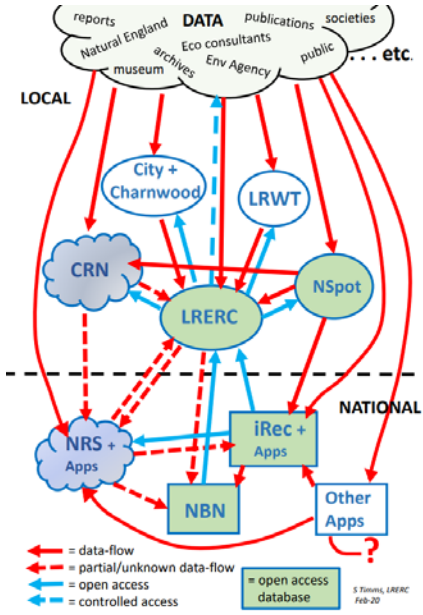
How Should I Record and Where Should I Send My Records?

Geoffrey Hall *BSBI Recorder for Leicestershire & Rutland*

If you've recently been bitten by the recording bug, you may be using one of several methods to collect your records and may be wondering what the best way to get them to the BSBI is. If you have chosen a recording system, you may also be wondering what happens to your records when you have pressed the submit button or sent an email. Records are the lifeblood of the BSBI, but the circulation of these records between natural history organisations is less well known by citizen recorders. So, in this short article, I'll illustrate what a Recorder might do with your records, and how they flow between the people and organisations that typically use them. I'll use my local system to describe the flow of data, which will differ according to vice-county, but some there are some general similarities. I'll also make some suggestions about how to ensure that your records reach the BSBI's distribution database (the DDb).

Where do botanical records come from?

As a Recorder, I receive records from local recorders in the form of spreadsheets, emails, database exports, posts on facebook, facebook Messenger and electronic messages all of which I enter into my MapMate database. Every year, I receive an export of a year's worth of records from the v.c.55 citizen recorder portal called NatureSpot, which is managed by local botanists, who verify all the records submitted, which I also enter these into MapMate. Records from iRecord are sent to the BSBI DDb and can be added when verified at my discretion.



CRN	County Recorders' Network e.g., BSBI Referee
LRWT	Leicestershire & Rutland Wildlife Trust
NSpot	NatureSpot online recording portal
NRS	National Recording Scheme
iRec	iRecord online recording portal
NBN	National Biodiversity Network
LRERC	Leicestershire & Rutland Local Environmental Record Centre

In Leicestershire and Rutland, the local Environmental Record Centre is a central agency for the collection and distribution of records, receiving records from many donor sources (including the BSBI Recorder) and exchanging them with other organisations. It was created in 1995 and has

currently has 2.5 million records (at March 2022) in its ORCA database that include 685,477 vascular plants (34% of the total holding). Records come from other Local Authorities, and from records sent in by the public directly. Records from ecological consultants, reports and local natural history groups' newsletters are extracted manually and added to ORCA. Datasets from Natural England and the Environment Agency are sent sporadically in various forms. Records are received via iRecord (which are also sent to the BSBI distribution database for verification by the VC Recorder).

Where do records go?

There are many different recording schemes for wildlife groups, each of which have different data exchange agreements, so flows of records between organisations are variable and not consistent. So, with the help of local Recorders, the LRERC developed a general model to display the flow of all wildlife records between the various agencies and organisations involved, the complexity of which is immediately apparent in the flow diagram.

So, how do botanical records fit into this model?

During the year, I periodically send my field records and records that other people send me to the BSBI's DDb from my MapMate database (CRN to NRS in the diagram). These include a file of records that I get from NatureSpot (NSpot to CRN in the diagram). At the end of the year, I export all the current year's records and send them to the LRERC (CRN to LRERC in the diagram), that also receives a file of records from NatureSpot (NSpot to LRERC in the diagram). As part of my exchange agreement with the LRERC, I can extract botanical records from the ORCA database (the cloud at the top of the diagram) and add them to the BSBI database, but I have not done this very often, as it is time-consuming. I can also add records from iRecord

but have only added a small proportion of them recently. Records are freely shared between the LRERC and the NBN. However, some apps have only recently shared data e.g., iNaturalist, which does now share some data with iRecord.

What's the effect of all this on my records?

There are three main effects of these procedures.

