

Flora News

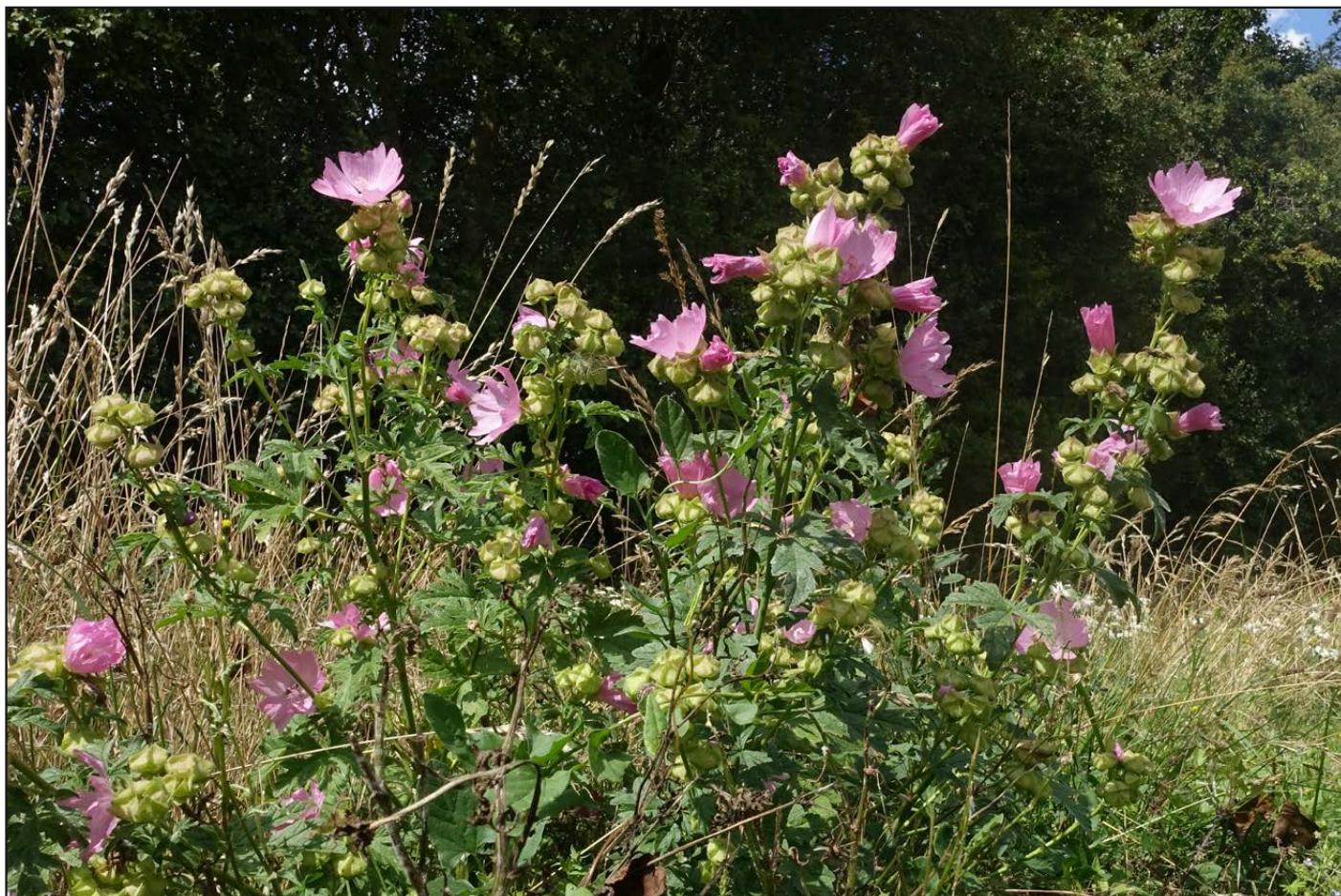
Hampshire &
Isle of Wight

Wildlife Trust



Newsletter of the Hampshire & Isle of Wight
Wildlife Trust's Flora Group

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Dear Flora Group member

In this issue we have details of lots of events to be held during 2020. Our Annual General Meeting (AGM) this year will be held on Saturday 6 June 2020 when we will be visiting the water meadows at Itchen Stoke Mill.

Other field meetings include opportunities to see coastal plants at Boscombe and Southsea, a visit to Hampshire & Isle of Wight's relatively new nature reserve at St Clair's Meadow near Soberton, a botanical survey of the arable reversion site at Barton Meadows nature reserve near Winchester and a botanical walk in the New Forest.

We are very grateful to Ron Allen who has agreed to lead a two-part course to introduce Flora Group members to wild soils of Hampshire, with a particular focus on the New Forest. The first day will be an indoor introductory session at Testwood Lakes Education Centre and then we will spend a day at Roydon Woods Nature Reserve where we'll investigate wild soils in the field. This is an excellent opportunity for us to learn from an expert in soils and geology who has considerable experience of the New Forest. Places will be limited so please book early to avoid disappointment.

Martin Rand and Andy Cross will be running a training day in June focusing on plant families that are characteristic of chalk grassland. This will be an ideal opportunity for people who have used a popular field guide but who would like to improve their identification skills and move on to using a formal Flora.

Would you like to share transport to Flora Group events? During the Flora Group's 2019 AGM Rob Still kindly agreed to set up and administer a WhatsApp group so that people could make contact with each other and arrange lifts to Flora Group events. If you would like to participate, please send a text to Rob on 07702 737456 saying you wish to join the HFG WhatsApp group.

We are grateful to everyone who helps to organise Flora Group events and, as usual, we welcome your suggestions for Flora Group activities. Please raise your ideas with any of the Committee members – Sarah Ball (Chairman), Catherine Chatters, Clive Chatters, Andy Cross, Isobel Girvan, Gareth Knass, Tony Mundell, John Norton, Martin Rand or Neil Sanderson.

We are always keen for more people to provide contributions to *Flora News* on any relevant botanical topics. If you have enjoyed any of the Flora Group events and would like to write a report we would be very pleased to receive it. Please send your articles, notes or reports to Catherine Chatters (Flora Group Secretary) at Catherine.Chatters@hiwwt.org.uk or to her home address which is given at the end of this newsletter.

Catherine Chatters
Flora Group Secretary

John Norton
Editor

Cover photo: Greater Musk-mallow *Malva alcea*, a rare neophyte found at Whitchurch in August 2019 by Pete Flood and photographed here by Peter Billingham.

Forthcoming Events

Please note that for some Flora Group events prior booking is required. If so, this will be stated clearly in the text relating to that particular event.

For a variety of reasons, a number of Flora Group events had to be cancelled in 2018. It would therefore be extremely useful if you could let the leader know if you are intending to participate in an event. The leader

would then be able to inform you if the event has to be cancelled or let you know about any other unforeseen circumstances. Bring a packed lunch and suitable footwear to all meetings.

For mobile phone users Rob Still administers a WhatsApp group for people wishing to share transport with other Flora Group members to and from meetings. If you would like to participate, please send a text to Rob on 07702 737456 saying you wish to join the HFG WhatsApp group.

Sunday 8 March 2020, 10am–3pm
Atlas 2020 is over: what do we all do now?
Testwood Lakes Education Centre, Totton
Leader: Martin Rand

We've come to the end of recording for the BSBI's Atlas 2020 project, and this meeting is to celebrate what we've achieved in Hampshire and to look at new projects to keep us out of mischief and escape the existential void.

There will be presentations on three projects already under way:

- The Online Supplement to the 1996 Hampshire Flora.
- Hants Plants Version 2. With large parts of the website now needing to change, it seems like the right time to give it a major overhaul. You will be able to see and comment on the work done so far; the plan is that the new site will go fully live during 2020.
- Updates to the Hampshire Notables list and to the Hampshire Rare Plant Register.

We shall also talk about ideas for activities over the next few years that you may like to get involved in. These are mine, but if you have others, bring them along for discussion!

- Site Floras.
- Threatened Plants Recording: this is a local continuation of the BSBI's Threatened Plants Project of a few years back.
- Variation Within Species: to improve our understanding and documentation of ecologically significant infraspecific taxa (subspecies and varieties) within the county.

Meet at the Wildlife Trust's Testwood Lakes Education Centre on the edge of Totton. The approach is a gated drive off Brunel Road, Totton at OS grid reference SU 349 151. Continue to the Education Centre at the end of the track, where there is ample parking. The grid reference for the Education Centre is SU 344 155. If you are using a sat nav the nearest postcode is SO40 3WX; Lat./Long. 50.9385, -1.5117. The event will take place in the upstairs meeting room.

Level: Suitable for all levels of experience; I hope there will be something to interest all. **Public transport:** buses Salisbury Red X7 (Southampton/Salisbury) or First Bus 1/Bluestar 12 (Southampton/Calmore), walk along Brunel Road and then along drive to Centre. **Booking:** the event is free and all are welcome, but please book with Martin Rand (details on back page) providing a phone number or regularly monitored email address in case of late changes. Free cake, biscuits and refreshments will be provided; bring your own packed lunch.

Saturday 21 March 2020, 10am–4pm
The Wild Soils of Hampshire (and the New Forest in particular) Part 1 – indoor introductory session
Testwood Lakes Education Centre, Totton
Leader: Ron Allen

Ron Allen, an expert in soils and geology who has considerable experience of the New Forest, has kindly

agreed to lead a two-day course to introduce Flora Group members to the wild soils of Hampshire and the New Forest in particular. The first day will be held indoors at Testwood Lakes Education Centre on Saturday 21 March and this will be followed by a day spent in (or rather under) Roydon Woods Nature Reserve on Sunday 17 May.

Ron describes wild soils as follows:

"Wild soils are those soils only little directly affected by man and can be considered semi-natural in the sense that an ancient woodland is semi-natural. They have changed with changing climates during and since the Ice Ages and again as man cleared woodland and created heathlands and grasslands, but wild soils essentially follow natural processes in their formation and development over thousands of years closely intertwined with the semi-natural habitats associated with them".

During the course we shall look at soils not only as a function of the underground part of a habitat, but how they are affected by differences in geology, Ice Age and postglacial climatic changes and the effects of man. We will look at how soils are formed from geological parent materials, the processes operating within them, their chemistry, their water regimes and how they are described, mapped and classified. We have dry sandy soils right through to deep waterlogged peat soils and all sorts in between but soils are so much more than their geology; they affect wild creatures and their habitats and are in turn affected by them. We will find out just what soils are and how they have a certain fascination of their own.

The indoor session on 21 March will first look at the geology of Hampshire and how this has affected the vast range of soil types present, move on to consider how different soils are formed and how to recognise them and to consider the New Forest as a wonderful case study of considerable soil diversity. Out in the field on 17 May we shall take spades and augers and investigate wild soils for real, get our hands dirty and discover just what it is that makes soils tick and discover how to distinguish different soil types.

The two days of this course are intended to complement each other and so to get the most out of these workshops, please try to come to both.

Fee: £5. Booking is essential and numbers will be limited. The fee will be collected on the day. Bookings and enquiries to Andy Cross at andymcross@gmail.com. People who can attend both days will get preference in the booking but if you can only make one of the days please do let Andy know. Further details about the course will be sent out to people who have booked a place.

Saturday 16 May 2020, 10am–4pm
Coastal Plants, Exotics and Aliens,
Boscombe, Bournemouth
Leader: Martin Rand

The built-up coastline of the Bournemouth cliffs has an extraordinary mix of native coastal plants and many non-natives. This is a chance to brush up your ID skills, perhaps see something new, and enjoy a day by the sea!

Meet at the head of Boscombe Pier, SZ 111 911 (BH5 1BN). There are take-aways and cafés in the meeting area, otherwise bring a packed lunch.

Level: Suitable for all levels of experience. **Public transport:** Bournemouth Station is 2km away on foot. Yellow Buses and Morebus run multiple frequent services to Boscombe Crescent, from where there is a 700m walk to Boscombe Pier via St John's Road and Sea Road. The bus route from Bournemouth Station entails either a change of bus or a similar distance on foot at the other end. **Parking:** Undercliff Drive, adjacent to Boscombe Pier (BH5 1BL) but parking is strung out over a long stretch of coastal road. Overstrand car park off Sea Road, just above Boscombe Pier (BH5 1BN; Lat./Long. 50.7199, -1.8432). If these are full, alternative parking at East Overcliff (BH1 3HR), then walk E (path and steps) 400m to Boscombe Pier. Current charges: £6 for up to 6 hours, £9 for over 6 hours; cash or phone (no credit cards). **Booking:** not required. **Contact:** Martin Rand (details on back page).

Sunday 17 May 2020, 10am–4pm
The Wild Soils of Hampshire (and the New Forest in particular) Part 2 – outdoor field session
Roydon Woods Nature Reserve
Leader: Ron Allen

Booking is essential and numbers will be limited. For details please refer to the information for the Part 1 event on Saturday 21 March 2020.

Saturday 6 June 2020, 10.30am–4pm
Visit to Itchen Stoke Mill and Flora Group AGM
Leader: Tony Mundell

The landowner, Roger Harrison, has invited us to survey the plants growing in water meadows near the mill. First Roger will show us the mill itself and talk about management of the water meadows. The Hampshire Conservation Volunteers have been helping to manage the site with annual visits for the last 39 years. One of their annual tasks is to open sluices to flood part of a meadow each year, in the time-honoured traditional way.

We will make a complete list of all plants seen, hopefully also with abundance on the DAFOR (Dominant, Abundant, Frequent, Occasional, Rare) scale. After munching our sandwiches we will hold our brief AGM before continuing the survey.

Meet and park in the grassy field immediately south of the mill house at SU 5637 3177, Lat./Long. 51.0825, -1.1966. This is accessed through a gate off the gravelled area. There is a ford just north of the mill house so if there has been a lot of rain it may be best to travel via Ovington. Bring a packed lunch and suitable footwear for very wet ground.

Booking: not required. **Contact:** Tony Mundell (details on back page).

Wednesday 24 June 2020, early evening
Survey of St Clair's Meadow, Soberton
Leaders: Martin Rand and Clive Chatters

St Clair's Meadow is a recently acquired nature reserve in the Meon Valley which was bought by the Wildlife Trust through the generosity of the local community. We had planned to visit this site during 2018 but we had to cancel the visit as the vegetation was impenetrably tall and tussocky due to the absence of livestock. This year we will be able to look at the site as the gates and fences have been repaired and the cattle have returned. The meadows are unlikely to be particularly species-rich in herbaceous plants as they have had a chequered agricultural history; by way of contrast the chalk river is superb.

Booking is essential as arrangements for parking and access are tricky. **Contact:** Please contact Clive Chatters between 1–14th June to book your place, via email at Clive.Chatters@hiwwt.org.uk.

Saturday 27 June 2020, 10.30am–4.30pm
Learning Flowering Plant Families: Chalk Grassland Shawford Down, near Winchester
Leaders: Martin Rand and Andy Cross

This is a rearrangement of the one-day training session that was originally scheduled for 2018. We've decided to be a bit less ambitious on venue this time. Shawford Down has had a troubled life over the last 80 years but is now being successfully restored with scrub clearance and grazing by Hampshire County Council. You will learn the characteristics of some of the major British plant families in the field and find out how to continue your learning afterwards.

Meet in the woodland just behind the small car park at the top of Shawford Down alongside Otterbourne Road (old Southampton-Winchester road), SU 467 248 (SO21 2BX; Lat./Long. 51.0207, -1.3341). Parking is free.

Level: Ideal for people who have used a popular field guide and now want to improve their technical recognition skills and move on to a formal Flora. If you have a copy of Streeter, *Collins Wild Flower Guide*, 2nd edition, by all means bring it. The leaders will provide loan copies of a more technical field flora and other materials. **Public transport:** Bluestar No. 1 bus from Southampton and Winchester every 15–20 minutes: alight at South Down and walk the short distance northwards to the meeting place (through the car park). Trains from both the Poole/Southampton direction and the London/Winchester direction call approximately hourly at Shawford Station, from where there is a stiff 550-metre walk up Shawford Down to the meeting place, or a slightly longer more gentle one by curving round to the right after entering the Down. **Booking:** essential, numbers will be limited and there will be a fee of £7 for the day. **Contact:** please contact Martin Rand (details on back page) to reserve a place, providing a telephone number or regularly monitored email address in case of any changes to plan at short notice.

Saturday 4 July 2020, 10.30am–5.30pm
More Native, Exotic and Alien Plants by the Seaside
Southsea, Portsmouth
Leader: Martin Rand

This is a chance to look at weeds and aliens later in the year along another largely built-up stretch of coast. For those who wish, there will then be time to continue to the beach at Eastney where there is a good flora of vegetated shingle and sand, including *Silene nutans* (Nottingham Catchfly) and the spiny coastal form of *Ononis repens* (Common Restharrow), also several good coastal grasses.

Meet at Lumps Fort, Southsea, at the eastern end of the car park, SZ 657 982 (PO4 9RU; Lat./Long. 50.7804, -1.0690).

Level: Suitable for all levels of experience. **Public transport:** Fratton Station is 2km on foot. Portsmouth and Southsea Station is 3km on foot. First Bus route 16 runs to the meeting place: alight at the Canoe Lake stop and walk E 300m along The Esplanade. From either of the stations, take the First Bus route 15 to Bransbury Park, Eastney, then change onto route 16 westbound. **Parking:** at the meeting place. Currently the parking charge is £6 for the day and machines accept cash only. **Booking:** not required. **Contact:** Martin Rand (details on back page).

Saturday 11 July 2020, 10.30am–4pm
Visit to Barton Meadows Nature Reserve, Winchester
Leader: Tony Mundell

This HIWWT reserve is an arable reversion site where grazing has recently been introduced and wildflower seeding was undertaken in 2017. The Hampshire Flora Group has been requested to survey the plants in order to provide a baseline for monitoring future changes in species composition.

We will list all plants seen with their abundance on the DAFOR (Dominant, Abundant, Frequent, Occasional, Rare) scale. There are two fields so we will survey them separately.

Park somewhere in Courtenay Road, Abbots Barton, c. SU 482 311, postcode SO23 7ER, and walk to meet at the north end of that road at SU 4825 3132, Lat./Long. 51.0791, -1.3126. Bring a packed lunch and suitable footwear for rough ground. **Booking:** not required. **Contact:** Tony Mundell (details on back page).

Saturday 18 July 2020, 10am–2pm
A walk over Wilverley Plain, New Forest
Leader: Clive Chatters

We will be taking a circular walk of about 5km across Wilverley Plain to Markway and back again. The purpose of the walk is to look at the Plain where it was 'dug for victory' in the 1940s and early 1950s; we will then move on to look at the recently cleared pine plantations of Markway. The recovery of natural vegetation on both sites is most impressive with a range of communities

naturally re-establishing themselves after periods of intense disturbance. The former arable land is renowned for its populations of Lesser Butterfly-orchid *Platanthera bifolia*, Soft-leaved Sedge *Carex montana*, a good range of Eyebright *Euphrasia* species and hybrids along with plentiful Field Gentians *Gentianella campestris* and Autumn Lady's-tresses *Spiranthes spiralis*. The restored land at Markway has not been thoroughly explored but as it contains some excellent dry heaths, broken ground, mires and open water there is considerable potential. What we will see in flower on the day will be determined on how summer progresses; flowering times are difficult to predict, so nothing is certain. An objective of the day is to draw up a species list of the restored habitats at Markway which we hope will encourage Forestry England to do more of the same.

Meet at 10am on the plain by the main Wilverley Car Park at SU 254 010; Lat./Long. 50.8081, -1.6409. **Booking:** not required. **Contact:** Clive Chatters via email at Clive.Chatters@hiwwt.org.uk.

Reports of Recent Events

Postscript to Visit to Hogmoor Inclosure and the Slab, Bordon – Saturday 18 May 2019

A note by Tony Mundell

I reported on this meeting in the previous issue of *Flora News*, and I commented that it was disappointing that the promised new café at Hogmoor Inclosure had not yet opened. It transpired that the delay was because the new building had not yet been connected to drains in the nearby road. During our meeting a splendid new site was found for a very rare grass, Orange Foxtail *Alopecurus aequalis*, and this was close to the café building. Bill Wain (a local naturalist who helped to guide us on the day) later liaised with the contractors to plan a route for a ditch to be dug for the new drain, avoiding the Orange Foxtail site.