- Information loss: re-keying records to suit other systems can create omissions.
- Information degradation: rekeying records to suit other systems can introduce errors.
- Information duplication: record sets can potentially arrive from more than one sources.

Record duplication is a constant issue among recording schemes and is often hard to spot, as schemes change or modify a record to suit their own database standards, leading to data loss and/or degradation. From a Recorder's point of view, one of the major issues is the duplication generated by the online portal and recording apps that are now available for field recorders, especially as there isn't a consensus over the 'best' one to use, and protocols for exchanging data between systems are in their infancy. For example, records from iRecord can go to the Recorder then to the DDb and to the NBN, and also from iRecord to the LRERC and to the NBN.

Steps to mitigate these issues include establishing a formal relationship between the national and local recording schemes for data exchange. This doesn't exist for many groups, but does for the BSBI, which goes a long way to reducing data duplication at national level. Using a local online portal for records from citizen scientists and the public removes the need to use other apps, and all the records can be passed to the Recorder for verification,

reducing the chance of duplication. App developers should also ensure that data can be exchanged in standard formats.

So, what should I do and where should I send my records?

I'm glad you asked! Vice-county Recorders are used to handling records and have much local experience, so will be able and willing to help. So, the first thing to do is ***to contact your local Vice-county Recorder***, who can then advise you about the best way to submit records: it may be in a spreadsheet, or they may advise you to use a local online portal, if one exists, or another app which they have some experience of and are comfortable with. They will also be able to tell you whether any formal exchange agreements have been made with other organisations that explain how your records will be used. I hope you enjoy many happy hours of recording.

Acknowledgements

This article arose out of a discussion among participants at an England recorders' meeting and was suggested by the Chair, Jonathan Shanklin. I would like to thank Sue Timms for advice on the content of this article and for providing the data flow diagram.

LOst Rarities in England
BSBI England Project LORE Guidance Notes

These notes are fairly comprehensive, but field experience may lead to some changes. Any substantive ones will be advertised through the recorders' eNews. Details of DDb queries are omitted from this EBN version.

Rarities can exist on many levels: locally, county, regionally or country. Even the common *Bellis perennis* (**Daisy**) can be a rarity in some habitats.

Project vision

To involve a wide range of participants
To document the distribution and habitats of our declining species
To investigate the threats to these species

Project aims

The project has multiple aims:

- encouraging members to go out plant hunting;
- attracting beginner botanists to recording;
- re-finding ordinary species that are apparently lost, but simply unrecorded at hectad level across England;
- re-finding threatened species that are apparently lost at hectad level across England;
- clarifying why species are being lost;
- helping to inform conservation of habitats;
- encouraging the writing of papers for *B&IB* or *EBN*;
- providing data for student projects;

Who is it for?

- VCRs
- Local groups or networks
- Individual botanists at all levels
- Students and supervisors
- Other volunteers

VCRs can choose whether to take part and look in their v.c., but the project is intended to be suitable for individuals and local groups or networks as well. Participants may choose to look at a habitat or area that transcends v.c. boundaries, for example in a home patch hectad. Some of the apparently lost more common species are readily recognisable and suitable for a beginner to hunt.

We envisage that the project will run for two or three years, or until the next iteration of the BSBI Local Change project commences, whichever is shorter. It is intended as an enabling project for people to follow up an idea that interests them and will not necessarily produce scientific results.

How will we measure success?

- Members go out and find missing plants;
- There is growth in local groups and networks;
- There is student engagement;
- Material is written for publication in *EBN*;
- Papers are written for *B&IB*;
- We gain better knowledge of habitat preferences to inform management
- New wildlife sites are designated;
- We gain a better knowledge of threats : including climate change, agriculture, people etc;

Methodology

The methodology chosen depends on your level of experience. Much of it also assumes that the DDb is up-to-date with the county records.

<u>Beginners</u>

If your VCR is participating in the project, they should be able to supply you with a general list of species to look for.

If you would like to participate without the support of a VCR, then contact the project co-ordinator, who is pro-tem the Chair of CfE, Jonathan Shanklin.