As the ditch was being dug a rather large bomb was discovered. It was decided that it was too dangerous to move, so it had to be exploded in situ. Many householders from the new housing estate across the road had to be evacuated and the bomb was detonated. One result of this was that the structure of the new café building was a bit distorted, so that the door no longer fitted. For many years army tanks had driven over the bomb!

In early autumn 2019 the area containing the café was still fenced off, so I don't know the fate of the Orange Foxtail. However, in September 2019 a new site was found for the grass not far away at Oakhanger Pond (see more about that under VC12 records), so it has resisted 'Hampshire extinction by bomb blast'!

Another P.S. Since writing the note above, John Norton has told me that he visited the Hogmoor Inclosure site in late November 2019. From his photo it is clear that

the Orange Foxtail is lost from there – it must have been very close to the bomb. The small pond where it used to grow has been mostly bulldozed over with sand. Bill Wain tells me that the sand was earlier built into a wall to help shield the houses across the road from the bomb blast.



The Orange Foxtail site, Hogmoor Inclosure, November 2019 (John Norton)

Visit to Cholderton Estate – Saturday 27 July 2019

A report by Rob Still

A happy group of around 20 gathered in the Estate car park in anticipation of observing some botanical gems. An introduction by Henry Edmunds, the current owner who has managed the family estate for the past 35 years, covered the philosophy, 200-year history and the contemporary challenges of managing an organic farm. Further inspired by this talk, the group squeezed into a minimum number of vehicles and proceeded in convoy to various locations.

First up, a visit to the farm cottage garden, interrupted by a photos-out-the-window stop for a magnificent Woolly Thistle *Cirsium eriophorum*. A gravelly area of the cottage garden held a thriving array of arable specialities introduced as seed: Prickly Poppy *Papaver argemone*, Rough Poppy *Papaver hybridum*, Shepherd's-needle *Scandix pecten-veneris*, Cut-leaved Germander *Teucrium botrys*, Field Gromwell *Lithospermum arvense* and Weasel's-snout *Misopates orontium* resulted in many a camera card being filled by all accounts.

A brief guided tour of the arboretum, with many planted *Sorbus* and Henry's insightful knowledge and enthusiasm was a treat, after which it was time to visit some well-managed areas. Firstly, the Reservoir Field, an area of chalk grassland reclaimed from scrub over the years and now managed to provide optimum conditions for some sought-after species. Near the entrance gate a particularly impressive Orange Mullein *Verbascum phlomoides* stood over 2m tall, with the group fanning out over the area and finding some goodies amongst the expected chalk grassland species. These included Dropwort *Filipendula vulgaris*, Hedge Bedstraw *Galium album*, Knapweed Broomrape *Orobanche elatior* and Bastard-toadflax *Thesium humifusum*. A couple of plants of Meadow Clary



Field Gromwell *Buglossoides arvensis* (*Lithospermum arvense*) (Peter Billingham)



Weasel's-snout *Misopates orontium* (Dave Pearson)

Salvia pratensis had long-finished flowering but were a delight to observe, nonetheless. However, a search for Field Fleawort *Tephrosia integrifolia* was without reward, seemingly not flowering this year.

On the way out of the field, a patch of the smaller, prostrate native form of Sainfoin *Onobrychis viciifolia* was found (the cultivar known as 'Hampshire Common', grown to fix nitrogen in the soil rather than using fertilisers, was seen later in the day for comparison).

The sense of excitement was palpable as we walked to the next field, with the hope of some very special plants – a hope that was rewarded. Entering the flower-filled arable field it was hard to decide where to look. One's eye was immediately drawn to the fine patches of Cornflower *Centaurea cyanus* amongst the poppies and Stinking Chamomile *Anthemis cotula* (these Cornflowers the genuine archaeophyte with smaller, more delicate flowers, all of them blue, rather than the aliens so frequently sown

Rose Workshop – Saturday 17 August 2019

A report by Gareth Knass

This event included an indoor session at Testwood Lakes where workshop participants were led through an introduction to rose ecology and the key features in rose identification. Fresh specimens of all native species of roses in Hampshire were brought along to the indoor session so that the participants were able to see the features for identification on both the commonly encountered species and the rarities.

Some of the indoor session was taken looking at the identification criteria for the recent changes in taxonomy in Roses, whereby the former 'Groups' in Dog-rose *Rosa canina* have been separated into species: Dog-rose *Rosa canina* (for Group Lutetianae & Group Transitoriae), Hairy Dog-rose *Rosa corymbifera* (for Group Pubescentes) and Glandular Dog-rose *Rosa squarrosa* (for Group Dumales).

The session also considered the potential identification pitfalls with hybrids, given that roses are well known for hybridisation and that where hybridisation occurs the genetic transfer between parent plants is not even in the dog-rose section as four fifths of the genes come from the maternal parent. Four common hybrid Roses that are relatively widespread in Hampshire (*Rosa x subcanina*, *Rosa x dumalis*, *Rosa x irregularis* and *Rosa x andegavensis*) and two rarer hybrids (*Rosa x scabriuscula* and *Rosa x toddiae*) were also brought along as fresh specimens.

After lunch we reconvened at the northern end of Beaulieu Airfield to look at roses in situ. Thankfully the weather was kind to us, especially given the previous week or so of rain and strong winds, although the unseasonal storm that passed the week before appeared to have damaged most of the roses in this relatively open and exposed site. The former airfield runway and associated infrastructure contains a wide diversity and number of roses. We spent a couple of hours going through the new key (published by Roger Maskew in *BSBI News*¹) and looking in the identification notes produced for the workshop. We managed to find a number of rose species, including a good quantity of Short Styled Field-rose *Rosa stylosa*, Small Flowered Sweet-briar *Rosa micrantha* and Dog-rose *Rosa canina*. We also noted Hairy Dog-rose *Rosa corymbifera* and three commoner hybrids: *Rosa x subcanina*, *Rosa x dumalis* and *Rosa x andegavensis*. The first two of these hybrids are unusual in that one of the parent species, Glaucous (Northern) Dog-rose *Rosa vosagiaca*, does not occur in Hampshire. Despite this, the two hybrids are common and widespread through the county, and largely under-recorded.

Finally we considered the potential for hybridisation and back-crossing of individuals to create hybrid swarms – as is likely the case on sites such as Beaulieu Airfield. Not all rose bushes are able to be adequately identified, and

¹ Maskew, R. (2017). Recent taxonomic and nomenclatural changes in *Rosa* L. *BSBI News* 135: 46–48.



Tony Mundell with Orange Mullein *Verbascum phlomoides* and close-up of flower (Peter Billingham)

on road verges by councils, etc.), and then to the swathes of fumitories which provided an incredible opportunity to compare and contrast, particularly the area where, in a few square centimetres, Dense-flowered Fumitory *Fumaria densiflora*, Fine-leaved Fumitory *F. parviflora* and Martin's Ramping-fumitory *F. reuteri* were growing side by side.

It was (for me at least) quite a challenge to leave this field, but the meeting had concluded and it was with reluctance but lingering joy that the group made its way back to the car park and dispersed with memories of some very special arable plants.

bearing this in mind, the recording of roses should be considered at a population level, taking into account what species and potential hybrid pairings can be present at any given location.

Thanks to Roger Maskew for discussions and tips on producing the workshop notes (downloadable from the Hants Plants website <https://www.hantsplants.org.uk/articles.php>), Andy Cross for assistance with the smooth running of the workshop and to Ginnie Copsey for bringing specimens of Burnet Rose *Rosa spinosissima*.

Visit to the Herbarium at Portsmouth Museum – Saturday 2 November 2019

A report by Jill Oakley

It was a late autumn day when a bevy of botanists battled through driving rain and 85 mph winds, conditions that would have had most ordinary mortals hunkering down indoors. However, Hampshire Flora Group members are made of strong stuff and it takes more than bad weather to deter them from reaching their destination. Fortunately the venue was Portsmouth Museum where we were welcomed by Christine Taylor, the Natural History Curator, and we were able to warm up with the hot drinks that she had thoughtfully provided. We were joined by a senior lecturer from Portsmouth University, two students and Dr Emma Karoune, an archaeobotanist.

Christine gave an interesting introductory talk. She told us that she had been in her post as Natural History Curator for fifteen months; previously she had worked at the Winchester Herbarium. She is implementing a two year funded project called 'Wild About Portsmouth'; to increase the profile of the Natural History collections. Her responsibilities include caring for taxidermy, geology, insects, exotic material, such as penguin eggs and puffer fish, as well as herbarium specimens. Storage space at the museum is very limited so it is necessary to keep many items at the Hilsea store and Cumberland House.

When Christine started her job she discovered that the herbarium collections were all mixed up in boxes with many mounted on old newsprint sheets, this made finding specific samples very difficult and the tight storage available was a real problem. Christine's priority was to organise the collections to make them readily accessible. She set to work directly and soon sourced 36 redundant herbarium cabinets from the Natural History Museum in South Kensington which she installed in the Portsmouth Museum. Her next task was to catalogue specimens so they could be easily accessed. With the help of about 25 volunteers who undertake cataloguing, cleaning and remounting there has been amazing progress, with very many specimens now easy to find, neatly stored in genus folders in Stace 2 order. The work is ongoing with the contents of a number of boxes still to be sorted.

Christine explained that due to extensive damage during the Second World War, 70% of the museum's natural history specimens were lost and only 700 specimens remained. Since then the museum has acquired six main herbarium collections often with much data included.

The earliest plant dates from 1782 and the majority of the collections contain plants collected in the nineteenth and early twentieth centuries.

Dr Emma Karoune gave a brief presentation which outlined her interesting work with microscopic crystalline structures of silica within plants, called phytoliths, and their role in providing ancient habitat data.

After this we all made our way to the herbarium and immediately appreciated Christine's work in transforming an assorted collection of boxes into a well catalogued collection of specimens in the herbarium cabinets. Several of us investigated one of the boxes yet to be processed. We saw a pile of poorly mounted specimens, some even fixed with yellowing Sellotape, which made us realise what a daunting task Christine had faced.

The day ended with the opportunity to examine some of the specimens more closely. We were particularly charmed by the collection made by Mrs Tate in 1832 with her carefully labelled pressed flowers beautifully presented in a large book. We thanked Christine for a very enjoyable and informative day before we made ourselves ready to battle against the elements again on our way home.

Flora Group/BSBI Exhibition Meeting – Saturday 16 November 2019

A report by Catherine Chatters



Rosemary Webb by the superb display of orchid photographs at the Flora Group exhibition meeting on 16 November 2019 (Catherine Chatters)

Martin Rand and Tony Mundell organised another enjoyable Exhibition Meeting at Testwood Lakes Education Centre which attracted over 30 Flora Group members. In the morning people were able to browse a selection of recent publications, purchase second hand botanical books and examine herbarium specimens. Once again, Rosemary Webb and Nigel Johnson exhibited a superb display of their stunningly detailed photographs, including varieties of orchids photographed by Rosemary at Noar Hill during 2019 and a range of helleborines photographed by Nigel. I was interested to learn there are so many different varieties of Pyramidal

Orchid *Anacamptis pyramidalis* growing at Noar Hill, such as var. *emarginata*, var. *angustifolia* and var. *albiflora*. Nigel's photographs featured Green-flowered Helleborine *Epipactis phyllanthes vectensis* growing along Hollywater Road in Bordon and close-up studies of wasps pollinating Broad-leaved Helleborine *Epipactis helleborine* and Violet Helleborine *E. purpurata*; Nigel and Rosemary were keen to know if anyone could identify the wasps.

After a delicious buffet lunch, we gathered upstairs for an interesting afternoon of talks and botanical photographs. Our first speaker was the archaeobotanist Dr Emma Karoune who gave a presentation about her research on phytoliths to facilitate the analysis of plant remains on archaeological sites. Tony had heard her give the presentation during the Flora Group's visit to view the herbarium at Portsmouth City Museum in early November and was so fascinated by her research that he invited her to share it with other Flora Group members. Emma explained that phytoliths are formed when plants take up silica in water from the soil and the silica is deposited in the cell walls. The study of phytoliths enables plants to be identified to family and genus level and can aid research into landscape change. Emma warned that care must be exercised when interpreting phytoliths as they can be transported by wind and water and are not preserved well in alkaline conditions above pH8.

Emma's research focuses on the transition to agriculture and involves the study of microscopic phytoliths in combination with macro-botanical remains (such as seeds, chaff, charcoal and fruits) which, being organic, only survive by charring, mineralisation, desiccation and water-logging. She is hoping to start a project with Historic England but at present there is no reference collection of phytoliths in the UK. In Britain most macro-botanical remains are charred or water-logged and on Palaeolithic and Mesolithic archaeological sites botanical remains are not well preserved. She intends to create a reference collection of plants and soils from Southern Britain. The plants would be heated in a furnace to extract the phytoliths for mounting on slides.

Emma would like to hear from botanists who would be willing to help her find suitable sites from which to collect specimens and who can help her with plant identification. She has invited Flora Group members to get in touch with her so if you are interested in helping or would like to find out more, please contact Emma at ekaroune@googlemail.com.

Ted Pratt then showed a few photographs of the unusual form of Bee Orchid *Ophrys apifera* var. *belgarum* which grows on two roundabouts near Winchester, one at the eastern end of Winchester, the other near the St Catherine's Park and Ride car park.

Howard Rose is a regular volunteer at Testwood Lakes Nature Reserve where he has been recording plants since 2016. Howard was keen to find out how the site has changed floristically since 1990 before the site was developed. The Environmental Statement (ES) written in 1991 provided a useful baseline and in 1995

a Management Plan aimed to increase species and structural diversity and encourage natural colonisation. These documents are stored in Southern Water's files at Testwood Lakes Education Centre. Howard has been recording plants in management compartments based on the units described in the ES, using a grid reference 'app' on his mobile phone and an Excel workbook which allows him to 'slice and dice' the data to provide relevant information. His recording indicates that species diversity has increased mainly in the central part of the site, in the vicinity of the lakes, although he is aware that the baseline information in the ES may not be comprehensive, so care must be taken during interpretation. Howard's research highlights the importance of maintaining an archive of historical botanical records to inform future research.

Martin Rand shared an interesting variety of plants he'd seen during the past year in Hampshire and beyond and emphasised how worthwhile it can be to go botanising early in the year. For example in mid February he'd found Hairy Wood-rush *Luzula pilosa* in Crab Wood and on 26 March the oak trees along the shore on the Chidham Peninsula in West Sussex were well in leaf. Another plant seen during the spring was White Comfrey *Symphytum orientale* which grows in Portchester and other coastal places and which Martin considers is probably spreading. On 10 April he found Tufted-sedge *Carex elata* growing near Winchester College. This species is one of the first water-side sedges to come into flower and Martin now realises that when he'd previously looked for it, he had been searching later in the year when it had become over-shaded by other vegetation.

Martin enjoyed a five day visit to Alderney in the spring to help with recording for Atlas 2020. He observed that the cliffs are the natural habitats for many plants which we associate with roadside verges and hedgerows; for example Common Ramping-fumitory *Fumaria muralis* and Tall Ramping-fumitory *F. bastardii* which are quite common on Alderney. Another plant found on the clifftops on Alderney is Prostrate Broom *Cytisus scoparius* subsp. *maritimus*, parasitised by Greater Broomrape *Orobanche rapum-genistae* which grows here in huge quantities. Unfortunately Hottentot-fig *Carpobrotus edulis* has become highly invasive; the Wildlife Trust has put a lot of effort into clearing it and this has benefited rarities such as Orange Bird's-foot *Ornithopus pinnatus*. Other interesting plants seen on Alderney included Spotted Rock-rose *Tuberaria guttata* and a good selection of clovers, such as Suffocated Clover *Trifolium suffocatum*.

Later in the year Martin and Clare spent time in Scotland where they found Whorled Caraway *Carum verticillatum*, Spignel *Meum athamanticum*, Scots Lovage *Ligusticum scoticum* and Cowbane *Cicuta virosa*. Closer to home Martin discovered a Juniper *Juniperus communis* growing in the New Forest near Turf Hill car park at a previously unrecorded location.

Finally, Martin reported the good news that the scrub clearance work undertaken by Flora Group members at Hinton Admiral during February 2018 has produced spectacular results with 800 flowering spikes of Heath

Lobelia *Lobelia urens* being recorded in 2019. Martin thinks this dramatic increase in the population has been aided by the good weather. Obviously the site will need to be grazed if it is to retain its botanical interest and there is hope that goats might be utilised here.

Tony shared his enjoyment of botanising in Teesdale where he saw Melancholy Thistle *Cirsium heterophyllum*, Wood Crane's-bill *Geranium sylvaticum*, Soft Downy-rose *Rosa mollis*, Mountain Pansy *Viola lutea*, Bird's-eye primrose *Primula farinosa* and Globeflower *Trollius europaeus*. Shrubby Cinquefoil *Potentilla fruticosa* was growing in its native habitats by the River Tees and Tony was also pleased to see Sea Plantain *Plantago maritima* growing in meadows and wet flushes by the river.

Teesdale is well known for its eight species of Lady's Mantle *Alchemilla* spp. and Tony described the differences between some of the species that he'd seen there. He showed some beautiful photographs of Heath Spotted-orchid *Dactylorhiza maculata*, Northern Marsh-orchid *D. purpurella* and their hybrid *D. x formosa* and he was interested to find the very variable Monkey-flower *Mimulus x robertsii* (the hybrid between *M. guttatus* and *M. luteus*) growing along tributaries of the River Tees.

Cetry Bank, which slopes steeply down to the River Tees was botanically very rewarding. Here, among other rarities, Tony saw Lesser Clubmoss *Selaginella selaginoides*, Alpine Bartsia *Bartsia alpina* and Yellow Saxifrage *Saxifraga aizoides*. Another rich site was Holwick Scars with large quantities of both Mountain Male-fern *Dryopteris oreades* and Parsley Fern *Cryptogramma crispa*.

At Cow Green Reservoir Tony was delighted to find plants of Spring Gentian *Gentiana verna* and Teesdale Violet *Viola rupestris* but their flowers were all over – so an earlier visit is planned in 2020. At Cronkley Fell, wet flushed areas supported Alpine Meadow-rue *Thalictrum alpinum* and Three-flowered Rush *Juncus triglumis*, whereas drier areas on the crumbling sugar limestone had Hoary Whitlow-grass *Draba incana* as well as Hoary Rock-rose *Helianthemum canum* subsp. *oelandicum*, the only British site for this subspecies.

Clive Chatters started his presentation by showing pictures taken in the New Forest on a snowy day in February 2019. The background of snow enabled him to photograph Petty Whin *Genista anglica* successfully and revealed how much scrub regeneration has occurred on the former runways of the WWII airfield at Stoney Cross. He was delighted to find a previously unrecorded site for Shepherd's Cress *Teesdalia nudicaulis* at Blashford Lakes.

Clive is currently writing a book on heathlands (which is due to be published as part of the British Wildlife Collection during Autumn 2020) and has enjoyed travelling around Britain to undertake research. Whilst on The Lizard in Cornwall he was pleased to see Three-lobed Crowfoot *Ranunculus tripartitus*, Spring Squill *Scilla verna* and Land Quillwort *Isoetes hixtrix* which has

declined dramatically, highlighting the crisis in species characteristic of early-stage succession.

Clive grows a number of native plants in pots in his garden to allow him to study them throughout the year, including Grey Hair-grass *Corynephorus canescens* which grows in raw sand and Blue Fescue *Festuca longifolia*, a Breckland species which also grows in extreme conditions in acid sand. Growing plants in pots also enables Clive to compare similar plants and differentiate between them. He was commissioned to advise coastal defence engineers at a site in Sussex and needed to be confident that he could distinguish Little-Robin *Geranium purpureum* subsp. *forsteri* from Herb-Robert *Geranium robertianum*, by growing both of these plants in pots he could compare the differences but concluded that the only consistently reliable way to separate them is by the colour of the pollen – it is yellow on Little-Robin and darker on Herb-Robert.