Choose a few plants from the general list for your area that you can recognise. Check in a book (*e.g. Collins Flower Guide* by Streeter *et al.*) what sort of habitat you are likely to find the plants in, then go and look at sites with that habitat in the chosen hectad. As an example, in February I visited the hectad SJ37 in v.c.51 (which is not England!) which had quite a few missing species including *Geranium lucidum* (**Shining Crane's-bill**). I found this in two monads without trouble (the leaves are easily recognisable at this time of year), so in this case the apparent loss was just a lack of recording. Report your find, with the usual what, where, when and who, to your local VCR using their preferred reporting method. As we are in a new date class, it may be helpful to report other species that you find at the same time, particularly if it is at a well-defined site. As you progress you may want to try finding more difficult species, making more complete lists of species found, or move to the next level.

Anyone can use the DDb to find which plants have previously been seen in a hectad or tetrad by using the grid reference lookup tool. This could potentially be used to narrow down the search, though common plants are likely to be widespread in a hectad. Although this project is designed to look for missing plants at hectad level, beginners may want to stick to their local area and the tool will show which plants have not been seen in the present date class.

VCRs, Local Groups, Networks and experienced botanists

Threatened plants are not just those in a standard county Rare Plant Register or with significant threats in the England

Red List. Many once common species are showing a decline, although this may not be sufficient to trigger IUCN criteria for concern at country level. At the county level however, these species may show a decline of over 30% compared to pre-2000 (at hectad, tetrad or monad level), though are still relatively common, and it is such species in particular that need investigation. All these can now be included in a county RPR according to the 2017 BSBI guidelines. A fully comprehensive RPR is therefore the same thing as a Register of Plants of Conservation Concern (RPCC). Whilst creating a fully illustrated RPCC with details of all the plants in it may seem daunting, in the first instance a simple checklist is of great use.

Such a Register is not essential for taking part in the project, though it may provide a focus. If your RPR is not already on the DDb, then consider having it uploaded, so that it can be selected as an attribute in searches. VCRs and approved users can then make use of the DDb to generate lists of their threatened species not seen in hectads since 2000 and local groups, networks or individuals can request lists from the VCR or from the project co-ordinator. They can also use the DDb tool to generate monad lists. This does however assume that all records have been incorporated into the DDb, which is not always the case for those counties which do not use MapMate.

One approach is to choose one or more plants that have apparently been lost from a hectad since 2000 but still persist in an adjacent hectad. Ideally they should be plants that have a reasonably precise location, as a hectad is a large area to search, but you are free to choose whatever species you like. It is preferable that the plant's original habitat is still present, as we shouldn't waste time by looking for some lost plants on new housing sites etc, though that would be worth recording as a reason for loss. It is worth

concentrating on those plants in the v.c. that aren't necessarily rare or scarce, but are in decline. A v.c.29 example would be *Asperula cynanchica* (**Squinancywort**), apparently lost from three hectads, but still present in 23 monads. Visit the old sites and see if you can re-find the plants. If the site has a specific name with well defined boundaries make sure that you record the standard site name. Whether you do or do not re-find the missing plant, record what plants are still present and make notes on habitat, population numbers, possible reason for loss, etc on the recording form (see draft). Then visit a nearby location where the plant is still present (or has previously been seen within at least the last decade) and make similar records.

On some occasions the apparent loss will simply be a lack of recording, and if this is most likely the case simply note the fact, without necessarily making a detailed list.

VCRs are free to adjust the methodology to suit their local requirements, and to take the project as a stepping stone for their own ideas. As an example, although this project focuses on hectads, you might want to go to a much finer level, investigating whether the missing RPR species are in un-recorded monads ("Shanklins") where they were previously only noted at hectad level. Another option would be to concentrate on a habitat, for example you might want to concentrate on aquatic species or arable weeds, so could select those to follow up. A further option is to look at species missing from designated sites or areas. The DDb has an option to search quite a wide range of bounded areas, from SSSIs through to individual Parishes, though it isn't clear whether the DDb is populated with some types of site for all counties. Such searches could include Important Plant Areas and Important Arable Plant Areas. There are

also filters in the DDb that can restrict searches to particular habitats.