Whilst in Sussex Clive was concerned that Seaside Daisy *Erigeron glaucus* has invaded the coast; Martin confirmed that this non-native plant has already arrived in Hampshire where it grows on the cliffs at Barton on Sea.

During the research for his book on heathlands, Clive has enjoyed seeing familiar plants in unfamiliar places. For example whilst in Scotland, exploring the hazel/birch wood-pastures of Assynt, he saw Narrow-leaved (Sword-leaved) Helleborine *Cephalanthera longifolia* at the northern limit of its range. The Assynt heaths support Mountain Everlasting *Antennaria dioica*; this used to be a species of lowland heath/parched grassland habitats (being first recorded in Sherwood Forest) and occurred on chalk grasslands in Hampshire but has disappeared from its lowland sites and is now regarded as an upland species.

Clive showed photographs he'd taken at Great Orme in Wales and in Sutton Park near Birmingham where he was pleasantly surprised to find 2000 acres of well-managed heathlands and fens.

Back home in Hampshire, 2019 was an excellent year for Pennyroyal *Mentha pulegium* at Cadnam Green in the New Forest, where it grows with lots of Chamomile *Chamaemelum nobile*. It was also a good year for Field Gentian *Gentianella campestris* and Autumn Lady's-tresses *Spiranthes spiralis* at Wilverley Plain. During his walk to Wilverley Plain to see the Field Gentians which are now getting very rare in Southern Britain, Clive photographed the vegetation around the fence which used to form the edge of Markway Inclosure; about 20 years ago the Forestry Commission felled the plantation and since then the heathland has regenerated so well that the fence is now the only clue that area was once covered in conifers – an example of the New Forest's capacity to restore itself.

Thank you to Martin and Tony for organising the event and to Clare Rand and Pat Mundell for keeping us refreshed with tea and coffee.

Features

Monitoring the success of the New Forest Non-Native Plants Project

A note by Catherine Chatters

The New Forest Non-Native Plants Project (NFNNPP) is a partnership project, hosted by Hampshire & Isle of Wight Wildlife Trust, which aims to help landowners meet their responsibilities to stop the spread of invasive non-native plants, particularly along watercourses and in wetland habitats.

Since the Project was launched in May 2009, its 'hit list' now totals over 20 species including Himalayan Balsam *Impatiens glandulifera*, Giant Hogweed *Heracleum mantegazzianum*, Japanese Knotweed *Fallopia japonica* and American Skunk-cabbage *Lysichiton americanus* which were introduced to the UK as ornamental garden plants but have invaded the countryside and threaten to out-compete our native species. Since 2016 the NFNNPP has received Lottery funding through the 'Our Past, Our Future' New Forest Landscape Partnership Scheme to tackle these four highly invasive species using volunteers and professional contractors.

Our Past, Our Future
Working together for the New Forest



To assess the effectiveness of the control work, a baseline survey and subsequent monitoring visits have been undertaken by placement students from Southampton University.

During the baseline survey undertaken in 2015 two students recorded:

- Himalayan Balsam at sample sites on the Lymington River, the Avon Water and the Cadnam River;
- Giant hogweed at three sample sites along the Avon Water;
- Japanese Knotweed at three sample sites along the Cadnam River;
- American Skunk-cabbage in wet woodland on the Fleet Water near Minstead.

The relative abundance of Himalayan Balsam and American Skunk-cabbage was assessed using quadrats whilst Japanese Knotweed stems and American Skunk-cabbage plants were counted individually. Observations were also made of native plants growing within the quadrats or in the vicinity of the Japanese Knotweed and Giant Hogweed. Since 2015, two other placement

students from Southampton University have undertaken monitoring each year at the ten sample sites.

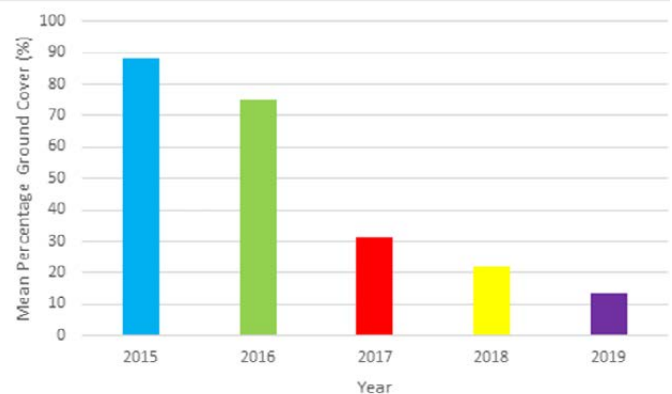
The result of the work by NFNNPP volunteers to control Himalayan Balsam by hand-pulling has been particularly positive. For example, where there were dense stands of it in the HIWWT's Lymington Reedbeds Nature Reserve at the time of the baseline survey in 2015, native plants such as Opposite-leaved Golden-saxifrage *Chrysosplenium oppositifolium*, Meadowsweet *Filipendula ulmaria*, Water Mint *Mentha aquatica* and Yellow Iris *Iris pseudacorus* are now able to thrive. Indeed the hand-pulling at this site has been so successful that some of the volunteer work parties planned for 2019 had to be cancelled!

My colleague Jo Gore and I (The New Forest Non-Native Plants Officers) are very grateful to the ten students from Southampton University who did the baseline survey in 2015 and undertook the monitoring in subsequent years:

- 2015 – Dominika Muriénova and Rebecca Wilson
- 2016 – Ben O'Hickey and Sophie Watts
- 2017 – Jacob Middleton and Isobel Tickner
- 2018 – Ben McClay and Flora Level
- 2019 – Sophie Minns and Rachael Anderson



Dominika Muriénova and Rebecca Wilson undertaking the baseline survey of Himalayan Balsam on the Cadnam River in 2015 (Catherine Chatters)



Graph prepared by placement students Sophie Minns and Rachael Anderson in 2019 showing the decrease in American Skunk-cabbage as a result of herbicide treatment undertaken by contractors using Lottery funding following the baseline survey in 2015.

Recording

What has Atlas 2020 told us about Hampshire's flora?

An article by Martin Rand

The dust is starting to settle on eight years of recording effort in Hampshire and across Britain and Ireland, and data are still being marshalled, especially at the national level. Yet it's now possible to see some trends over the past few decades, with the aid of the BSBI's national Distribution Database (DDb). This article examines two of these, also pinpointing some of the gaps in our present knowledge.

Declines

The recording for Atlas 2020 has given us a basis for comparing the 20 years before 2000 with the 20 years since in the county. In Hampshire during 1980–1999 there was recording for the 1996 *Flora of Hampshire*, the first round of the BSBI's 'Local Change' project and recording work for Atlas 2000. 2000–2019 saw the second round of 'Local Change', the Threatened Plants project, the recording for Atlas 2020, and the digitisation of a huge number of records from both millennia; but there are caveats on the interpretation of these data. The total number of records from before 2000 that can be resolved to at least a 2km x 2km square (tetrad) and at least a specific year exceeds 300,000; but the number since 2000 is over a million. Unfortunately many records that might have contributed to numbers between 1980 and 2000 have to be excluded: their sources for the 1996 *Flora* can be pinned down no more closely than post-1930, as they were only preserved on hand-drawn tetrad maps with broad age-banding.

This explains why there's no section on species increases in this article, given that the only metric available to us over both periods is the number of tetrads. Many apparent increases in frequency may be attributable at least in part to recording bias. The other side of this coin is that for many plants, an evidence of decline is going to be that much more convincing. This is not always true: for instance, aquatic plants were recorded exhaustively by the Environment Agency to at least 1km x 1km (monad) resolution over all major Hampshire watercourses in the early 1990s. While there have been about 800 surveys by the Agency in the later period, they tend to be at a limited number of monitoring points and repetitive; for the most part, the data have not been available to us. Although there is some good evidence of decline at sites easily accessible by non-professional recorders, the lack of public access to long stretches of our rivers makes it difficult to extrapolate declines county-wide for many species.

Severe declines

Species with severe decline are shown in **Table 1**. See below for a note on 'Hampshire Responsibility'. These are declines where the number of tetrads recorded in 2000–2019 is lower than 50% of those recorded in 1980–1999. The list excludes hybrids and critical taxa, since they are only recorded sporadically. The list of species that have declined by 25%–50% is considerably longer, and if anything their roll call raises even more conservation concern. I will deal with these in a follow-up article.

It will probably be no surprise that the longest of these lists is for arable and open ground, and includes several probable extinctions to add to those we know are long gone. Perhaps the most concerning after that are grassland and fen/marsh communities, since they suggest habitat degradation.

Species for which Hampshire has special responsibility

Hampshire Biodiversity Information Centre has adopted the definition of 'Hampshire Responsibility' for cases where the county holds 10% or more of the national population of a taxon. In fact this is impossible to assess for many species, since records often do not state population sizes in any quantifiable way. Instead, I have compared the number of tetrads in which a taxon has been recorded since 1986 in Hampshire with the number nationally for the same period, applying the 10% threshold. The resulting list is shown in **Table 2**. Since the conservation threat status of most of these species is based on the England Red List, the comparison is made with England rather than the whole of Britain and Ireland. Neophytes (non-native plants with no evidence of presence before 1500) have been omitted.

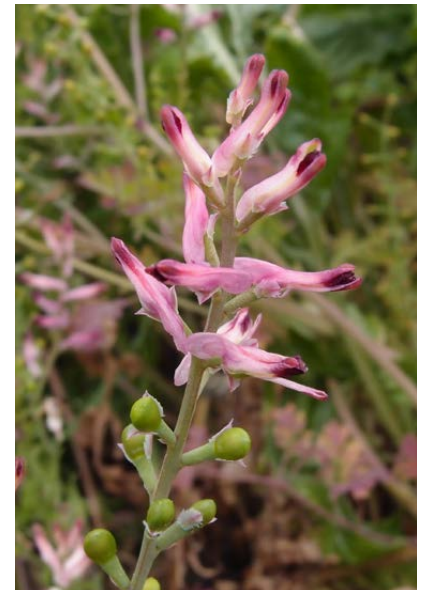
In the table 'Declining' means that the total number of tetrads in which the species has been recorded in Hampshire in 2000–2019 is less than 75% of the number in 1980–1999. 'Rare' indicates that the species has been found in 10 or fewer tetrads in the county since 1986. 'Scarce' indicates that the species has been found in 42 or fewer tetrads in Hampshire in that period. Percentages of 25% or more of the English tetrad total are shown in **bold type**.

There will be a few surprises in these lists, and no doubt some adjustments will be needed in the future, when a more complete record from outside Hampshire is available. Above all, the lists demonstrate just how important Hampshire is for so many plant species in such a wide range of lowland habitats. Note particularly the very high proportion of the English population held by many species in the heath and wetland categories.

Additional details of these and many other notable taxa in Hampshire will be found in the next release of the Hampshire Notables list, which is currently under review.

Table 1. Species with severe decline in Hampshire during 2000–2019.

Hampshire Responsibility	Probably Extinct	Species
Rivers, streams and open water		
		<i>Elatine hexandra</i> (Six-stamened Waterwort)
Y		<i>Eleocharis acicularis</i> (Needle Spike-rush)
		<i>Nitella mucronata</i> (Pointed Stonewort)
Y		<i>Oenanthe fluviatilis</i> (River Water-dropwort)
		<i>Potamogeton lucens</i> (Shining Pondweed)
		<i>Potamogeton nodosus</i> (Loddon Pondweed)
		<i>Potamogeton perfoliatus</i> (Perfoliate Pondweed)
		<i>Ranunculus circinatus</i> (Fan-leaved Water-crowfoot)
		<i>Ruppia cirrhosa</i> (Spiral Tasselwort)
		<i>Sparganium natans</i> (Least Bur-reed)
Y		<i>Utricularia australis</i> (Bladderwort)
Arable, open and disturbed ground (including damp and saline ground)		
Y		<i>Adonis annua</i> (Pheasant's-eye)
		<i>Artemisia absinthium</i> (Wormwood)
	Y	<i>Centaurea calcitrapa</i> (Red Star-thistle)
	Y	<i>Descurainia sophia</i> (Flixweed)
		<i>Fumaria bastardii</i> (Tall Ramping-fumitory)
	Y	<i>Galeopsis speciosa</i> (Large-flowered Hemp-nettle)
		<i>Gastridium ventricosum</i> (Nit-grass)
		<i>Hordeum marinum</i> (Sea Barley)
		<i>Lithospermum arvense</i> (Field Gromwell)
		<i>Marrubium vulgare</i> (White Horehound)
	Y	<i>Medicago minima</i> (Bur Medick)
		<i>Minuartia hybrida</i> (Fine-leaved Sandwort)
		<i>Ranunculus arvensis</i> (Corn Buttercup)
		<i>Verbascum lychnitis</i> (White Mullein)
		<i>Vicia lutea</i> (Yellow-vetch)
		<i>Vulpia ciliata</i> subsp. <i>ambigua</i> (Purple Fescue)
Woodland, scrub and hedgerows		
	Y	<i>Campanula patula</i> (Spreading Bellflower)
	Y	<i>Epipactis leptochila</i> (Narrow-lipped Helleborine)
		<i>Hypericum montanum</i> (Pale St John's-wort)
		<i>Polygonatum odoratum</i> (Angular Solomon's-seal)
		<i>Rosa sherardii</i> (Sherard's Downy-rose)
Grassland		
		<i>Astragalus danicus</i> (Purple Milk-vetch)
		<i>Botrychium lunaria</i> (Moonwort)
		<i>Euphrasia arctica</i> subsp. <i>borealis</i>
		<i>Neotinea ustulata</i> (Burnt Orchid)
		<i>Orchis anthropophora</i> (Man Orchid)
		<i>Tetragonolobus maritimus</i> (Dragon's-teeth)
Heathland (including Bracken heath)		
		None



***Fumaria bastardii* (Tall Ramping-fumitory) which briefly appeared in Gosport in 2011 (John Norton)**

Hampshire Responsibility	Probably Extinct	Species
Fen, marsh and swamp		
Y		<i>Carex diandra</i> (Lesser Tussock-sedge)
	Y	<i>Cuscuta europaea</i> (Greater Dodder)
		<i>Epipactis palustris</i> (Marsh Helleborine)
		<i>Gymnadenia densiflora</i> (Marsh Fragrant-orchid)
		<i>Juncus compressus</i> (Round-fruited Rush)
		<i>Stellaria palustris</i> (Marsh Stitchwort)
Bog		
		<i>Eriophorum vaginatum</i> (Hare's-tail Cottongrass)
		<i>Gymnadenia borealis</i> (Heath Fragrant-orchid)
		<i>Pinguicula vulgaris</i> (Common Butterwort)
Coastal sand and shingle		
		<i>Atriplex laciniata</i> (Frosted Orache)
Y		<i>Geranium purpureum</i> subsp. <i>forsteri</i> (Little-robin)
Saltmarsh		
		<i>Salicornia obscura</i> (Glaucous Glasswort)
		<i>Spartina maritima</i> (Small Cord-grass)



***Epipactis palustris* (Marsh Helleborine) – a decline that has continued over many decades (Tony Mundell)**

Table 2. Species with Hampshire responsibility

Declining	County scarcity	% English tetrads	
Rivers, streams and open water			
		17%	<i>Apium inundatum</i> (Lesser Marshwort)
		20%	<i>Baldellia ranunculoides</i> (Lesser Water-plantain)
Y		38%	<i>Callitriche brutia</i> subsp. <i>brutia</i> (Pedunculate Water-starwort)
Y	Scarce	24%	<i>Elatine hexandra</i> (Six-stamened Waterwort)
Y	Scarce	12%	<i>Eleocharis acicularis</i> (Needle Spike-rush)
		17%	<i>Eleogiton fluitans</i> (Floating Club-rush)
	Rare	50%	<i>Lamprothamnium papulosum</i> (Foxtail Stonewort)
		12%	<i>Littorella uniflora</i> (Shoreweed)
	Scarce	88%	<i>Ludwigia palustris</i> (Hampshire-purslane)
	Scarce	21%	<i>Nitella translucens</i> (Translucent Stonewort)
Y		14%	<i>Oenanthe fluviatilis</i> (River Water-dropwort)
Y	Scarce	16%	<i>Potamogeton alpinus</i> (Red Pondweed)
		19%	<i>Ranunculus penicillatus</i> subsp. <i>pseudofluitans</i> (Stream Water-crowfoot)
Y	Scarce	12%	<i>Utricularia australis</i> (Bladderwort)
	Rare	100%	<i>Utricularia bremii</i> (New Forest Bladderwort)
Arable, open and disturbed ground (including damp and saline ground)			
Y	Scarce	18%	<i>Adonis annua</i> (Pheasant's-eye)
Y	Rare	10%	<i>Ajuga chamaepitys</i> (Ground-pine)
	Scarce	10%	<i>Briza minor</i> (Lesser Quaking-grass)
Y		20%	<i>Centunculus minimus</i> (Chaffweed)
	Scarce	12%	<i>Chenopodium glaucum</i> (Oak-leaved Goosefoot)
	Scarce	49%	<i>Cicendia filiformis</i> (Yellow Centaury)
		17%	<i>Crassula tillaea</i> (Mossy Stonecrop)
	Rare	40%	<i>Cyperus fuscus</i> (Brown Galingale)
Y		13%	<i>Erophila glabrescens</i> (Glabrous Whitlow-grass)

Declining	County scarcity	% English tetrads	
		10%	<i>Filago minima</i> (Small Cudweed)
		24%	<i>Fumaria densiflora</i> (Dense-flowered Fumitory)
	Scarce	13%	<i>Fumaria parviflora</i> (Fine-leaved Fumitory)
	Rare	18%	<i>Fumaria reuteri</i> (Martin's Ramping-fumitory)
	Scarce	12%	<i>Fumaria vaillantii</i> (Few-flowered Fumitory)
Y	Scarce	16%	<i>Galeopsis angustifolia</i> (Red Hemp-nettle)
	Scarce	12%	<i>Galium parisiense</i> (Wall Bedstraw)
		67%	<i>Illecebrum verticillatum</i> (Coral-necklace)
		15%	<i>Isolepis cernua</i> (Slender Club-rush)
		11%	<i>Kickxia spuria</i> (Round-leaved Fluellen)
	Rare	15%	<i>Lotus angustissimus</i> (Slender Bird's-foot Trefoil)
		19%	<i>Misopates orontium</i> (Weasel's-snout)
	Scarce	11%	<i>Myosurus minimus</i> (Mousetail)
		17%	<i>Papaver hybridum</i> (Rough Poppy)
	Scarce	12%	<i>Parapholis incurva</i> (Curved Hard-grass)
		11%	<i>Polygonum rurivagum</i> (Cornfield Knotgrass)
Y	Scarce	10%	<i>Puccinellia fasciculata</i> (Borrer's Saltmarsh-grass)
	Scarce	16%	<i>Puccinellia rupestris</i> (Stiff Saltmarsh-grass)
	Scarce	58%	<i>Pulicaria vulgaris</i> (Small Fleabane)
Y		29%	<i>Radiola linoides</i> (Allseed)
	Rare	38%	<i>Teucrium botrys</i> (Cut-leaved Germander)
	Scarce	14%	<i>Trifolium suffocatum</i> (Suffocated Clover)
		11%	<i>Valerianella dentata</i> (Narrow-fruited Cornsalad)
		15%	<i>Valerianella rimosa</i> (Broad-fruited Cornsalad)
		19%	<i>Verbascum nigrum</i> (Black Mullein)
		10%	<i>Verbena officinalis</i> (Vervain)
	Rare	14%	<i>Vulpia unilateralis</i> (Mat-grass Fescue)
Woodland, scrub and hedgerows			
		15%	<i>Agrimonia procera</i> (Fragrant Agrimony)
		11%	<i>Campanula trachelium</i> (Nettle-leaved Bellflower)
		22%	<i>Cephalanthera damasonium</i> (White Helleborine)
	Scarce	33%	<i>Cephalanthera longifolia</i> (Narrow-leaved Helleborine)
	Rare	33%	<i>Cephalanthera rubra</i> (Red Helleborine)
		10%	<i>Epipactis helleborine</i> (Broad-leaved Helleborine)
		20%	<i>Epipactis phyllanthes</i> (Green-flowered Helleborine)
		11%	<i>Epipactis purpurata</i> (Violet Helleborine)
	Rare	15%	<i>Fallopia dumetorum</i> (Copse-bindweed)
	Scarce	11%	<i>Hypopitys monotropa</i> (Yellow Bird's-nest)
		11%	<i>Luzula forsteri</i> (Southern Woodrush)
		38%	<i>Polygonatum multiflorum</i> (Solomon's-seal)