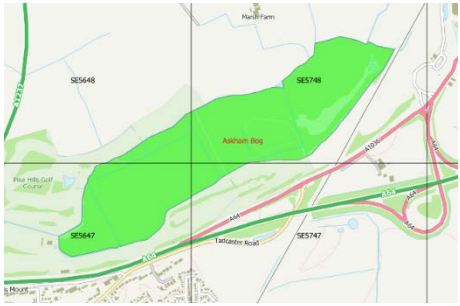
Recording

Every recorder has their own preference in how to record; there is no best way to record, though you must note what, where, who and when. In addition some supplementary information is desirable for the project. Options include:

- The BSBI has standard recording cards for each county. The species lists for each county on these are a little out of date, as there has been a significant decline of some species since then, and an increase in others. They do have an advantage for those who like to input records using BRC numbers, however not all species have BRC numbers.
- The LORE recording card has been designed to be as simple as possible, so that all levels of expertise can potentially use the same form. It shows the supplementary information desired.
- Beginners may wish to just report one or two plants and there is then no need to use any form. Species can be reported using English names, though such names need to be just as accurate as Latin names. For example whilst **Hawthorn** is most likely to be *Crataegus monogyna* there are a lot of other possibilities, especially in eastern England. We do however encourage beginners to learn Latin names as these often give additional information. For example the Latin name for Hawthorn tells you that there should be only one stone in the haw. If there are two stones then you may have *Crataegus laevigata* (**Midland Hawthorn**)
- Some VCRs use notebooks rather than cards as this allows them to retrace the sequence of recording and add additional notes.

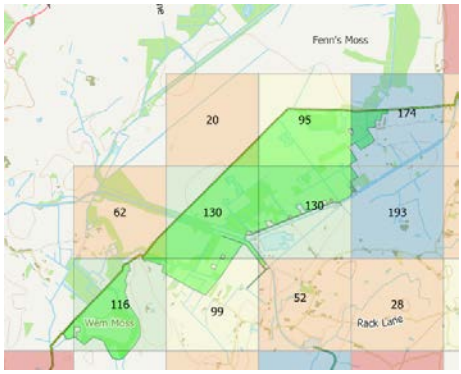
- Increasingly recorders are using iNaturalist, iRecord or similar apps. The BSBI is developing its own app. iNaturalist records do feed into iRecord, and there are occasional downloads of records into a holding area on the DDb, but they are not instantly available to VCRs.

On one side of a recording card there is a standard recording list, which gives abbreviated Latin names for around 650 relatively common species across the county or in the case of the LORE card across England. On the LORE card species that are very common have an exclamation mark after them and these do not need any further details. Note that species that are common in some counties may be rare in others! The list was generated via the MapMate software used by many recorders, and as this still uses Stace III names, they are what has been used here.



On the front side you should give the site name (eg Askham Bog SSSI), general area (eg Woodthorpe), nearest feature in the monad (eg Marsh Farm) or the general parish (eg Copmanthorpe CP); the monad grid reference, or better for a small site; and the v.c. Records must be attributable to a monad or better, so if a site spans more than one monad, please record each part separately, unless this is a very small fragment.

For example Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses SSSI covers eleven monads and crosses the boundary between England and Wales. The illustration shows the number of post 2000 v.c.40 records for each



monad, but does not show the extent of the Welsh part of the SSSI in v.c.50. Each monad should be recorded separately and in this example it is worth recording each SSSI unit or management unit separately as well. If however you were recording in a monad outside the SSSI, give it a different name, for example Whixall CP for records from SJ4935. This can be problematical when part of a well-defined site is a SSSI or other designated site and the rest is not, so the only option is to omit the SSSI part of the site name for records from the part that is not a SSSI. It can be difficult to find exactly where site boundaries are, particularly where county designation boundaries (eg Wildlife Trust) differ from SSSI or other designation boundaries. In such cases do the best you can! Do not use site centroids with a six figure grid reference as these can be very misleading. Equally if you give an eight figure grid reference all species must be present within a 10 metre radius of that point. Do not give 10-figure grid references as they are rarely accurate to that level unless you have a very expensive differential GPS.

On the reverse side you can note

- the date (if you visit more than once, you can either use separate forms, or use different colours/symbols on the same form for a subsequent visit, but all records must be tied to a single date);
- the species that you were particularly looking for and whether you saw it or not;
- the recorder names;
- any threats to the target species;

- short notes on the site habitat and site management.

There is then space to record additional species not on the card and as it is not tailored to any specific county there may be many that need noting. If you find species of significance – the target species or other threatened species you can also note approximate population sizes, the accurate grid reference and any additional information that might be important. Population can either be given in the standard DAFOR scale, or as an approximate count to the nearest order of magnitude (1, 10, 100, 1000, more than 3000).

If you have your own county recording card, you can of course use this, as it will be better suited to your locality.

Submission of results

As with all botanical recording, participants should send their results to their local VCR, either on a recording form (local, BSBI or project) or as simple text, ideally within a month of the observations being made. This allows the VCR to give feedback, and also a chance to update the local or national database in good time. If you write a note on your experiences or a report for EBN, please send it to Jonathan Shanklin. If you write a more formal paper on your findings send this to the B&IB editor.

Data Logging

Ideally we need a volunteer to design an access database and data entry front end to log the information recorded. Failing that we will have to make do with MapMate, Recorder or your local software. It is possible to enter null records into both MapMate and the DDb, but if you don't find the plant it is probably better to add a comment to the previous positive record, rather than putting in a new entry

recording that you didn't find it, as there are many reasons for apparent absence. In MapMate putting in N as the quantity seen implies not found, though doing so will generate a point on a dot map, unless you put in code to prevent the display. In the DDb a VCR can give a record status of "looked for but not found" when adding records manually.

Analysis

The level of analysis will depend on whether volunteers (academics, members, students, VCRs or staff) come forward, and on whether this is at local or national level. You could write up your observations for *EBN* to give a county or local picture. If you do this in a more formal way, covering a suite of species, a paper could be submitted for consideration by *B&IB*. If a suitable volunteer or volunteers come forward there could be more comprehensive analysis across England for a major paper in *B&IB*. Corporate BSBI do not envisage any staff time being available to manage the project, design databases or enter data; unfortunately MapMate is not suitable for capturing the fine detail. Questions that might be investigated include:

- What are the differences between survival and disappearance?
- How much does discovery depend on looking closely?

DDb examples

VCRs and other authorised users can use DDb queries to give some suitable suggestions of plants to follow up. They can suitably select any native or archaeophyte species not seen for 20 years or add a constraint that the species should be in the county RPR. I have used v.c.29 (Cambridgeshire)

in this example (with thanks to Tom Humphrey for considerably improving my original effort).

The query joins two sub-queries – the first part selects native or archaeophyte species (or if you want, any species) recorded from 1950 to 1999 in distinct hectads and lists those hectads, the second excludes all species that have been seen in those hectads from 2000. You could use different time periods – I have used 1950 to exclude almost certainly extinct plants, but you could use an earlier or later date or a different date class boundary. For example Kent are trying to refind all the plants on their RPR not seen since 2019.

My query gave this output:

results table | download | help

396 groups matched your query.

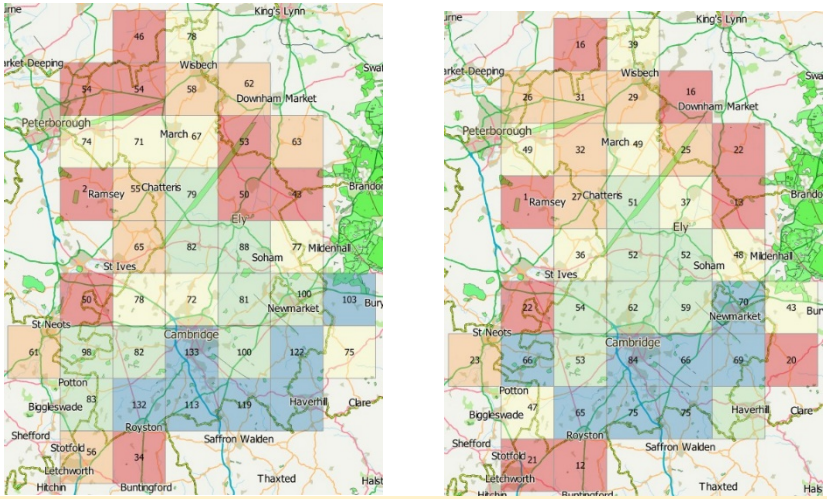
<< first < prev 1 2 3 4 5 6 7 8 next > last >>

species (exclusive)	qualifier	rank	hectads	Number of hectads
Achillea ptarmica		species	TF30,TF41,TL25,TL36,TL49,TL57	6
Adonis annua		species	TL26,TL35,TL45,TL56,TL64,TL65	6
Agrostemma githago		species	TL23,TL24,TL65	3
Agrostis vinealis		species	TL54	1
Aira caryophyllea		species	TL55,TL57,TL66,TL67	4
Aira praecox		species	TL39,TL55,TL65,TL66,TL67,TL76	6
Alchemilla filicaulis		species	TL24,TL45,TL55	3
Alisma gramineum		species	TL57	1
Alisma lanceolatum		species	TL44,TL49,TL69	3
Alisma plantago-aquatica		species	TF31,TF50,TL15,TL54	4
Allium oleraceum		species	TL45,TL54	2
Alopecurus aequalis		species	TF40,TL54,TL57,TL66	4
Alopecurus geniculatus		species	TF31,TF40,TL34,TL54,TL65	5
Althaea officinalis		species	TF41,TL46	2
Anacamptis morio		species	TL36,TL46,TL47,TL55,TL56	5
Anagallis arvensis		species	TL35	1
Anagallis tenella		species	TL25,TL55,TL56	3