***Polygonatum multiflorum* (Solomon's-seal)**
– a common plant with a localised national distribution, for which Hampshire has special responsibility (*Martin Rand*)

Declining	County scarcity	% English tetrads	
Y		57%	<i>Pulmonaria longifolia</i> (Narrow-leaved Lungwort)
	Scarce	12%	<i>Pyrola minor</i> (Common Wintergreen)
	Scarce	34%	<i>Rosa agrestis</i> (Small-leaved Sweet-briar)
		22%	<i>Rosa micrantha</i> (Small-flowered Sweet-briar)
Y		20%	<i>Rosa obtusifolia</i> (Round-leaved Dog-rose)
		14%	<i>Rosa stylosa</i> (Short-styled Field-rose)
		15%	<i>Ruscus aculeatus</i> (Butcher's-broom)
		12%	<i>Sorbus aria</i> (Whitebeam)
Grassland			
Y		11%	<i>Anacamptis morio</i> (Green-winged Orchid)
		10%	<i>Asperula cynanchica</i> (Squinancywort)
		12%	<i>Carex divisa</i> (Divided Sedge)
Y	Scarce	27%	<i>Carex punctata</i> (Dotted Sedge)
		11%	<i>Centaureum pulchellum</i> (Lesser Centaury)
	Rare	11%	<i>Centaureum scilloides</i> (Perennial Centaury)
		16%	<i>Cerastium diffusum</i> (Sea Mouse-ear)
		26%	<i>Chamaemelum nobile</i> (Chamomile)
Y		11%	<i>Coeloglossum viride</i> (Frog Orchid)
	Rare	11%	<i>Eryngium campestre</i> (Field Eryngo)
		17%	<i>Euphrasia officinalis</i> subsp. <i>anglica</i> (English Eyebright)
	Scarce	11%	<i>Euphrasia pseudokernerii</i> (an Eyebright)
	Scarce	18%	<i>Gentianella campestris</i> (Field Gentian)
Y	Rare	12%	<i>Herminium monorchis</i> (Musk Orchid)
		22%	<i>Lotus subbiflorus</i> (Hairy Bird's-foot Trefoil)
		26%	<i>Moenchia erecta</i> (Upright Chickweed)
		16%	<i>Oenanthe pimpinelloides</i> (Corky-fruited Water-dropwort)
		11%	<i>Onobrychis viciifolia</i> (Sainfoin)
	Scarce	44%	<i>Ophioglossum azoricum</i> (Small Adder's-tongue)
		24%	<i>Orobanche elatior</i> (Knapweed Broomrape)
Y		10%	<i>Polygala calcarea</i> (Chalk Milkwort)
		16%	<i>Spiranthes spiralis</i> (Autumn Lady's-tresses)
	Scarce	12%	<i>Thesium humifusum</i> (Bastard-toadflax)
		17%	<i>Trifolium glomeratum</i> (Clustered Clover)
		10%	<i>Trifolium micranthum</i> (Slender Trefoil)
		26%	<i>Trifolium ornithopodioides</i> (Bird's-foot Clover)
		11%	<i>Trifolium striatum</i> (Knotted Clover)
		21%	<i>Trifolium subterraneum</i> (Subterranean Clover)
Heathland, including Bracken heath			
		17%	<i>Agrostis curtisii</i> (Bristle Bent)
		65%	<i>Carex montana</i> (Soft-leaved Sedge)
		17%	<i>Cuscuta epithymum</i> (Dodder)
	Scarce	18%	<i>Euphrasia micrantha</i> (an Eyebright)
		19%	<i>Festuca filiformis</i> (Fine-leaved Sheep's-fescue)
		28%	<i>Genista anglica</i> (Petty Whin)
	Scarce	21%	<i>Gentiana pneumonanthe</i> (Marsh Gentian)
Y	Scarce	88%	<i>Gladiolus illyricus</i> (Wild Gladiolus)
Y	Scarce	12%	<i>Gnaphalium sylvaticum</i> (Heath Cudweed)
		21%	<i>Montia fontana</i> subsp. <i>chondrosperma</i> (Blinks)

Declining	County scarcity	% English tetrads	
	Scarce	12%	<i>Orobanche rapum-genistae</i> (Greater Broomrape)
Y	Scarce	12%	<i>Phyteuma orbiculare</i> (Round-headed Rampion)
Y	Scarce	13%	<i>Platanthera bifolia</i> (Lesser Butterfly-orchid)
Y		16%	<i>Sagina subulata</i> (Heath Pearlwort)
		13%	<i>Salix repens</i> (Creeping Willow)
		32%	<i>Ulex minor</i> (Dwarf Gorse)
		13%	<i>Viola canina</i> (Heath Dog-violet)
		31%	<i>Viola lactea</i> (Pale Dog-violet)
Fen, marsh and swamp			
Y	Rare	11%	<i>Carex diandra</i> (Lesser Tussock-sedge)
Y	Rare	16%	<i>Carex elongata</i> (Elongated Sedge)
		21%	<i>Cirsium dissectum</i> (Meadow Thistle)
Y	Scarce	15%	<i>Dactylorhiza incarnata</i> subsp. <i>incarnata</i> (Early Marsh-orchid)
	Scarce	10%	<i>Eleocharis uniglumis</i> (Slender Spike-rush)
		94%	<i>Galium constrictum</i> (Slender Marsh-bedstraw)
		18%	<i>Juncus foliosus</i> (Leafy Rush)
		11%	<i>Lysimachia vulgaris</i> (Yellow Loosestrife)
		10%	<i>Lythrum portula</i> (Water-purslane)
	Scarce	13%	<i>Mentha pulegium</i> (Pennyroyal)
	Scarce	22%	<i>Montia fontana</i> subsp. <i>amporitana</i> (Blinks)
		33%	<i>Persicaria minor</i> (Small Water-pepper)
		50%	<i>Pilularia globulifera</i> (Pillwort)
		15%	<i>Scutellaria minor</i> (Lesser Skullcap)
		12%	<i>Urtica dioica</i> subsp. <i>galeopsifolia</i> (Fen Nettle)
Bogs			
	Rare	13%	<i>Carex limosa</i> (Bog-sedge)
Y		34%	<i>Dactylorhiza incarnata</i> subsp. <i>pulchella</i> (Early Marsh-orchid)
Y	Scarce	74%	<i>Deschampsia setacea</i> (Bog Hair-grass)
	Rare	15%	<i>Drosera anglica</i> (Great Sundew)
		37%	<i>Drosera intermedia</i> (Oblong-leaved Sundew)
		18%	<i>Eleocharis multicaulis</i> (Many-stalked Spike-rush)
	Rare	80%	<i>Eriophorum gracile</i> (Slender Cottongrass)
Y	Scarce	14%	<i>Gymnadenia borealis</i> (Heath Fragrant-orchid)
	Scarce	40%	<i>Hammarbya paludosa</i> (Bog Orchid)
		19%	<i>Hypericum elodes</i> (Bog St John's-wort)



Lycopodiella inundata (Marsh Clubmoss) – a nationally threatened plant for which Hampshire has high responsibility (Tony Mundell)

Declining	County scarcity	% English tetrads	
		44%	<i>Lycopodiella inundata</i> (Marsh Clubmoss)
		22%	<i>Myrica gale</i> (Bog-myrtle)
		11%	<i>Osmunda regalis</i> (Royal Fern)
		23%	<i>Pinguicula lusitanica</i> (Pale Butterwort)
		23%	<i>Rhynchospora alba</i> (White Beak-sedge)
	Scarce	43%	<i>Rhynchospora fusca</i> (Brown Beak-sedge)
	Rare	100%	<i>Utricularia intermedia</i> (Intermediate Bladderwort)
	Scarce	31%	<i>Utricularia minor</i> (Lesser Bladderwort)
Coastal sand and shingle			
		11%	<i>Crambe maritima</i> (Sea-kale)
		100%	<i>Geranium purpureum</i> subsp. <i>forsteri</i> (Little-robin)
	Rare	17%	<i>Polygonum maritimum</i> (Sea Knotgrass)
	Scarce	16%	<i>Polygonum oxyspermum</i> subsp. <i>railii</i> (Ray's Knotgrass)
	Rare	11%	<i>Silene nutans</i> (Nottingham Catchfly)
Saltmarsh and sublittoral			
	Rare	75%	<i>Eleocharis parvula</i> (Dwarf Spike-rush)
Y	Scarce	15%	<i>Limonium humile</i> (Lax-flowered Sea-lavender)
	Scarce	11%	<i>Salicornia dolichostachya</i> (Long-spiked Glasswort)
	Rare	18%	<i>Salicornia emerici</i> (Shiny Glasswort)
	Scarce	13%	<i>Salicornia fragilis</i> (Yellow Glasswort)
Y	Scarce	10%	<i>Salicornia pusilla</i> (One-flowered Glasswort)
		13%	<i>Sarcocornia perennis</i> (Perennial Glasswort)
	Scarce	10%	<i>Zostera marina</i> (Eelgrass)
	Scarce	24%	<i>Zostera noltei</i> (Dwarf Eelgrass)

WANTED: A Joint BSBI Recorder for South Hampshire

A plea by Martin Rand

Conscious of the fact that I'm not getting any younger but the work goes on, I'm looking for someone to join me as BSBI Vice-county Recorder for South Hampshire (VC11). Having two or more people covering the Recorder's job is becoming increasingly common around Britain, and it makes a lot of sense.

Unlike the early days of 'gentlemen's agreements', there is a formal job description laying out what a Recorder is expected to do, and all of us are now expected to sign up to this. One of the good things about sharing the job is that no one person has to be expected to cover everything in the normal course of events. So I'll start by listing a few general points, and then deal with how we might share the workload.

- You will need to be a member of the BSBI.
- For the purposes of succession planning, it's probably a good thing if you're a bit younger than me (I'm 72).
- You will need to have a reasonable knowledge of vascular plants in Britain, but you do **not** have to be an expert in everything. As well as calling on your co-recorder (who probably won't know either), you have local and national experts to help you out.

- A knowledge of the vice-county's geography and its wildlife sites is an advantage, but don't worry if yours is limited – you'll soon learn on the job!
- You will need the means to travel around the vice-county. (Just to remind you, this extends to the western boundary of Bournemouth with Poole, the edges of Cranborne Chase, the Wiltshire border west of Stockbridge, Winchester, Petersfield and Hayling Island.) Fortunately, good botanists are thick on the ground in Hampshire, so you don't have to be running around all of these places yourself all the time.

Here are some of the things I do as Recorder. Not all of these are incumbent on me as part of the job, but I like to think they all contribute and some of the non-mandated ones are the most fun!

- Answering questions and requests for information, and dealing with general correspondence. This is certainly part of the job description. I would like you to act as the prime contact for correspondence, most of which comes by email these days. You will of course be able to refer anything you can't deal with back to me. By the way, I choose not to deal with requests for data from ecological and planning consultants, as Hampshire Biodiversity Information Centre (HBIC) has a good service for this and has access to all our data.

- Entering and acquiring data, verifying it and sending it to BSBI's national database. Again, an essential part of the job. Data comes from a variety of sources these days and a lot of it is already in electronic form, which reduces the burden of typing. You will need to be, or become, au fait with a computerised data entry system (currently MapMate, but that may change) and with the facilities available on the BSBI's Distribution Database. I can help with that, and the tasks can certainly be shared between us.
- Participating in national projects. The big one that's just finished is obviously Atlas 2020. Nobody's sure what the next ones will be, but I have my own priorities (see below). This aspect typically involves quite a lot of enjoyable fieldwork, some data entry and some organisation of activities, and I would anticipate your playing a part in all this.
- Organising and leading meetings, predominantly field meetings, often in collaboration with Hampshire Flora Group; and promoting the cause of wild plants in general. Again, this is something I would expect to share.
- Maintaining the Hampshire Notables List and updating the Hampshire Rare Plant Register. Rare Plant Registers are something that BSBI HQ has promoted very heavily to its Recorders, without actually turning the thumbscrews on us. Ours is now nine years old, and there have been only limited updates to it since then; Atlas 2020 has given us a lot of extra data. I've just finished a review and update to the Notables List. This is something that we do in consultation with HBIC, who use the list to inform site designations and responses to planning matters. I want to expand and update the Rare Plant Register over the next few years, and this will entail more fieldwork, some desk research and quite a bit of typing – but I have tools to make the last task less onerous than it might be. This is a good project for load-sharing on all these fronts.
- Developing a Supplement to the 1996 *Flora of Hampshire*. This is not something expected of us by BSBI HQ, but something that both Tony and I

are keen on. I've so far done part of the groundwork for developing a web portal which will carry the Supplement, with plans for facilities for users to print off sections if they need to. It's designed to be published incrementally, and to allow for numerous contributors to collate and write up content. Unless you are a wizard at Web development, I will continue to deal with that side. However, you will be able to contribute content, and I hope you would want to do this, but it's not obligatory.

- Contributing to *Flora News*. Not a mandated activity, but valuable for a host of reasons. The most onerous single part of it is preparing the 'Plant Records' report at least annually, but I have tools for extracting and sifting information from the databases and turning it into a format that is easy to edit in a Word document. Everything else is very much the length of a piece of string.
- Managing the Hants Plants website. This is not a BSBI-mandated activity, although it serves some of the ends of a Recorder. Again, unless you are already a Web developer and wanted to get involved, I will continue to look after that. At present I'm in the process of producing 'Version 2' of the website, which is intended to be better-looking, easier to navigate, and to allow more public participation – for instance by posting news, advertising botanical events and writing articles. An indication of what it's likely to look like is below.

The future of Hants Plants

By this stage, you may (I hope) be thinking 'this looks like something I want to get involved in'. But perhaps you're also wondering 'For goodness' sake, how much time am I going to have to devote to this'? Well, I reckon that if you can devote 8–10 hours a week to it on a fairly regular basis, with occasional bursts of activity around meetings, you would be making a very valuable contribution. I should end by saying that in the 16 years of doing the job I've had a tremendous amount of pleasure and healthy exercise, learnt a lot about my county and botany in general, and made many friends. I await your email!



BSBI Atlas 2020 in Hampshire

A note by Tony Mundell

Things are changing. After many years of effort by many people, we have reached the end of recording for the BSBI Atlas 2020 project. As most of you will know, this is a national project covering all of Britain and Ireland aimed at mapping the distribution of practically all wildflowers. It has occupied a large part of my life for the last ten years but as things are changing one change is that I don't now need to keep a close eye on weather forecasts! That is not to say that the project is finished – there is still a lot of data validation to do.

Over 20 years ago I helped to collect records for Atlas 2000 and the results of that earlier project were published in the *New Atlas of the British & Irish Flora*. This book is basically a huge set of maps showing the national distribution of each species using 10km diameter dots. The aim now is to see how plant distributions have changed since 2000.

In more recent years for Atlas 2020 I have been out with my helpers in VC12 'square-bashing' for typically three days each week between early April and late September. Of course Martin Rand has been doing the same thing in VC11. Many other people have also been contributing records. We have been trying to get every complete tetrad (2km square) up to a reasonable state of recording (but paying less attention to the small pieces of tetrads mainly in neighbouring counties). There are 530 tetrads (or parts of tetrads) that include at least some area within VC12, but about 28 of those straddling VC borders include less than 20% that is within VC12. Similarly, VC11 has 550 tetrads (or parts of tetrads) though 23 of them share a border with VC12. This means that there were 1,057 Hampshire tetrads (or parts of tetrads) that required surveying for Atlas 2020. A tetrad is a convenient area to be surveyed in a full day, but of course many visits are required to each tetrad at different times in the year in order to find most of the species present.

In the early days Martin Rand constructed a splendid aid for the recording effort on our 'hantsplants' website. This shows scores for each tetrad in terms of the number of taxa ever recorded, the number recorded from the year 2000 onwards and the resulting percentage re-found, or new, to the tetrad. Based on these scores, priorities for recording were set at the start of each year, and Martin included many other useful features such as enabling a map to be shown of a selected tetrad, details of previous recording history and facilities for planning future visits.

The effort for Atlas 2020 started ramping up in 2010 and we were collecting over 30,000 records each year in VC12 from 2012 to 2015. Over that same period in VC11 Martin's team always managed to exceed 40,000 records per year. In fact, the peak for VC11+VC12 reached an astonishing 104,851 records just for 2015. The number of records peaked in 2015 partly because Martin introduced a customised recording form that automatically omitted taxa that had already been found since 2000. Subsequently using this recording form

meant that fewer records were made but each record was potentially of much greater value for Atlas 2020.

As the national project included large remote areas in Scotland and Wales as well as areas where botanists are thin on the ground such as Ireland, BSBI encouraged recorders to concentrate on getting at least two tetrads 'well recorded' in every 10 km square (a hectad consisting of 25 tetrads). 'Well recorded' might mean that the number of taxa recorded from year 2000 onwards was at least 80% of the number ever recorded there. In Hampshire we decided to aim higher, hoping to get at least five tetrads in each hectad reaching the 80% level (i.e. for 20% of the tetrads in the Hampshire part of a hectad if crossed by a county border). Initially we also aimed to get every single tetrad up to at least 180 taxa ever recorded.

That second aim was soon achieved, but at the end of all recording in 2019, the number of tetrads in the nine complete hectads wholly within VC12 where we achieved the 80% target varies enormously between 2 and 10 out of the 25 tetrads available. Similarly, in VC11 for the 11 hectads with a full complement of 25 tetrads the number of tetrads reaching the 80% target varies between 2 and 16. Remarkably one hectad, SZ19, with only 24 tetrads, reached our target in 17 of them.

In 2019 a lot of attention was diverted in both VC11 and VC12 to trying to re-find old pre-2000 records of particular species where there was no more recent record for the whole 10 km square. It was important to do these so-called 'Species Searches' because only if the plant was re-found would it get a dot in Atlas 2020. Again Martin had added new facilities on our website to indicate particular relevant records for 'Species Searches'. In VC12 many others helped by searching separately from me, and in all 78 previously recorded plants were re-found, 291 were not re-found, and a further 19 could not be checked because they were on private land without access. So the re-find rate of around 26% was rather poor, but it was worth doing for those important extra 78 records, each one the only post-2000 record for the whole hectad. However, I did find it a rather depressing exercise, seeing how habitats I had known 20 years ago had clearly deteriorated – perhaps the worst were ponds, most of which seem to have been taken over by fishermen and for some reason the water quality had usually plummeted.

Nearly all recording has been done from public footpaths or by walking along minor roads but of course access has been a problem in some areas. In VC11 tetrad SU40N is mainly in the sea or estuarine mud of Southampton Water, whilst neighbouring SU40M is wholly within Fawley Oil Refinery and is now inaccessible.

In 2019, apart from all the 'Species Searches', I kept raising the bar to improve the level of recording more uniformly across all VC12 tetrads. Omitting part-tetrads on the borders with Wiltshire, Berkshire or Surrey that contain only small scraps of VC12, by the end of 2019 we managed to get all tetrads up to over 200 taxa recorded from 2000 onwards (as opposed to ever recorded). Also

all tetrads wholly in VC12, except one, are now up to over 60% refound or new from 2000 onwards.

The exception, SU73R, is interesting. It is at Blackmoor where shoddy (soiled wool waste) used to be spread on the apple fields as a fertiliser. It had been imported from Australia, New Zealand and even South America so it contained many alien seeds. As a result of this, there are old records of a huge number of alien plants, the vast majority of which will never be re-found at Blackmoor. In fact, some of those records were not entered, as they do not appear on the MapMate taxa list. Steve Povey and I worked hard at trying to improve the refind rate in SU73R and the best we could raise it to was 49.8%, with a total of 784 taxa ever recorded.

The total of 784 taxa ever recorded is a splendid score, but the VC12 tetrad with the highest number of taxa ever recorded is SU85G, having a score of 830, with 628 of them found since 1999. This is just east of Church Crookham, but a large proportion of the records were by Chris Hall rather than me. There are eight VC12 tetrads that exceed 500 taxa found from 2000 onwards. Par for the course in more arable areas is only around 200–300 taxa since 1999 and about 300–400 ever recorded. Martin Rand mentions that it is interesting to note that in VC11 the champion tetrad (SZ19R) had 903 taxa, with 764 recorded since 2000; 70 tetrads achieved 500 or more taxa since 2000.

At 10km square level many VC12 hectads exceed 1,000 taxa ever recorded. The most diverse area is SU73 around Selborne at 1,752 taxa, no doubt helped by all the shoddy aliens once found in SU73R. For VC11 this is exceeded by 1,821 taxa found in SZ19 in the Christchurch area. Those counts are the highest at the time of writing but there could be more records still to come in.

In order to show plant distribution at national scale BSBI will only need the data aggregated to 10km scale, but all Hampshire records have been collected at least with 4-figure (1km grid) references, and records for the more uncommon species have been given 6 or 8-figure grid references. This means that there is now a wealth of records to analyse locally. The plan is to write a web-based Supplement to the 1996 *Flora of Hampshire*. Martin has already set this in motion and no doubt it will occupy much of my time in future. Others will be able to contribute text for it. Unlike the previous flora we will include records for far more aliens, and being web-based it will allow many more photographs to be included. All the extra records we now have will also allow updates to the Hampshire Rare Plant Register and Martin is streamlining ways to do this.

I think that BSBI have decided to publish a book discussing the changes in plant distributions since 2000, but the indications are that the mass of distribution maps will not be available in book form like they were for Atlas 2000 (much to my disappointment).

Finally, I want to give a great big 'thank-you' to the very large number of people who have helped by collecting plant records.

Bryophyte Recording in Hampshire and the Isle of Wight – January 2020 update

A report by John Norton

Hampshire Notable Bryophytes Register and website update

Since my last report in *Flora News* 55 (Autumn 2018) I have been working on a Hampshire Notable Bryophytes Register that Fred Rumsey originally produced as a rare bryophyte register and checklist in 2014. I completed version 1 of this in October 2018 and have recently been revising it again with the intention of publishing on my website later this spring. In addition to listing all bryophytes in the county which have national or international rarity or threat status, it includes a provisional assessment of county rarity status and assigns those species of conservation importance to one of three county Notable categories (denoting 'high conservation priority' species, 'medium conservation priority' species and 'other ecologically important species'). A simple scoring system has been devised so that sites with similar habitats can be evaluated and compared in terms of their conservation value for bryophytes.

I have also revamped and updated the bryology web pages on my website – now entitled 'Hampshire and Isle of Wight Bryophytes' <http://www.jnecology.uk/bryophytes/index.htm>. Species distribution maps of the Isle of Wight have been added at 5km square resolution but I have not yet been able to update the 10km Hampshire maps, which mostly only reflect data up to 2013.

Recording activities

At the end of 2018 George Greiff and Colin Pope discovered an extensive colony of the nationally rare ephemeral moss *Acaulon triquetrum* at Culver Cliff on the Isle of Wight; in recent years known only from St Catherine's Point. I visited the site with George on 3 January 2019. The plants occur on bare, slightly calcareous soil on the cliff top, mainly around the entrances of rabbit burrows. Due to the dangerous



The nationally rare tiny ephemeral moss *Acaulon triquetrum* at Culver Cliff on the Isle of Wight, 3 January 2019 (John Norton)

situation and lack of time we couldn't do an extensive survey, but with the aid of photographs a single large colony on the side of one burrow entrance was estimated at around 8-10,000 plants (more than 200 plants per square centimetre in the densest patches). The rabbit warren here is quite large and so potentially the true size of the population at this time could have been 10 times this number. Even 8,000 plants is much higher than any previous estimate for a population in the UK. The site also supports other noteworthy bryophytes, including the declining nationally scarce moss *Pterygoneurum ovatum* and the local coastal species *Tortula viridifolia*. As *Flora News* was going to press George informed me that he had found another large colony at Freshwater.

I also joined George for a 4-day visit to the Island in the middle of March 2019. He showed me an amazing bryophyte site that he had been investigating – the coastal cliffs north of Shanklin where *Philonotis marchica* had been historically recorded (in addition to its other well known British site nearby at Shanklin Chine). The foot of the cliffs is made up of a soft, sandy material which supports extensive seepages, much of which are covered with communities of thalloid liverworts, hornworts and mosses. However, most of the slumped material at the bottom supports impenetrable willow scrub and bramble on a steep slope, with pockets of marshy ground, making access to the base of the cliffs almost impossible. We did, however, manage to get through in a few spots where we found plenty of *Philonotis*, but when checked microscopically it seemed to be a different species, also typical of this habitat, *P. rigida*. However, this could not be fully confirmed due to a lack of mature shoots and sporophytes (it was reproducing by deciduous branchlets).

Philonotis rigida has not previously been accepted for the Isle of Wight, though at one stage it was thought that the *P. marchica* was this taxon. Further visits need to be arranged to look for better material and to confirm that *P. marchica* or both taxa do indeed occur here. Whilst there we managed to collect male and female plants of the thalloid liverwort *Pellia neesiana*, which George had previously recorded; a new vice-county record. The seepages also support large colonies of the uncommon liverwort *Blasia pusilla* and the hornwort *Phaeoceros laevis*. Also during the trip George showed me a new population he had found of the nationally scarce liverwort *Cololejeunea rosettiana* at Bonchurch Landslip.

In February and March 2019 I continued my investigations into the distribution and abundance of ephemeral bryophytes in the New Forest, especially *Sphaerocarpos* and *Riccia* species on campsites (see previous report). *Riccia crystallina* was found at a third site (Holmsley campsite) and *Sphaerocarpos texanus* at a second site (Matley Wood campsite). Graeme Smith alerted me to the existence of an interesting campsite on Stoney Cross Plain (Ocknell Campsite) where probably both *Sphaerocarpos* species occur. Here I found a tiny *Bryum* with bulbils in the leaf axils, which turned out to be *B. gemmilucens*, a nationally rare and Near Threatened species, mainly with an eastern distribution, which



Specimen of *Bryum gemmilucens* (centre) with *Sphaerocarpos michelii*, from Ocknell Campsite, New Forest, March 2019 – immature green bulbils are visible at the base of the plants (John Norton)

was new for Hampshire. The old airfield here has a rich bryophyte community of calcareous grassland, and beside it there are some nice colonies of *Climacium dendroides* in wet depressions.

During the Flora Group visit to Hogmoor Inclosure in May 2019 recent wet weather had led to a flush of small annual mosses, one of which collected from disturbed ground by the lake turned out to be *Pohlia bulbifera*, new for Hampshire. This is a strongly western and northern species, with only a single record for eastern England, from north Norfolk. The latest atlas shows that the other nearest sites to Hampshire would be Dartmoor and Exmoor in Devon. A return visit by the BBS Southern Group in November 2019 refound it along with *Sanionia uncinata* in the adjacent willow carr, new for VC12. This is also a locally frequent species of northern and western Britain, but is very scattered in the south. In VC11 it was recorded in five 10km squares in the New Forest by Jean Paton in the 1950s but not since (but is very easy to overlook). We also managed to refind the S41, nationally Vulnerable and nationally scarce moss *Dicranum spurium* in a small patch of heather-dominated wet heath at the southern end of the site.

On 15 August 2019 I joined George Greiff again for a day trip to Tennyson Down on the western extremity of Isle of Wight where we had planned to carry out a survey of some potential habitat for the *Scapanietum asperae* bryophyte community. This followed our previous visit here in March 2017 where we had found some associates of the community. There appear to be two suitable areas, each around 0.3 ha in size, on the north-facing slope, one of which we looked at in detail. Due to recent drought and hot weather it was not an ideal time to look at mosses and liverworts but we did manage to find all the typical associates of the community apart for *Scapania aspera* itself, though we had previously found this flourishing in a nearby quarry. A few tiny shoots of the liverwort *Porella arboris-vitae* were found, the first record on the Island since 1964. Francis Rose coined the term 'Southern hepatic mat' for this interesting liverwort-rich

community of generally high altitude, north facing chalk slopes in southern England, but even though he explored the Isle of Wight on several occasions, including visits to Tennyson Down, he did not mention finding it. The Tennyson Down example is likely to be a drier, much more tightly grazed and therefore less typical version of the type that is well known on Butser Hill, but is still of high ecological significance. Prior to our visit, Sharon Pilkington published a summary of a study she had been carrying out on the community in Wales, where she had located further examples from as far north as Great Orme (*Field Bryology* 121, June 2019).

In autumn 2019 I turned my attention to organising meetings of the BBS Southern Group. Meetings were held monthly in October (Crockford Bridge, New Forest), November (Hogmoor Inclosure, Bordon) and December 2019 (Harting Down, West Sussex); the first of these jointly with the Wessex group and the last with the South-east Group. Reports with species lists can be downloaded from the website. Highlights included finding a few small populations of the nationally scarce wetland moss *Campyliadelphus elodes* at Crockford Bridge, the various finds at Hogmoor Inclosure mentioned above and seeing large populations of *Rhodobryum roseum* at Harting Down.

In November I visited a cemetery in Fareham with Debbie Allan to look for waxcaps and made the chance discovery of what eventually turned out to be *Acaulon mediterraneum*. This is another nationally rare ephemeral moss, but was formerly regarded as a variety of *A. muticum* and is likely to be under-recorded in the UK. The two can only reliably be separated by characteristics of their spores, but when I found it I forgot to check the spores and assumed it to be *A. muticum*, a more widespread species which I see regularly in Gosport. In December I made further collections of the Fareham colony and from my Gosport sites and sent a couple of specimens to the moss recorder, who agreed that these were 'probably' *A. mediterraneum*. Usually this species has spores with long spinules, rather than the granulose or papillose appearance of the spores of *A. muticum*. However, most of the spores from the Fareham and Gosport populations seemed to have what could be described as 'long papillae' or 'short spinules', so were apparently intermediate between the two taxa. Many of the capsules in the specimens collected were immature, so I made another visit to the cemetery in early January to collect a suitable voucher specimen, which was accepted as a new VC record. The question remains as to whether *A. muticum* actually occurs in the Gosport area, or whether all the colonies are *A. mediterraneum*.

Stop press: In early January 2020 a brief local walk resulted in finding large patches of the rare and declining moss *Tortula wilsonii* next to Little Anglesey lagoon in Gosport, the second record for VC11 since a record from Tanners Lane, Lymington in 1973. The Gosport colony was on bare soil on a sheltered south-facing bank, under an elm hedge. Growing with it was *Phascum cuspidatum* var. *papillosum*, also rare. These both have Mediterranean tendencies and would be more at home



Brown shoots of the liverwort *Porella arboris-vitae* (arrowed) growing over a mat of *Ditrichum gracile* – two characteristic species of the *Scapanietum asperae*, Tennyson Down, 15 August 2019 (John Norton)



***Acaulon mediterraneum*, Wickham Road Cemetery, Fareham, 17 November 2019 (Debbie Allan)**

on a Cornish hedge on the Lizard. Further details to follow in a future article.

List of new VC and county records

I had mentioned in my first bryophytes article (*Flora News* 51, Autumn 2016) that *Didymodon acutus* was recorded from Portsdown Hill in December 2014, a new vice-county record for VC11. Molecular studies have now shown that most material from British localities belongs to a similar-looking taxon *D. icmadophilus*, and there are additional confusion taxa elsewhere in Europe. However, the Portsdown record was determined as true *D. acutus* by *Didymodon* specialist Jan Kučera for a workshop that was held here in 2018, one of only two confirmed British records (the other being a 1991 specimen from North Somerset, VC6).

Ulota intermedia has now been recorded a few times from the Isle of Wight by George Greiff and once from South Hampshire. Further to my note in the last listing that the distribution of this species appears to be mainly northern and western, it is becoming apparent that it is also widespread in southern England and may have coastal tendencies.

Details of new records are given below. These cover the period August 2018 to December 2019. Previous records were listed in *Flora News* 55 (Autumn 2018).

Liverworts

Pellia neesiana, **VC10**: Shanklin Cliffs, SZ 5884 8231, 13 March 2019. G.R.L. Greiff & J.A. Norton, conf. N.G. Hodgetts. At least a few large patches of male thalli on slumped Lower Greensand material at base of cliff under willow scrub; small patches of female plants on nearby cliff face (with ripe spores). Growing with *Riccardia* sp. and various other thalloid liverworts and hornworts including more abundant *P. epiphylla*, *Phaeoceros laevis* and *Blasia pusilla*.

Riccia cavernosa, **VC12**: Oakhanger Pond, SU 7719 3460, 7 September 2019. I. Girvan & S. Povey, conf. F. Rumsey. A large population on drying mud of the pond. New for VC12 (see photo, p.34).

Mosses

Acaulon mediterraneum, **VC11**: Wickham Road Cemetery, Fareham, SU 5802 0740, 17 November 2019. J.A. Norton, conf. T. Blockeel. Two colonies noted in one strip of fairly recently dug over sandy clay soil between memorials, the largest covering at least 10 sq cm (>2400 plants). Voucher material collected 5 January 2020. New to Hampshire.

Bryum gemmilucens, **VC11**: Ocknell Campsite, New Forest, 24 February & 4 March 2019. J.A. Norton, conf. D.T. Holyoak. Locally frequent in thin patches of unconsolidated silty and gravelly soil covering margins of old concrete and tarmac taxiways (former WW2 airfield); also on bare gravelly areas at edge of grassland. Noted in at least three locations including SU 2489 1203 and SU 251 118. Present alone or with other small acrocarps and occasional *Sphaerocarpos michelii*. New to Hampshire.

Hedwigia stellata, **VC12**: Brandy Mount, Alresford, SU 5895 3265, 18 February 2017. J. Sleath, conf. T. Blockeel. New for Hampshire.

Pohlia bulbifera, **VC12**: Hogmoor Inclosure, Bordon, 18 May 2019. J.A. Norton, conf. T. Blockeel. In recently disturbed soil on margin of pond, with *Juncus* spp., *Veronica scutellata*, etc. New to Hampshire.

Sanionia uncinata, **VC12**: Hogmoor Inclosure, Bordon, SU 7905 3466, 24 November 2019. J.A. Norton and BBS Southern Group. Small patch on base of young fallen willow in old drying carr at edge of pond; fruiting well. New to VC12.

Ulota crispa s.str., **VC12**: Little Hampgate Wood, Winchester, SU 540 297, 13 October 2019. J. Sleath, conf. T. Blockeel. On branch of *Acer campestre*. This split now confirmed for VC12.

Ulota intermedia, **VC10**: Lynch Copse north, Newchurch SZ 563 856, 10 August 2019. G.R.L. Greiff. On *Salix*. **VC11**: Rockford Common, New Forest, 18 November 2018. J.A. Norton and BBS Southern/Wessex groups. New to Hampshire.

VC11 Notes and Records

Compiled by Martin Rand November 2019

Again, non-natives tend to outnumber natives and archaeophytes in this list, which is not surprising given that several decades of intensive recording have just culminated in the huge effort for Atlas 2020. In the last decade over 1,100,000 records have been made and added to our database for the two vice-counties, which (even allowing for some duplication) is impressive. Nevertheless, it's still possible to make interesting and sometimes surprising finds, and I'll single out a few.

Given its spread in other parts of the country, it's puzzling that *Atriplex littoralis* (Grass-leaved Orache) has not made more inroads along salted roads in Hampshire, even allowing for the difficulty of identifying oraches at speed along the central reservations of our crowded main roads. Perhaps Mike Rowe's record will be the forerunner of many.

It was nice to see a new location for *Calamagrostis canescens* (Purple Small-reed), rare in the county, from the HBIC survey team – although given the site, its existence there must be fairly precarious. This is a plant that has several recorded sites on the Forest in the decades before 2000, and although it seems to have gone from at least one of them it would still be worth chasing up the others.

Centaurea debeauxii (Chalk Knapweed) is a plant that more people are now recording separately from *C. nigra*, although there are still surely gaps in its distribution. It's by no means confined to the chalk, as the meticulous recording by Mike Rowe in the south-west of the county (complete with phyllary measurements) shows, and it is probably the commonest segregate species in the county overall. But if you do look for it even on the chalk, you will undoubtedly find intermediates; and the perils of over-generalising were brought home to me on the coastal downs between Eastbourne and Cuckmere Haven this year. Having just had a lecture from me to the effect that the *C. debeauxii* I was holding was likely to be the only species in the area for miles, one of the party rose to the challenge and within 30 seconds found a perfect example of *C. nigra* sensu stricto, along with an intermediate and, shortly after, a plant that seemed to have some residual *C. jacea* in it!



Common Knapweed *Centaurea nigra*, Biddenfield, Shedfield (left) and Chalk Knapweed *C. debeauxii* (St Catherine's Hill, Winchester (right) (Martin Rand)

It has been interesting to see the gradual accretion of records for *Erodium maritimum* (Sea Stork's-bill) since its first discovery in South Hampshire in 1996 by Geoffrey Field and Elizabeth Young. Many of the earlier sites suggest that the plant was transported there by human agency, but we now have three coastal populations and I feel sure it can be discovered in more places. It is very easy to overlook, even when in flower.

The coast at Highcliffe seems to have become increasingly well-colonised over the last decade with good coastal plants of sand and shingle, some of them rare, and it's well worth a visit for this alone. (The glorious views of Christchurch Harbour, Purbeck and the Isle of Wight from the cliffs west of the Cliff Hanger café are another good reason.) David Leadbetter has added another species to the rollcall this year: *Eryngium maritimum* (Sea-holly). It will be interesting to see whether, like Sea Spurge, Yellow Horned-poppy and others, it manages a rapid expansion. On the subject of coastal sand and shingle, Rob Wardell's records remind us that though most people go to Hayling for their coastal excitement, Eastney in the south-east of Portsea Island retains a lot of interest. I shall be leading part of a field meeting there this year.

Dawn Nelson and Jill Oakley have been doing excellent work recording in the far south-east of the vice-county in the last few years, and I was particularly gratified to see a record of *Fumaria capreolata* (White Ramping-fumitory) in a new hectad. This must be our second rarest Fumitory in the county, after *F. reuteri*.



**White Ramping-fumitory *Fumaria capreolata*
(Martin Rand)**

I have a couple of personal memorable finds: one was a single bush of *Juniperus communis* (Juniper) at a previously unrecorded spot in the north of the New Forest. As you probably know, the Juniper population on the Forest comprises mostly single bushes in apparently moribund condition, and this one was no exception. It was quite close to a car park, so perhaps there are others waiting to be found elsewhere.

The second was a new stand of *Sonchus palustris* (Marsh Sow-thistle) on the Cadland estate. This fills a gap between the Beaulieu River estuary populations (first found in 1959 and gradually extended in the years since) and that found by the Flora Group on Southampton

Water in 2006. Given the late date of its discovery and the fact that (literally!) it's hard to overlook, there have been doubts expressed about its native status in Hampshire; but it was accepted as such in the BSBI's *Atlas 2000*. It is a good natural coloniser in East Anglia, and the habitat of this new population looks as 'natural' as the Beaulieu River sites.

You will notice a sprinkling of subspecies and other infraspecific taxa in the listings, and for many species our record of these is very incomplete. Some subspecies have ecological significance, and different taxa within the species often differ in their rates of spread or decline. This is a topic on which I hope to concentrate more in the post-Atlas years, and I hope I can bring more people along with me. At the first Flora Group meeting of the new year there will be a chance to hear about this and other proposals and discuss them. Bring your own ideas too!

A full discussion of the continuing flood of non-natives into the vice-county would make this a tiresomely long preamble, and a mention of the emergent 'caravan park flora' will have to wait until next time, as there's a batch of sightings that arrived after I'd abstracted my records for 2018–2019. I will just mention a couple of spreaders. *Euphorbia oblongata* (Balkan Spurge) now seems to be popping up everywhere: from just 5 tetrads where it was recorded before 2000, the tally is now 31, with an apparent loss from only one. It can be a bit confusing to identify, and one of the recent records replaces a mis-ID for *E. hyberna* reported here in an earlier edition. Another striking spreader is *Galium parisiense* (Wall Bedstraw), which has gone up from 4 tetrads pre-2000, all in North Hampshire, to 23 (with losses from only 2). I've previously mentioned *Erodium moschatum* (Musk Stork's-bill), which from 9 tetrads before 1990, all coastal, has gone to 109. It's still much commoner in the south, but now extends right up to the Berkshire border.