Note that the v.c.29 RPR on the DDb is the 2019 version and includes declining species in the county.

It is interesting to map where these species are missing from, and I used QGIS with Ordnance Survey open source Zoomstacks map to produce some maps using an earlier

form of the query. The output from the DDb is not ideal and I had to do some transformations using a combination of Excel and a FreePascal program that I wrote.



Number of species missing from hectads in v.c.29. Left: native & archaeophyte. Right: RPR.

The pattern of loss seems broadly similar and shows that you don't necessarily need to have an RPR in order to participate. For Cambridgeshire it seems to suggest that the greater loss has been from the chalk downlands and also from the acidic greensands around Gamlingay.

Postscript [Ed]

Several members have been out hunting, with some success, for example re-finding *Primula veris* (Cowslip) in the v.c.29 part of TL37. The queries have also been used by VCRs, providing ideas for species and habitats to look at. I produced a map showing the location of the more precisely recorded species in Cambridgeshire, which highlights some places to visit.

Articles

Mistletoe In South Cumbria

Lynne Farrell

When I lived in Cambridgeshire I carried out surveys of two species which were much more obvious in the winter period than in the summer when leaves were on the trees and bushes. These species were *Daphne laureola* (Spurge Laurel) and *Viscum album* (Mistletoe). Last winter I searched for both *Daphne laureola* and *Daphne mezereum* (Mezereon) up here in the South Lakes, which some success. In January 2022 I decided it was time to search for Mistletoe in Cumbria.

There were very few records, and even fewer recent records, for this area, so I thought it would not take long. But of course, once you begin these projects it seems to expand and it becomes more interesting. The main area seemed to be very close to where I live in Arnside, and indeed I have found a few clumps in the village, which have been propagated by a very keen local lady. But the nearby village of Heversham is the hot spot! References mentioned ‘near the churchyard’ and near Levens Hall, so I set off walking round the village with my binoculars, notebook, camera and map. Not surprisingly, several villagers emerged from their houses and enquired what I was up to. All of them were intrigued and have been very helpful, suggesting further spots to look. I am providing some of them with a marked-up map, to which they can add any additional records.

Quite a few records are from the churchyard itself, old Apple trees adjacent, small orchards and on individual trees in gardens. Several Apple trees have large quantities of Mistletoe, and one particular tree is laden down to the extent that a local gardener harvested two large green bins full in July, which I think have been put on the compost heap, and then a further large harvest in December to take to the local supermarket for sale, and to the church for people to enjoy.

Other clumps, or spheres, as I occasionally call them due to their rotund nature when mature, were located in old hedgerows on Hawthorn, and in large Lime trees near Levens Hall.

I have counted the number of male and female plants where visible, and estimated the number of smaller sprigs viewed through binoculars. There is clearly a healthy population. Locals who had lived in the village for over 20 years were able to report that Mistletoe has expanded over the past 13 years, which is good news. The records have been sent to the VCR ready for updating the BSBI database. A total of 64 females, 75 males and many small plants were found. This is a great improvement on the vague records from pre-2000, and has stimulated some local interest. Mike Porter has now asked local botanists to look out for

Mistletoe as well as Snowdrops in the next few months, so perhaps more records will be relocated, update and new places discovered.

Volume 3 of British and Irish Botany includes a paper by Jonathan Briggs, (*British & Irish Botany* 3(4): 419-454), who has been interested in Mistletoe for many years, and has updated previous information and added new considerations. Jonathan thinks that Mistletoe may be declining in the main area down near Worcester and where the annual Mistletoe markets take place. The orchards are declining and becoming older. Could Mistletoe spread further northwards with warming temperatures? Perhaps only if there are suitable host trees and required dispersal agents.

Why not go out and have a look in your local area and discover what has changed?