**Balkan Spurge *Euphorbia oblongata* at Chandlers Ford
(Martin Rand)**

An innovation you'll notice in the listings is that I'm using the Stace edition 4 scientific name as the primary name, as we need to start getting used to the changes. But I've also included the old names for those of us (most of us?) who haven't yet fully converted.

The codings at the front of each plant are:

*** = Hampshire notable (** = British or English Red List).** I list these whenever I have a record for a tetrad that is either new, or the first for a long time (usually taken as about 25 years, but for species 'on the brink' it can be shorter). However, the account would be long and tedious in the case of some plants now on the English Red List that are widespread in Hampshire, so I summarise tetrads for these unless the record is a significant extension to the known range. First records for a long time then have the last recorded year in brackets; new tetrads are simply listed.

NA = Native or Archaeophyte. I list these if they are new vice-county records, new to a hectad or the first for a long time.

IN = Invasive, or Potentially Invasive, Non-native. I use the IUCN's three-pronged definition of 'Invasive', so that a plant like *Artemisia ambrosiifolia* (Ragweed), which hasn't actually invaded anywhere in Hampshire yet but will pose a health hazard if it does, are included. I also list these for new tetrads, but when you are recording I would like as precise a grid reference and as many supporting details as possible.

NN = other Neophyte Non-native. Defining Neophyte (arrived after 1500) or Archaeophyte (arrived by 1500) in a local context is beset with difficulty, but I use this category if the plant in the given location is outside its generally agreed native range and can reasonably be inferred to have got there recently by human agency whether intentional or not. That includes plants that are native elsewhere in Britain, or even nearby in other habitats. Generally I list these if they are new vice-county records, new to a hectad or the first for a long time. For some, I simply list new hectads. I exclude patently planted trees and shrubs occurring in gardens, municipal parks and cemeteries unless they are also self-establishing or very likely to do so. However, I keep records for them on the database so such records are welcome, provided you state that they are 'Planted' if the only individuals clearly are planted, or 'Introduced' if they are spreading naturally from original plantings.

Abbreviations for recorders and determiners are:

ABr=Andrew Brookes, ACr=Alison Cross, AD=Tony Davis, ADi=Anita Diaz, AEB=Alison Bolton, AHP=Andrew Powling, AJBa=Andy Barker, AMC=Andy Cross, ARGM=Tony Mundell, ASt=Anna Stewart, BB=Ben Benatt, BGo=Barry Goater, BMD=Ben Mead, BSBI=BSBI members, CC=Clive Chatters, CDI=Chris Dieck, CWhit=Catherine Whitmarsh, DC=David Caals, DL=David Leadbetter, DLan=D Langiewicz, DMO=David Morris, DN=Dawn Nelson, DRA=Debbie Allan, DTr=Dennis Trunicka, EJC=Eric Clement, FAW=Felicity Woodhead, GCo=Ginnie Copsey, GES=G E Smith, GK=Garth Knass, HFG=Hampshire Flora Group members, IBu=Ian Buckley, ILR=Ian Ralphs, JAN=John Norton, JCre=Jon Crewe, JCri=Janet Crichton, JF=Jeanette Fryer, JLan=J Langiewicz, JMill=Joel Miller, JOa=Jill Oakley, JSB=Jessica Brooks, LBA=Linda Barker, MBe=Matthew Berry, MGP=Mark Painter, MPa=Mary Parker, MPo=Mike Porter, MPt=Matt Parratt, MR=Martin Rand, MWR=Mike Rowe, NAS=Neil Sanderson, NJ=Nigel Johnson, NRJ=Nigel Jones, NWi=Ms N Williamson, OP=Oli Pescott, PAB=Phil Budd, PCo=Phil Collier, PGS=Paul Stapleton, PM=Peter Marston, PSm=Paul Smith, PW=Pat Woodruffe, RBu= Mrs R Bunn, RCR=Clare Rand, RCol=Richard Collingridge, RGA=Robin Garnett, RHWa=Robert Wardell, RWe=Rosemary Webb, SCa=Shireen Caals, SCo=Simon Colenutt, SD-T=Sue Denton-Thompson, SP=Steve Povey, TGCR=Tim Rich, VFr=Victor Freestone.

NN *Abies procera* (Noble Fir): Ibsley, SU156094; 05-Oct-18; MWR conf. MPt 07/12/2018. 1 tree, wood edge, SU 1565 0940. **1st for SU10.**

NN *Acanthus mollis* (Bear's-breech): SU7205 (residential area N of A27), SU7205; 23-Sep-19; DN. Langstone (S. Langstone and South Moor), SU716048; 30-Apr-19; DN & JOa. SU71682 04880 good sized clump about 70cm across. **1st for SU70.**

NN *Acer saccharinum* (Silver Maple): Fishlake Meadows, Romsey, SU360223; 16-Oct-19; MR. Single tree to W of Barge Canal in ground going down to Fishlake Meadows, now embedded

in secondary woodland but presumed planted. **1st for SU32.** Colden Common, SU487226; 20-Aug-18; PM. Large tree north of tennis courts at SU4878 2260. **1st for SU42.**

NN *Achillea filipendulina* (Fern-leaf Yarrow): Burgoyne Gardens, Southsea, SZ647982; 15-Jul-19; MR & GCo. Pavement weed (planted c. 50m away). **New VC record.**

NN *Aconitum napellus* (Monk's-hood): Woodside, SZ322946; 26-Jun-18; MWR. Several plants, roadside, All Saints Road, SZ 3229 9469. **1st for SZ39.**

NN *Alchemilla mollis* (Garden Lady's-mantle): Sherfield English, SU2922; 25-Apr-18; PW. Naturalised in Churchyard. **1st for SU22.** The Meadow ((The Holt)), SU558230; 09-Jun-18; PAB. **1st for SU52.**

NN *Allium ampeloprasum* (Wild Leek): Hayling Billy (paths on western side of monad), SU717036; 17-Apr-19; DN, JOa & SDe. SU717036 on edge of ditch. **1st for SU70.**

NN *Allium neapolitanum* (Neapolitan Garlic): King's Park (Meadow area), SZ1192; 25-May-19; ADi. Mixed habitat - woodland and grassland, with some remnant heath. **1st for SZ19.**

NN *Allium roseum* (Rosy Garlic): Brockenhurst (church area), SU304018; 06-Jun-19; PCo. 100-5000. Locally abundant in unmown area of churchyard. Few scattered plants nearby. **1st for SU30.**

NN *Allium trifoliatum* (Hairy Garlic): Pennington (North), SZ315952; 02-May-19; DL. N side of verge by cycle track/footpath off Southern Road at SZ 31597 95298. **1st for SZ39.**

IN *Allium triquetrum* (Three-cornered Garlic): Sherfield English, SU292231; 02-May-18; PW. Naturalised in old orchard. **1st for SU22.** Broughton, SU308330; 26-Apr-18; MR & ASt. **1st for SU33.**

NN *Alnus incana* (Grey Alder): Buriton, N of, SU743210; 06-Jul-18; ARGM & DN. Two trees and many sucker growths at SU7434 2104 near pond beside Hangers Way. **1st for SU72.**

****NA *Althaea officinalis* (Marsh-mallow):** Pitts Deep, SZ37159559; 03-Jul-19; AEB. Shore, east of Tanners Lane, one large plant Grid ref. SZ 37155 95595. **New tetrad.**

NN *Amaranthus blitum* (Guernsey Pigweed): Everton, SZ290944; 08-Aug-18; MWR det. EJC 25/11/2018. Gutter and pavement edge, Buckstone Close, SZ 2909 9448. **1st for SZ29.**

NN *Amaranthus caudatus* (Love-lies-bleeding): Moors Valley CP, compartment 7c, VC to Kings station 10530580, SU1005; 25-Jun-18; FAW. Path N to station. **1st for SU10.**

NN *Amaranthus hybridus* (Green Amaranth): W of Ashley New Buildings, SU372306; 28-Sep-19; MR. **1st for SU33.**

NN *Amaranthus powellii* (Powell's Amaranth): Wallops Wood Parlour, SU633177; 15-Aug-19; MR & GCo. Around farm buildings by lane. Checked microscopically from specimen, Inflorescence more less stiff, bracts with stout midrib, long, styles thickened at base. **1st for SU61.**

NN *Ambrosia artemisiifolia* (Ragweed): Christchurch Priory, roadside verges, Convent Walk, Priory Groun, SZ1692; 01-Sep-19; FAW. Priory Walled Garden and Paradise Walk. **1st for SZ19 since 1923.** Lymington (Buckland), SZ319967; 03-Sep-19; MWR. Several plants, garden, 21 Bankview, SZ 3190 9674, clearly from bird seed (bird table nearby). **1st for SZ39.**

NN *Anemanthele lessoniana* (New Zealand Wind-grass): Southsea, SZ658983; 25-Mar-19; MR & GCo. One or two plants naturalised from garden plantings on adjacent banks. **1st for SZ69.**

NN *Anemone x hybrida* (Japanese Anemone): Copythorne Common East, SU317152; 17-Sep-19; PM. Large pink-flowered plant on north side of Barrow Hill Road at SU3171 1527. **1st for SU31.**

NN *Anisantha madritensis* (Compact Brome): Barton on Sea, SZ232937; 23-May-19; PCo. 21-100. Small grassy area between footpath tarmac and front wall. Growing in dense group. Lemna and palea with long bristles along edge. Lemma hairy on back. **1st for SZ29.**

****NA *Anthemis cotula* (Stinking Chamomile):** Nursling, SU368149; 05-Jun-19; MR & GCo. **New tetrad.**

NN *Antirrhinum majus* (Snapdragon): SU7205 (residential area N of A27), SU7205; 23-Sep-19; DN. North Hayling (Church Farm and Churchyard area), SU7303; 02-Oct-19; DN, JOa & SDe. self sown on wall in Churchyard. **1st for SU70 since 1969.**

***NA *Apium graveolens* (Wild Celery):** Fisherman's Bank, Christchurch, SZ173922; 02-Jul-19; DL. c15 plants, Fisherman's Bank, Christchurch at SZ 1734 9226. **1st for tetrad since 1953.**

NA *Arctium minus* subsp. *pubens* (Lesser Burdock): S of Teglease Down, SU655182; 28-Jun-18; MR, GCo & ASt. **1st for SU61.**

NN *Aruncus dioicus* (Buck's-beard): King's Park (Meadow area), SZ1192; 25-May-19; ADi. Woodland and grassland, with some remnant heath. **New VC record.**

NN *Asarina procumbens* (Trailing Snapdragon): Stockbridge, SU35423511; 01-Jun-19; ARGM & HFG. Single flowering plant beside a building in Blandford Row, between public toilets and the shops. **1st for SU33 in VC11.**

NA *Atriplex littoralis* (Grass-leaved Orache): Ringwood (W side), SU147056; 02-Sep-18; MWR conf. EJC 25/11/2018. Several plants, roadside, A31 slip road, SU 1472 0561. **1st for SU10.**

NN *Aubrieta deltoidea* (Aubretia): Racecourse Heath area, SU108034; 01-May-19; MWR. 2 clumps, pavement edge, Craigs Road, SU 1087 0343; planted in nearby garden. **1st for SU10.** Fishlake Meadows, SU357220; 03-Jun-18; PM. Small patch flowering on verge on south side of Robert Whitworth Drive at SU3575 2201. **1st for SU32.**

****NA *Baldellia ranunculoides* (Lesser Water-plantain):** Backley Bottom, SU230072; 18-Jul-19; MR and BSBI group. **New tetrad.**

NN *Ballota acetabulosa* (False Dittany): Linch Hill, SU41470399; 29-Apr-18; DMo & OP. **1st for SU40.**

NN *Barbarea intermedia* (Medium-flowered Winter-cress): Warnford 2 km NW, SU6124; 07-Jun-18; AHP & EJC. Common on field edges in monad. **1st for SU62.**

NN *Berberis thunbergii* (Thunberg's Barberry): SU7205 (residential area N of A27), SU7205; 23-Sep-19; DN. forma atropurpurea. **1st for SU70.**

NA *Berula erecta* (Lesser Water-parsnip): Marlborough Deepes, SZ22479856; 01-Oct-19; AEB. Grid ref. SZ 22474 98563. **1st for SZ39 since 1986.**

NN *Bidens ferulifolia* (Fern-leaved Beggarticks): Hedge End (N of train station), SU497152; 25-Aug-19; MWR. 1 plant, disturbed soil, roadside almost opposite garden, Shamblehurst Lane North, SU 4974 1522, with *Antirrhinum majus*. **1st for SU41.** Fountain Roundabout, Christchurch, SZ156929; 09-Jul-19; DL det. MBer. 8 in pavement near car park and Fountain Roundabout, Christchurch between SZ 15639 92933 and 15650 92946. **1st for SZ19.**

NN *Brachyglottis x jubar* (Shrub Ragwort (?*B. laxifolia* x *B. compacta*)): Millbrook, SU384131; 25-Mar-18; PM. Small plant at SU3840 1319 spread from larger plants planted nearby. **1st for SU31.**

?NA *Brachypodium rupestre* (Tor-grass): Lazy Bushes, SU211078; 11-Jun-19; MR, GCo, PCo & RGA. N verge of A31. **?1st for SU20.**

***NA *Briza minor* (Lesser Quaking-grass):** Beaulieu, SU38010138; 29-Jul-19; AEB. Grid ref. SU 38011 01388. maize field, Beaulieu. **New tetrad.** Near Fair Oak (W of Allington Lane), SU479179; 08-Sep-19; MWR. Many plants, mostly within 1 square metre, SU 4791 1795. **New tetrad.**

****NA *Bromus secalinus* (Rye Brome):** Buriton, N of, SU743214; 06-Jul-18; ARGM & DN. At SU7430 2148 on edge of fallow arable field. **1st for SU72.**

NN *Buddleja globosa* (Orange-ball-tree): Lock Lake, SZ677996; 04-Jul-18; RHWa. **1st for SZ69.**

***NA *Calamagrostis canescens* (Purple Small-reed):** Horsea Island - Compartment 8, SU622040; 06-Sep-18; JMill. HBIC Hampshire Habitat Survey Partnership Project 2018 Full GR: SU62270406. **New tetrad.**

NN *Callistephus chinensis* (China Aster): Langstone (S. Langstone and South Moor), SU719045; 23-Oct-19; DN, JOa & SDe. SU7195804547 Just N of bridge to Hayling on W side one flowering plant in pavement edge. **1st for SU70.**

NN *Campanula persicifolia* (Peach-leaved Bellflower): Sparsholt, SU434310; 15-Sep-19; MR. Single plant in lane hedgebank by garden. **1st for SU43.**

NN *Campanula rapunculoides* (Creeping Bellflower): Chalton Lane, Chalton, SU725163; 02-Oct-19; AD. also at SU723164. **1st for SU71.**

NN *Cardamine corymbosa* (New Zealand Bitter-cress): Lymington (Buckland), SZ318967; 27-Jul-18; MWR conf. EJC 25/11/2018. 2 plants in compost in flowerpots, with other species, 21 Bankview, SZ 3188 9672. **1st for SZ39.**

***NA *Carduus tenuiflorus* (Slender Thistle):** Townhill Park area, SU450142; 22-May-19; MWR. 1 plant, urban roadside gutter, Wakefield Road, SU 4509 1421. **1st for SU41.**

NA *Carex disticha* (Brown Sedge): Gilkicker, SZ605975; 18-May-19; RHWa. **1st for SZ69.**

***NA *Carex hostiana x demissa*:** Boundway Hill, SZ259983; 04-Jul-18; MWR conf. MPo 25/11/2018. 1 plant at edge of bog, SZ 2595 9838; two stems with inflorescence sent to referee. With both parents. Suspected plant also at SZ 2593 9836. C. x fulva is strictly C. hostiana x C. viridula seg., according to Stace. **1st for SZ29.**

NA *Carex pallescens* (Pale Sedge): Southleigh Forest (Part), SU744093; 12-Jun-18; JMill. HBIC Hampshire Habitat Survey Partnership Project 2018. **1st for SU70.**

****NA *Carex pulicaris* (Flea Sedge):** Kings Farm, Moors Valley CP North, comp 8a, Wet meadow 10560630, SU1006; 21-Jun-18; FAW. 10581 06316. **New tetrad.**

IN *Carpobrotus edulis* (Hottentot-fig): Eastney Beach, SZ675988; 10-Dec-18; RHWa. **1st for SZ69.**

NA *Centaurea debeauxii* (Chalk Knapweed): Netley Marsh, south of, SU3312; 28-Sep-18; MR & GCo. **1st for SU31.** SU7204, SU7204; 23-Sep-19; DN. Warblington and Langstone, SU7205; 18-Sep-19; DN & JOa. **1st for SU70.** Buriton, N of, SU7421; 06-Jul-18; ARGM & DN. Phyllaries, etc checked. **1st for SU72.**

NN *Chaenostoma cordatum* (= *Sutera cordata*) (*Bacopa*): Town Square, Petersfield, SU746232; 03-Apr-19; SP. Large plant in pavement by Town Square, Petersfield. Presumably from a previous hanging basket. **1st for SU72.**

***NA *Clinopodium ascendens* (Common Calamint):** Brownhill Road, Chandlers Ford, SU438212; 03-Oct-19; MR. Single plant in disturbed soil of verge. Possibly introduced. **New tetrad.** North Hayling (Church Farm and Churchyard area), SU7303; 02-Oct-19; DN, JOa & SDe. **New tetrad.**

NN *Cordylina australis* (Cabbage-palm): St Leonards Hospital, Hospital Grounds North., SU1002; 25-May-18; FAW. St Leonards Hospital Grounds North. Ashley Heath, SU12230503; 07-Aug-19; VFr. One small plant Ashley Heath. **1st for SU10.**

NN *Cota austriaca* (= *Anthemis austriaca*) (Austrian Chamomile): Hythe Village Marina area, SU419085; 10-May-19; MR & AMC. In grassland reseeding. **1st for SU40.**

NN *Cotoneaster dielsianus* (Diels' Cotoneaster): Meadow south of Burridge Road SINC, SU513106; 29-Jun-18; JAN. **1st for SU51.**

NN *Cotoneaster divaricatus* (Spreading Cotoneaster): Southampton Airport area (N side), SU453179; 06-Oct-19; MWR. Roadside hedge opposite gardens, Southampton Road (A335), SU 4536 1796. **1st for SU41.**

IN *Cotoneaster integrifolius* (Entire-leaved Cotoneaster): Avon Heath Country Park, SU12820135; 29-Jun-18; JCre. Lions Hill, SU1003; 13-May-18; JCre. **1st for SU10.**

NN *Cotoneaster sternianus* (Stern's Cotoneaster): Kingsway, Chandler's Ford, SU436211; 04-Oct-19; MR. Single small plant established in pavement margin by Oak. **1st for SU42.** Waterlooville N.W. (Billy's Pond and surroundings.), SU6711; 17-Oct-19; AHP & EJC. Garden escape. **1st for SU61 since 1985.** Parley Court South, Stour Valley N, Muscliff Riverside S, Redhill F, SZ0996; 18-Apr-18; FAW. Riverside Path south, first section + Redhill Ferry end, 09144 96018. **1st for SZ09.**

NN *Cotoneaster x suecicus* (Swedish Cotoneaster): Great Barn, Titchfield, SU539065; 02-Jun-18; DRA & JAN conf. JF. Patch at corner of car park, SU 5398 0653. **1st for SU50.**

NN *Crataegus persimilis* (Broad-leaved Cockspurthorn): Jacob's Farm, Eling, SU362117; 11-Jul-18; DRA & JAN. **1st for SU31.**

***NA *Crepis biennis* (Rough Hawk's-beard):** Waverlooville east, SU6809; 02-Jun-19; AHP. **New tetrad.** Melville Road, SZ676990; 22-May-19; RHWa. **New tetrad.**

NN *Cupressus glabra* (Smooth Arizona Cypress): St Catherines Hill, hill slopes and top, SZ1495; 23-Apr-18; FAW. Marlow Drive, top near rectangular reservoir. Winkton, Holfleet, Harpway Lane, SZ1696; 16-Apr-18; FAW. Harpway Lane, Holfleet N to Dorset border. **1st for SZ19.**

***NN *Cynodon dactylon* (Bermuda-grass):** Bransbury Park, SZ670994; 25-Aug-18; RHWa. **1st for SZ69.**

****NA *Cyperus longus* (Galingale):** Romsey South-west, SU348208; 19-Aug-19; MR & GCo. Presumably originally introduced, now well-naturalised in riverside grassland. **1st for SU32.** Stockbridge, SU356349; 26-Aug-19; MR & GCo. Established by leaf by Nelson Close. Looking as if originally planted. **1st for SU33.**

***NA *Dactylorhiza incarnata* subsp. *pulchella* (Early Marsh-orchid):** New Forest, SU2908; 11-Jun-18; JLAN & DLan. **New tetrad.**

NA *Deschampsia cespitosa* subsp. *parviflora* (Small-flowered Hair-grass): Lowton's Copse, SU696177; 14-Aug-18; MR & BSBI/HFG survey party. **1st for SU61.**

***NA *Dryopteris x deweveri* (*D. carthusiana* x *dilatata*):** North Baddesley, SU385205; 29-Mar-19; MR & GCo. Ditch bank on S side of A27. **New tetrad.**

NN *Echium pininana* (Giant Viper's-bugloss): Southsea, SZ658983; 25-Mar-19; MR & GCo. Here and in several other spots on waste ground or as a garden weed. **1st for SZ69.**

NN *Echium plantagineum* (Purple Viper's-bugloss): Woodside, Lymington, SZ32299415; 11-Oct-18; DL. In a field at Woodside, Lymington at SZ 32290 94153. There was a sown wildflower area nearby, but this plant was separate. **1st for SZ39.**

NN *Elaeagnus commutata* (Silverberry): Christchurch Priory, roadside verges, Convent Walk, Priory Groun, SZ1692; 01-Sep-19; FAW. Priory Walled Garden and Paradise Walk. **1st for SZ19.**

NA *Eleocharis palustris* subsp. *vulgaris* (Common Spike-rush): Fulliford Bog area, SU346086; 19-Jul-18; MWR. Bog, SU 3466 0860. Frame Heath Inclosure (S of railway line.), SU340036; 15-Jul-18; MWR. Pond, SU 3403 0367. **1st for SU30.**

NN *Elodea canadensis* (Canadian Waterweed): Lockerley (Wetland off East Dean Road), SU284268; 31-Jul-18; PW. In River Dunn. **1st for SU22.**

***NA *Elymus junceiformis* (= *Elytrigia juncea*) (Sand Couch):** Gilkicker, SZ605975; 01-Jul-18; RHWa. Latitude: 50.778811, longitude: -1.149522. **New tetrad.**

***NA *Epilobium lanceolatum* (Spear-leaved Willowherb):** All Saints Church, Fawley, SU4503; 19-Sep-18; PGS. Northern extension of churchyard. **New tetrad.**

***NA *Epilobium roseum* (Pale Willowherb):** Crampmoor, SU391221; 03-Aug-19; PM. A few plants flowering/fruitlet south of railway bridge at SU3910 2212. **New tetrad.**

***NA *Equisetum sylvaticum* (Wood Horsetail):** Valley Park, South, SU415197; 20-May-18; PM. On east side of footpath which runs along the eastern edge of Great Covert at SU4152 1972. **New tetrad.**

NN *Erigeron floribundus* (= *Conyza floribunda*) (Billbao's Fleabane): Chalton, SU7216; 02-Oct-19; AD. **1st for SU71.**

NN *Erigeron glaucus* (Seaside Daisy): SU7205 (residential area N of A27), SU7205; 23-Sep-19; DN. **1st for SU70.**

NN *Erigeron sumatrensis* (= *Conyza sumatrensis*) (Guernsey Fleabane): Waterlooville N. (Park Wood), SU6810; 16-Oct-19; AHP. Claimed as ancient woodland by Woodland Trust but was in part a garden about 100 yrs ago. **1st for SU61.**

***NA *Erodium maritimum* (Sea Stork's-bill):** Nr Lodge Farm, East Boldre, SZ38729952; 01-Aug-19; AEB. Grid ref. SZ 38723 99529. near Lodge Farm. **1st for SZ39.**

****NA *Eryngium maritimum* (Sea-holly):** Highcliffe, SZ205930; 09-Jul-19; DL. 1 plant on Highcliffe beach at SZ 20553 93046. **1st for SZ29.**

NN *Erythranthe guttata* (= *Mimulus guttatus*) (Monkeyflower): Southsea, SZ647981; 15-Jul-19; MR & GCo. In Rock Garden pond. **1st for SZ69.**

NN *Euonymus fortunei* (Fortune's Spindle): Waterlooville N. (Park Wood), SU6810; 16-Oct-19; AHP det. EJC. Recent garden throw-out. **New VC record.**

NN *Euonymus japonicus* (Evergreen Spindle): Hambledon NE Chidden Holt, SU6516; 27-Oct-19; AHP & EJC. **1st for SU61.**

NN *Euphorbia amygdaloides* subsp. *robbiae* (Turkish Wood Spurge): North Baddesley, SU389203; 29-Mar-19; MR & GCo. **1st for SU32.**

NN *Euphorbia hyberna* (Irish Spurge): Sussex Road B2146 through Nursted, SU762212; 17-Jun-19; SP. Two flowering plants in hedgerow, possible garden 'throw-outs'? At SU762 212. **New VC record.**

NN *Euphorbia lathyris* (Caper Spurge): Newbridge, SU298153; 28-Jul-19; PM. Fruiting on east side of Newbridge Road. **1st for SU21.**

NN *Euphorbia oblongata* (Balkan Spurge): Christchurch Station, Christchurch bypass, Fairmile Road, SZ1593; 02-Oct-19; FAW. Fairmile Road, by railway bridge, 15393 93394, one plant opp end of Clarendon Rd. **1st for SZ19.**

***NA *Euphrasia x areschougii* (*E. nemorosa* x *micrantha*):** Backley Holmes, SU220078; 11-Jun-19; MR, GCo, PCo & RGA. Plants small so habit characters difficult to determine but colour bronzy, flower colour purple to varying degrees, flower size intermediate between parents and lower floral bracts somewhat acuminate, rather broad and with more or less patent basal lobes. **New tetrad.** Backley Holmes, SU218077; 11-Jun-19; MR, GCo, PCo & RGA. Many plants with one parent (*E. nemorosa*) abundant, the other (*E. micrantha*) rare, extending into adjacent 100m squares. All plants small but showing bronzing, purple flower colouring, flowers small and floral bracts rather narrow but slightly acuminate, basal teeth of lower variable in spread. **New tetrad.**

NN *Fagopyrum esculentum* (Buckwheat): Farley Down, SU394282; 30-Sep-18; PM. Several plants in field margin at SU3944 2820. **1st for SU32.**

NN *Ficaria verna* subsp. *chrysocephala* (Lesser Celandine): Wick, Wick Meadows, tracks around school, SZ1591; 01-May-18; FAW. tracks + paths near school + golf course edge, introduced/naturalised, 15712 91729. **1st for SZ19.**

****NA *Filago germanica* (= *Filago vulgaris*) (Common Cudweed):** Rockbourne Manor Farm (track/arable headland), SU119189; 28-Jun-19; JSB. **New tetrad.**

NN *Fragaria ananassa* (Garden Strawberry): Crow area, SU167037; 27-Sep-18; MWR. By footpath opposite garden, SU 1673 0376. **1st for SU10 since 1955.**

NN *Fritillaria meleagris* (Fritillary): Upham, SU56812200; 31-Mar-19; SD-T. **1st for SU52.**

***NA *Fumaria capreolata* subsp. *babingtonii* (White Ramping-fumitory):** Warblington and Langstone, SU728054; 18-Sep-19; DN & JOa. One large healthy plant in Church car park SU72840543. **1st for SU70.**

***NA *Fumaria muralis* (Common Ramping-fumitory):** Boarhunt village, SU6010; 11-Oct-18; AHP & EJC. **1st for SU61 since 1978.**

NN *Galanthus elwesii* (Greater Snowdrop): Eling, SU366125, SU367126; 25-Mar-18; PM. Flowering over approx. 10 square metres near Goatee Shore at SU3672 1260. **1st for SU31.**

NN *Galanthus x valentinei* (*Galanthus nivalis x plicatus*): Twyford Churchyard, SU481250; 08-Feb-19; MR. Scattered in churchyard, probably established from plantings of the hybrid rather than natural hybridisation. **1st for SU42.**

NN *Galanthus woronowii* (Green Snowdrop): Braishfield Road, Braishfield, SU373256; 10-Feb-19; MR. Well-established on lane bank, probably originally planted out by neighbouring householder. **1st for SU32.**

NN *Galinsoga parviflora* (Gallant Soldier): Hiltingbury Road, Chandler's Ford, SU44352198; Sep-19; BGo. There is a small clump of *Galinsoga parviflora* growing on the side of the S traffic island at Kingsway Crossroads, SU44359 21983. Bournemouth Road, Chandler's Ford, SU433204; 11-Sep-19; MR. In front of parade of shops on W side of road. Nr railway station, Chandlers Ford, SU433205; 11-Sep-19; MR. On central reservation on Hursley Road approach to roundabout. **1st for SU42 since 1980s.**

NN *Galinsoga quadriradiata* (Shaggy Soldier): Sheffield English (Gilbert's Nursery and roadside), SU298224; 01-Aug-19; PW. In nursery beds. **1st for SU22.** Kilmeston, south of, SU59442580; 26-Sep-19; ASt. **1st for SU52.**

NA *Galium palustre* subsp. *elongatum* (Great Marsh-bedstraw): W of Goldsmiths Hill, SU287047; 31-Jul-18; MR & PCo. In rewilded stream. **1st for SU20 since 1954.**

****NA *Galium parisiense* (Wall Bedstraw):** Roeshot Belt South, Roeshot Hill, bridleway A35 to railway bridg, SZ1994; 16-Apr-18; FAW. Vernon Lane, from Hazel Close N to A35 + adjacent woodland. **1st for SZ19.**

***NA *Galium x pomeranicum* (*G. verum x album*):** Ashley Down, SU393292; 17-Aug-19; MR. Single small patch in reverted pasture. **1st for SU32 since 1965.**

NA *Geranium rotundifolium* (Round-leaved Crane's-bill): Woodley, SU370224; 22-Apr-18; PM. Several plants including some with flowers on east side of Braishfield Road spreading for 20 metres from SU3708 2244 to SU3708 2245. **1st for SU32.** Solent Road, Hill Head, SU5402; 14-Apr-19; Titchfield Haven LNR volunteer team. **1st for SU50.**

NN *Gladiolus communis* subsp. *byzantinus* (Eastern Gladiolus): Lock Lake, SZ677996; 19-May-19; RHWA. latitude: 50.794166, longitude: -1.039723. **1st for SZ69.**

NN *Griselinia littoralis* (New Zealand Broadleaf): Fort Cumberland Open Space, SZ679991; 14-Dec-18; RHWA. **1st for SZ69.**

NN *Hedera algeriensis* (Algerian Ivy): Hinton Admiral (Station forecourt), SZ202947; 07-Sep-19; PCo. On bank opposite stations entrance. **1st for SZ29.**

****NA *Helianthemum nummularium* (Common Rock-rose):** Moors Valley CP, comp 20, Visitor Centre + car park, 10630565, SU1005; 19-Jun-18; FAW. 10677 05675, inside triangle fenced grass area of car park near visitor centre. **1st for SU10.**

NN *Helianthus annuus* (Sunflower): Farley Down, SU394282; 30-Sep-18; PM. Flowering in field margin at SU3944 2820. **1st for SU32.**

****NA *Heliosciadium inundatum* (= *Apium inundatum*) (Lesser Marshwort):** New Forest: Queen Bower and Fletchers Thorn, SU2804; 07-Jun-18; MR & BSBI/HFG members. **1st for tetrad since 1987.**

NN *Helleborus orientalis* (Lenten-rose): Buriton, N of, SU743210; 06-Jul-18; ARGM & DN. A single plant at SU7433 2104 near pond beside Hangers Way. **1st for SU72.**

NN *Helleborus x hybridus* (Garden Hellebore): Hursley Home Farm Lodge (wooded area), SU415261; 23-Oct-19; ASt. **1st for SU42.**

NA *Hieracium umbellatum* (Umbellate Hawkweed): Ashlett, SU468031; 15-Sep-18; MWR. 3 plants, scrub, SU 4689 0311. **1st for SU40 since 1963.**

****NA *Hottonia palustris* (Water-violet):** Alver Valley Country Park, SU57660099; 18-Jul-18; VFr. Water Violet, Alver Valley Country Park, a few patches in stream seen from footbridge, SZ 5766 0099. **1st for SU50.**

NN *Hylotelephium* cv. *Herbstfreude* (= *Sedum 'Herbstfreude'*) (Autumn Stonecrop (*S. spectabile x telephium*)): Waterlooville N.W. (Billy's Pond and surroundings.), SU6711; 17-Oct-19; AHP & EJC. Garden escape. **1st for SU61. Warblington and Langstone, SU7205; 18-Sep-19; DN & JOa. **1st for SU70.** Idsworth, SU739146; 08-Oct-19; DN. Layby, verges and field corner where footpath starts to Chalton Down. in layby. **1st for SU71.****

NN *Hypericum calycinum* (Rose-of-Sharon): Stocklands, Pullens Lane, SU76102398; 20-Jun-18; NWi. **1st for SU72.**

NA *Hypericum elodes* (Marsh St John's-wort): Straight Mile, Romsey, SU383225; 22-Nov-18; NRJ. Garden of 1 hectare. **New tetrad.**

NA *Hypericum x desetangsii* (*H. maculatum x perforatum*): Houghton Down, SU324348; 13-Apr-18; ARGM, DN & MPa. On road verge at SU3248 2482. **1st for SU33.**

NN *Hypericum xylosteifolium* (Turkish Tutsan): Brock Hill, SU266057; 14-Sep-18; AEB. Car park, SU26695 05794. **1st for SU20.**

NA *Hypochaeris radicata* subsp. *ericetorum* (Cat's-ear): Milkham Bottom, SU215099; 04-Jul-19; MWR. Heath, SU 2159 0994. **1st for SU20.**

****NA *Illecebrum verticillatum* (Coral-necklace):** Picket Post, SU192059; Sep-19; GES. Wet hollow by track, SU1922 0599, SU1922 0598, SU1928 0591. SU192058; 07-Sep-19; GES. Edge of track, SU1922 0589. SU192059; 07-Sep-19; GES. Edge of track, 6 patches, SU1928 0591. SU193059; 07-Sep-19; GES. Wet hollow off track, 4 patches, SU1930 0598. SU193060; 07-Sep-19; GES. Wet ground on track, SU1930 0604. SU193061; 07-Sep-19; GES. Wet hollow by track, tiny amount, SU1931 0614. **New tetrad.** Hartford Heath area, SU399048; 28-Jul-19; MWR. Several plants, bare ground, heath, SU 3990 0484. **New tetrad.** Matley Ridge area, SU324074; 07-Sep-19; MWR. Abundant over several square metres, bare ground, heath, near Beaulieu Road (B3056), SU 3245 0740. **1st for tetrad since 1956.**

***NA *Isolepis cernua* (Slender Club-rush):** Pooksgreen pony fields, Marchwood, SU376105; 11-Jul-18; DRA & JAN. Large patches N side of pond, where mud had started to dry out. **1st for SU31 since 1987.**

NN *Jacobaea x albescens* (= *Senecio x albescens*) (*J. maritima x vulgaris*): Southsea, SZ658983; 15-Jul-19; MR & GCo. Grassy S bank of Lumps Fort, SZ6585 9834. Photos taken. **1st for SZ69.**

NA *Juncus conglomeratus* var. *subuliflorus*: Havant Thicket, SU708103; 23-May-18; SCo. **1st for SU71.**

NN *Juncus tenuis* (Slender Rush): Southleigh Forest (Part), SU744093; 12-Jun-18; JMill. HBIC Hampshire Habitat Survey Partnership Project 2018. **1st for SU70 since 1919.**

***NA *Juncus x kern-reichgeltii* (*J. conglomeratus x effusus*):** Jacob's Farm, Eling, SU362118; 11-Jul-18; DRA & JAN. Marshy area, SU 3625 1181. **1st for SU31.**

NN *Juncus x surrejanus* (*J. acutiflorus x articulatus*): Baddesley Common, SU388215; 04-Aug-19; MR & BB. **1st for SU32.** Upper Flexford NR, SU424217; 11-Jul-19; MR. With *J. acutiflorus*, but good *J. articulatus* no longer to be found here (last recorded 1999). **1st for SU42.**

****NA *Juniperus communis* (Juniper):** Turf Hill, Godshill, SU212178; 09-Jul-19; MR, GCo & SRo. Single low male bush with many dead branches on heath, SU2120 1784. **New tetrad.**

NA *Koeleria macrantha* (Crested Hair-grass): Pig Bush - Beaulieu Road Station, SU357056; 06-Jun-18; MR & AMC. Around SU35735 05676. **1st for SU30 since 1987.**

NN *Lagurus ovatus* (Hare's-tail): Otterbourne Hill Common, SU455226; 05-Jul-18; JMill. HBIC Hampshire Habitat Survey Partnership Project 2018 SU45362251. **1st for SU42.**

IN *Lamiastrum galeobdolon* subsp. *argentatum* (Garden Yellow-archangel): Warblington and Langstone, SU7205; 18-Sep-19; DN & JOa. Near houses. **1st for SU70.**

NN *Laphangium luteoalbum* (= *Gnaphalium luteoalbum*) (Jersey Cudweed): Botley, SU513129; 05-Jul-18; TGCR. In lane behind Dolphin Hotel, SU5136 1294. **1st for SU51.**

***NA *Lemna gibba* (Fat Duckweed):** Clanfield village pond, SU698167; 14-Aug-18; MR & BSBI/HFG survey party. Carpeting much of pond. **1st for SU61.**

NN *Lemna minuta* (Least Duckweed): Minstead village, SU282109; 24-Sep-18; MR & GCo. Roadside ditch, SU2826 1097. **1st for SU21.** Sheffield English, SU293220; 01-Aug-19; PW. Wet field to west of Sheffield English Fen. In stream on western edge of square. **1st for SU22.** Nr Preshaw House, SU577232; 21-Sep-18; MR & GCo. Small pond by Love Lane. **1st for SU52.**

NN *Lemna turionifera* (Red Duckweed): Muscliff, Muscliff Riverside S, lane towards Redhill Ferry, SZ0995; 19-Aug-18; FAW. Bioblitz, comp 10, Riverside Walk South. **1st for SZ09.**

NN *Lepidium sativum* (Garden Cress): Ashley Manor Farm area, SZ252945; 05-Oct-18; MWR. Several plants, Tesco car park, Caird Avenue, SU 2520 9459. **1st for SZ29.**

NN *Leucojum aestivum* subsp. *aestivum* (Summer Snowflake): Christchurch, Wick Rec and tea gardens, SZ1592; 01-May-18; FAW. Wick Lane, 15525 92187, by river, NE side of board bridge. **1st for SZ19.**

NN *Leucojum aestivum* subsp. *pulchellum* (Summer Snowflake): Broadmarsh, Bedhampton, SU698055; 01-Apr-19; MR & GCo. In rough grass on open space N of car park. **1st for SU60 since 1985.**

IN *Leycesteria formosa* (Himalayan Honeysuckle): Head Down, SU732181; 28-Sep-19; AD. **1st for SU71.**

***NA *Leymus arenarius* (Lyme-grass):** Inchmery, SZ4398; 04-Sep-18; MR & RCR. **1st for tetrad since 1970s.** Eastney Beach, SZ675988, SZ679991; 17-Aug-18; RHWa. **1st for tetrad since 1980s.**