Postscript [Ed]

Viscum album on a rambling Rose (Pete Michna)

As a postscript to this item from Lynne, I received a report of Mistletoe on an unusual, although perhaps not unexpected host as the Briggs article notes Rosaceae as common hosts.

It was found growing on the thick stem of a cultivated rambling Rose in a Cambridge garden, which supported a lot of Mistletoe on other trees.

Sorting *Galium x pomeranicum*

Steve Mellor

I have been puzzled that Stace records *Galium x pomeranicum* (*G. album x G. verum*) as a frequent taxon that in the hybrids handbook is said to be easily determined on flower colour, yet there are few records for Surrey where large areas have suitable habitat for the hybrid and its parent taxa.

During the Covid years I have recorded a number of local SSSIs on and near the North Downs in Surrey between Guildford and Epsom. At Norbury Park I noted two sites where there were three morphologically different vegetative *Galium* plants growing together in an area no more than 2 m radius. The extreme plants were surely *G. album* (**Hedge Bedstraw**) and *G. verum* (**Lady's Bedstraw**), but the intermediate was well worth further examination, it had a fairly robust unbranched self-supporting stem and intermediate leaves. The plants flowered sequentially: first *G. album*, then the intermediate which had pale yellow flowers and finally *G. verum*. The intermediate taxon was surely *G.*

Herbarium sheet of the largest hybrids

x pomeranicum that later was noted to have reduced fertility (many aborted capsules). Fig. 1 is a herbarium sheet of the largest of the hybrids seen, recorded on the verge of an access road on Norbury Park growing through bramble scrub to a height of 0.8 metres.

Recording Epsom Downs Golf Course, there is much *G. verum* but I saw no *G. album* or plants that had hybrid morphology until I recorded an old sunken track at the edge of the open downland. Down this track *G. verum* was well in flower and there appeared short robust upright stems with fruit and a few yellow flowers, and continuing, similar plants grew taller and taller but carried only fruit. The tallest plant seen here grew to approx. 45 cm and nearby there were a few fruiting *G. album*. It is reasonable to presume that the hybrid was back-crossing frequently with *G. verum*.

All hybrids recorded had pale yellow flowers, many in natural habitats on the Downs. Some of the roadsides populations were surely planted, for example on a road verge in Leatherhead. All the plants had very similar morphology except for one population growing in a field in Bookham. Here there are 100s of plants growing together in a patch about 3 m across and having every appearance of being rhizomatous. A plant at the edge of this patch is shown at right. Neither parent of the hybrid was recorded in the field.

Rhizomatous patch

During 2021 I recorded *G. x pomeranicum* in ten different tetrads in a small area of Surrey, and in so doing doubled

the total number of records of the hybrid in v.c.17. Clearly, this hybrid is seriously under recorded.

Some frequent abbreviations:

B&IB	*British & Irish Botany*
BRC	Biological Records Centre
CEH	Centre for Ecology & Hydrology
DDb	BSBI Distribution Data-base
E&C	BSBI Events & Communications Committee
EBN	*English Botanical News*
IUCN	International Union for Conservation of Nature
LC	Least Concern threat level
LRC	Local (Environmental) Records Centre
LNR	Local Nature Reserve
LWS	Local (or County) Wildlife Site
NCR	New County Record
NPMS	National Plant Monitoring Scheme
QGIS	A freeware geographic information system
RPCC	Register of Plants of Conservation Concern
RPR	Rare Plant Register
S&D	BSBI Science & Data Committee (formerly Records & Recording)
S&T	BSBI Skills & Training Committee (formerly Training & Education)
v.c.	vice-county
VCR	Vice-county Recorder

Date-class BSBI divides plant records into different time periods. Historically these were rather arbitrary, depending on Atlas recording projects. Since 2000 they have been strictly decadal, with the current one starting in 2020.

Picture Gallery

Myosotis discolor subsp. *discolor* (**Changing Forget-me-not**), Histon, Cambridgeshire (v.c.29) (Peter Leonard)

Primula farinosa (**Bird's-eye Primrose**), Widdy Bank, Upper Teesdale (Falgunee Sarker).

Spiranthes spiralis (**Autumn Lady's-tresses**), Tydd Gote, Cambridgeshire (v.c.29) (Peter Leonard)

Orchis purpurea (**Lady Orchid**), Elham Valley, Kent in 2016 (Jon Dunn)