NN *Limnanthes douglasii* (Meadow-foam): Abbey Meadows, Titchfield, SU539063; 02-Jun-18; DRA & JAN. Note: large site, centroid grid ref. **1st for SU50.**

***NA *Limonium x neumanii* (*L. vulgare* x *humile*):** R. Hamble (Dock Copse), SU502110; 17-Jul-19; MR & GCo. **1st for SU51.**

NN *Linaria maroccana* (Annual Toadflax): Eastleigh, SU4518; 01-May-19; GCo. In kerb, escaped from garden, like large flowered *L. repens*. **1st for SU41.**

***NA *Linaria repens* (Pale Toadflax):** New Barn Lane, Chalton, SU73641764; 28-Sep-19; AD. **1st for SU71 since 1950.**

***NA *Linum bienne* (Pale Flax):** Warwick Slade area, SU279066; 18-May-19; MWR. Many plants over 2.5 x 1.5m, roadside, A35, SU 2792 0669. **1st for SU20 since 1976.**

NA *Lipandra polysperma* (= *Chenopodium polyspermum*) (Many-seeded Goosefoot): North Park Farm area, Little Somborne, SU3733; 16-Jul-18; MR & GCo. **1st for SU33.**

NN *Lobularia maritima* (Sweet Alison): Colden Common, SU485225; 17-Aug-18; PM. Small plant flowering near the car park for Colden Common Park at SU4855 2251. **1st for SU42.**

***Lolium x boucheanum* (*L. perenne* x *multiflorum*):** Gravel Hill, SU715175; 12-Sep-19; AD conf. MR from photo, a few plants in cracks in pavement. **1st for SU71.**

NN *Lonicera japonica* (Japanese Honeysuckle): Stockbridge, SU352351; 26-Aug-19; MR & GCo. **1st for SU33.**

NN *Lonicera nitida* (Wilson's Honeysuckle): North Hayling (Church Farm and Churchyard area), SU7303; 02-Oct-19; DN, JOa & SDe. Warblington and Langstone, SU7205; 18-Sep-19; DN & JOa. Langstone (S. Langstone and South Moor), SU7104; 30-Apr-19; DN & JOa. **1st for SU70.**

NN *Lonicera pileata* (Box-leaved Honeysuckle): Forest Corner area, SU175051; 17-Sep-19; MWR. Roadside by garden, Hightown Hill, SU 1754 0511. **1st for SU10.**

NN *Lonicera x italica* (*L. caprifolium* x *etrusca*): Kilmeston, south of, SU5924; 26-Sep-19; ASt. **1st for SU52.** North Hayling (Church Farm and Churchyard area), SU7303; 02-Oct-19; DN, JOa & SDe. **1st for SU70.**

****NA *Lotus angustissimus* (Slender Bird's-foot-trefoil):** Peartree Green, SU437117; 16-Jun-18; PAB. Peartree Green. **1st for SU41.**

***?NA *Luzula sylvatica* (Great Wood-rush):** Hurn, Ramsdown car park, SZ1297; 28-Apr-18; FAW. Ramsdown Car Park, 12974 97112, many plants growing well. St Catherines Hill, hill slopes and top, SZ1495; 23-Apr-18; FAW. Marlow Drive to top, around top, past chapel and back. **1st for SZ19.**

***NA *Luzula x borneri* (*L. forsteri* x *pilosa*):** Near Marchwood (Staplewood Lane), SU369093; 03-Jun-19; MWR. Several plants, both sides of road. The location of the 1964 record from Staplewood Lane is given as SU 370094; two GPS readings on W side of road gave SU 3698 0939; two on E side gave SU 3699 0939, with one of SU 3699 0940. A reading of SU 3702 0937 is shown by satellite imagery to be too far E. **1st for SU30 since 1964.**

****NA *Lycopodiella inundata* (Marsh Clubmoss):** Barnsfield Heath, SZ12199963, SZ12229962; 01-Oct-18; CDi. Centre of track. **New tetrad.**

NA *Lycopsis arvensis* (= *Anchusa arvensis*) (Bugloss): Broughton Down, N of, SU285342; May-19; ACr. At SU28511 34259. **1st for SU23 in VC11.**

NN *Lysichiton americanus* (American Skunk-cabbage): Bournemouth West, Upper Gardens, SZ0791; 18-Jul-19; FAW. Upper/Central Gardens from Glenferness Ave to 07924 91629, at 07507 91726. **1st for SZ09.**

NN *Malva x clementii* (Garden Tree-mallow (*M. olbia* x *thuringiaca*)): Farley Down, SU394282; 30-Sep-18; PM. Flowering/fruiting in field margin at SU3944 2820. **1st for SU32.**

NN *Melilotus officinalis* (Ribbed Melilot): Hinton Admiral (Waste ground on railway side of roadway), SZ20259479; 07-Sep-19; PCo. Keyed using vegetative flora from infertile material. **1st for SZ29.**

****NA *Mentha pulegium* (Pennyroyal):** Mockbeggar, Mockbeggar Cross Lanes, SU159093; 22-Aug-19; RCol. At the junction of Gorley Road and Mockbeggar Lane: SU 1596 0936. Seen on 22 August. I didn't actually count the plants, but there's one very close to the southernmost P vulgaris, and a larger plant or patch where the garden hedge hangs out over the ditch close to the corner, so in partial shade. Mockbeggar, SU160095, SU161099; 05-Sep-19; MWR. Present over c 1 square metre, SU 1617 0990, with *Perscaria* minor. Mockbeggar Green (In the ditch), SU159093; 14-Sep-19; CC. c. 4 clumps, non flowering, collectively covering in total a little under 1m square. **1st for SU10 since 1957.**

NA *Menyanthes trifoliata* (Bogbean): NE of Sinah Lake, SZ701993; 09-Oct-19; DN, JOa & SDe. Refind at lake edge. **1st for SZ69.**

***NA *Montia fontana* subsp. *amporitana* (Blinks):** Digden Bottom, SU1709; 20-May-18; FAW. NE corner of Newlands Plantation. **1st for SU10 since 1927.**

***NA *Myriophyllum alterniflorum* (Alternate Water-milfoil):** Fletchers Green, SU281040; 07-Jun-18; MR & BSBI/HFG members. Close to footbridge. **1st for tetrad since 1978.**

NA *Myriophyllum spicatum* (Spiked Water-milfoil): Hamble Common, SU481060; 03-Oct-18; ILR. HBIC Hampshire Habitat Survey Partnership Project 2018 Full GR: SU48160606. **New tetrad.** Gravel Hill, SU716175; 16-Sep-19; AD. Common in concrete-lined pond. **New tetrad.**

NN *Narcissus minor* (Lesser Daffodil): Eling, SU366123; 25-Mar-18; PM. Small clump flowering near Eling Cemetery at SU3662 1230. **1st for SU31.**

NN *Narcissus tazetta* (Bunch-flowered Daffodil): Ringwood (W side), SU146055; 31-Mar-19; MWR. 1 plant, roadside, A31 slip road, SU 1468 0553. **1st for SU10.** Fawley Inclosure area, SU415056; 19-

Mar-19; MWR. 1 clump, roadside opposite gardens, Roman Road, SU 4150 0566. **1st for SU40.** Chewton Bunny (E side), SZ228939; 21-Mar-19; MWR. 1 clump, roadside near garden, Christchurch Road (A337), SZ 2289 9396. **1st for SZ29.**

NN *Nassella tenuissima* (Argentine Needle-grass): Tipner, SU6403; 17-Jul-19; TGCR. **1st for SU60.**

NN *Nemesia strumosa* (Cape-jewels): Christchurch, Druitt Gardens, SZ1592; 04-Jun-18; FAW. Druitt Gardens, 15765 92612, in wall/path crack. **New VC record.**

NN *Nicotiana x sanderae* (*N. alata x forgetiana*): Michelmersh, south of, SU349258; 30-Jul-18; PM. Clump with pale yellow flowers on disturbed ground on north side of Rudd Lane at SU3491 2581. **1st for SU32.**

NN *Nothofagus obliqua* (Roble): Longdown Inclosure, SU356084; 10-Sep-19; MWR. Several trees, wood, SU 3567 0844. **1st for SU30.**

NN *Nymphaea x marliacea* (Coloured Water-lily): Mansbridge, Southampton (Reservoir.), SU447158; 25-Jul-19; MGP. Probably not 'alba'. Possibly a hybrid or garden variety. One clump is pink tinged another is yellow. **1st for SU41.**

NN *Oenothera stricta* (Fragrant Evening-primrose): Bournemouth East Cliff, cliff tops, slope up from car park, SZ0990; 29-May-18; FAW. East Cliff, down slope, along seafront, up zigzag, cliff top, 09522 90948. **1st for SZ09 since 1978.**

NN *Olearia macrodonta* (New Zealand Holly): Fort Cumberland Open Space, SZ679991; 14-Dec-18; RHWa. **1st for SZ69.**

***NA *Onobrychis viciifolia* (Sainfoin):** Stonymarsh, SU336266; 08-Sep-19; PM. Flowering in fallow field. **1st for SU32.** Ashley Down, SU386295; 28-Sep-19; MR & RCR. Presumed introduced with Phacelia planting. **1st for SU32.**

***NA *Ononis spinosa* (Spiny Restharrow):** Gilkicker, SZ605975; 01-Jul-18; RHWa. **1st for SZ69.**

***NA *Ophioglossum azoricum* (Small Adder's-tongue):** Hackets [=Hatchet] Pond, SU36600175; 13-Jun-19; DMo. Small area of short lush grass just off track into heathland. Former fire site? Numerous plants. **New tetrad.**

***NA *Ophrys apifera* var. *belgarum*:** Winchester (Garnier rd/bull drove/Bar end roundabout), SU48972815; 09-Jun-19; NJ & RWe. **1st for SU42.**

***NA *Orobanche hederæ* (Ivy Broomrape):** Old rail line NW of Wootton Bridge, SU247001; Jun-19; DC & SCo. **1st for SU20.** Romsey, SU35442135; 28-Jun-18; SCo. **1st for SU32.**

***NA *Orobanche hederæ* f. *monochroa*:** Hoads Hill, Wickham monad, SU5710; 05-Jul-19; RBu det. MR. W verge of A32. **New tetrad.**

NN *Oxalis latifolia* (Garden Pink-sorrel): Southsea, SZ658983; 15-Jul-19; MR & GCo. Weed in Lumps Fort rose garden. **1st for SZ69.**

NN *Panicum capillare* (Witch-grass): Bisterne (Dragon Lane) area, SU154015; 29-Sep-18; MWR. Maize (presumed pheasant cover), SU 1546 0159, with Sorghum bicolor and Setaria pumila. **1st for SU10.**

***NA *Papaver lecoqii* (Yellow-juiced Poppy):** Buriton, SU740202; 06-Jul-18; ARGM & DN. At SU7400 2024 on Hangers Way. **New tetrad.** Boldre Bridge, SZ31909845; 23-Jul-19; AEB. Grid ref. SZ 31907 98457. Garden at Boldre Bridge Cottage. **1st for SZ39 since 1986.** Southsea, SZ646981; 15-Jul-19; MR & GCo. Single plant in beds in Rock Garden, latex yellow. **1st for SZ69.**

***NA *Parentucellia viscosa* (Yellow Bartsia):** Waterworks meadow, Soberton Heath, SU595143; 11-Jun-19; JAN. Single plant 1 metre from edge of path SU 5955 1437. **New tetrad.**

NN *Parthenocissus inserta* (False Virginia-creeper): Throop West, Hicks Farm, Area F1, Farmyard + House, SZ109959; 29-Aug-18; FAW. Old farmyard. **1st for SZ19.**

NN *Parthenocissus quinquefolia* (Virginia-creeper): Lock Lake, SZ677996; 04-Jul-18; RHWa. latitude: 50.7925, longitude: -1.041667. **1st for SZ69.**

NN *Phacelia tanacetifolia* (Phacelia): Queen Elizabeth Country Park, SU718183; 26-Jul-19; AD. Gravel Hill, SU717173; 16-Sep-19; AD. currently uncultivated field corner. **1st for SU71.** Stroud, W of, SU711236; 06-Aug-18; ARGM, SP & DN. At SU7119 2360 on arable field edge. **1st for SU72.**

NN *Phlomis russeliana* (Turkish Sage): Hordle (E side), SZ275950; 06-Jun-18; MWR conf. EJC 25/11/2018. By garden, footpath linking Everton Road and Longfield Road, SZ 2753 9507. **1st for SZ29.**

NN *Phytolacca acinosa* (Indian Pokeweed): Kilmeston, SU59282608; 26-Sep-19; ASt det. MR. Vigorous plant on compost pile. **1st for SU52.**

NN *Picea omorika* (Serbian Spruce): St Leonards Hospital (S side), SU107011; 21-Sep-18; MWR. 1 tree near track, wood, SU 1074 0112. **1st for SU10.**

NN *Pinus nigra* subsp. *nigra* (Austrian Pine): Hayling Billy (paths on western side of monad), SU7103; 17-Apr-19; DN, JOa & SDe. **1st for SU70.**

NA *Plantago major* subsp. *intermedia* (Greater Plantain): Parley Court South, Stour Valley N, Muscliff Riverside S, 1st sec, SZ0996; 19-Aug-18; FAW. Bioblitz, comp 10, 09172 96005. **1st for SZ09.**

***NA *Poa infirma* (Early Meadow-grass):** Central Car-park, SU747234; 30-Mar-19; SP. Many plants scattered on grassy areas between parking bays in Central Car-park at and around SU747 234. Recorded thanks to information from Paul Stanley. **1st for SU72.**

***NA *Polygonatum multiflorum* (Solomon's-seal):** Millersford Brook, Godshill, SU170157; 20-Apr-19; MR & IBu. Native plants and in native woodland cover by streamside, but remote from main Hants distribution. **1st for SU11.**

NN *Polygonatum x hybridum* (Garden Solomon's-seal): Hogs Lodge Lane, Clanfield, SU71301778; 04-Sep-19; AD. frequent along road verge. **1st for SU71.**

***NA *Polypodium cambricum* (Southern Polypody):** Christchurch Priory, roadside verges, Convent Walk, Priory Groun, SZ1692; 24-Jun-18; FAW. Convent Meadows, Convent Walk, marina 'new' houses, boatyard car park, 15993 92409. **New tetrad.**

NN *Polypogon viridis* (Water Bent): Stockbridge, SU354351; 26-Aug-19; MR & GCo. **1st for SU33.**

NN *Populus x canescens* (Grey Poplar (*P. alba x tremula*)): Sheffield English, SU293222; 02-May-18; PW. **1st for SU22.**

NN *Portulaca oleracea* (Common Purslane): Locks Heath (gutter), SU51270644; 26-Aug-19; PSm. **1st for SU50.**

NA *Potamogeton crispus* (Curled Pondweed): Willswood Farm, SU330119; 01-Jun-18; NAS & AMC. **New tetrad.**

NN *Potentilla indica* (Yellow-flowered Strawberry): Southsea, SZ647981; 25-Mar-19; MR & GCo. **1st for SZ69.**

***NA *Potentilla x suberecta* (*P. anglica x erecta*):** Rockford, Old Pit area, SU1608; 20-May-18; FAW. Pit car park + up to top, Newlands Plantation, 16657 08855. **1st for SU10.** Badminton Common, Blackfield, SU459019; 10-May-19; MR & AMC. Blackwell Common, SU435018; 10-May-19; MR & AMC. **1st for SU40.**

NN *Prunus persica* (Peach): Eastney Beach, SZ675988; 07-Jul-18; RHWa. **New VC record.**

NA *Prunus x fruticans* (*P. domestica x spinosa*): Ramsdean, SU700221; 25-Sep-18; DN. SU7001 2210 and more in hedges round this field S of Barrow Hill. **1st for SU72.**

IN *Pterocarya fraxinifolia* (Caucasian Wingnut): Sheffield English (The Mill), SU292220; 14-Oct-19; PW. Main tree in poor condition but ample suckers at base. **1st for SU22.** Locks Farm, SU5516; 27-Sep-19; GCo. Suckering/seeding into pasture field from garden. **1st for SU51.**

NN *Pyracantha coccinea* (Firethorn): Waterlooville N. (Park Wood), SU6810; 16-Oct-19; AHP det. EJC. Claimed as ancient woodland by Woodland Trust but was in part a garden about 100 yrs ago. **1st for SU61.**

NN *Pyracantha rogersiana* (Asian Firethorn): Waterlooville N.W. (Billy's Pond and surroundings.), SU6711; 17-Oct-19; AHP & EJC. **1st for SU61.**

NN *Quercus ilex* (Evergreen Oak): Sherfield English, SU2922; 01-May-18; PW. East Tytherley (The Avenue), SU294293; 16-Sep-18; PW. **1st for SU22.**

***NA *Ranunculus aquatilis* (Common Water-crowfoot):** N of Avon Tyrrell (SU 1890 0081), SU189008; 23-Jun-19; MWR. Petals 7.7, 8.3, 8.3mm; nectar pit circular (n=3); pedicel in (immature) fruit <50mm (n=2). **1st for SU10 since 1987.** Hale Purlieu (National Trust Northern Commons), SU200186; 22-Jul-19; CWhit. Transect across upper mire. **1st for SU21 since 1979.**

***NA *Ranunculus parviflorus* (Small-flowered Buttercup):** Fields Trust field E of Home Covert, Nursling, SU378161; 16-May-18; MR & GCo. On S-facing bank in NE of field, SU3788 1619, 4 or 5 plants. **1st for SU31.** Abbey Meadows, Titchfield, SU535066; 02-Jun-18; DRA & JAN. 1 plant on recently disturbed soil mound SU 53579 06615. **New tetrad.**

****NA *Ranunculus tripartitus* (Three-lobed Crowfoot):** Edge of Avon Water, SZ261989, Edge of Avon Water, SZ260991; 04-Mar-18; AEB. Identity queried by recorder. **1st for tetrad since 1979.**

NN *Rhus typhina* (Stag's-horn Sumach): Langstone (S. Langstone and South Moor), SU7104; 23-Oct-19; DN, JOa & SDe. **1st for SU71.**

***NA *Rhynchospora fusca* (Brown Beak-sedge):** North Hollow (By track), SU18351035; 30-May-18; NAS. **1st for SU11 since 1986.** Widden Bottom, SZ28759919; 05-Jul-19; AEB. Grid ref. SZ 28753 99193. 4 plants. **1st for tetrad since 1986.**

****NA *Rosa agrestis* (Small-leaved Sweet-briar):** Warren Court area, SU2734; 17-Jul-19; GK. at SU27345,34417 - A single bush in at western end of a small section of hedge that is regularly flailed. Had only a few hips, but showed all characters for *R. agrestis* including eglandular pedicels, multi-serrate leaflets with glands on edges and underside of the leaflets, sepals, stipules, petiole & rachis, weakly apple scented. Leaf structure spaced with cuneate leaf bases and acute apex to leaflets. Limited woody growth at correct age, but young woody growth showing distinct triangular (almost deltate) prickles. Stylar orifice narrow. **1st for SU23.**

NN *Rosa rugosa* (Japanese Rose): Stroud, SU722236; 06-Aug-18; ARGM, SP & DN. At SU7223 2362 in roadside hedge backing on to pub car park. Ramsdean, SU7022; 25-Sep-18; DN. Lane edge E of village green nr gardens. **1st for SU72.**

NA *Rosa x dumalis* (*Rosa squarrosa* x *vosagiaca*): Crow area, SU161039; 27-Sep-18; MWR. Roadside hedge, Moortown Lane, SU 1614 0394. **1st for SU10.** Wintershill, SU535179; 07-Jun-18; DMo. **1st for SU51.**

NN *Rubus laciniatus*: Abbey Meadows, Titchfield, SU542063; 02-Jun-18; DRA & JAN. Small patch at SU 5420 0633. **1st for SU50.**

NN *Rubus phoenicolasius* (Japanese Wineberry): Dundridge, SU583182; 17-Jul-19; DTr. Seems to have invaded ancient woodland. Far from any garden waste areas. Probably bird sown. **1st for SU51.**

NA *Rumex acetosella* subsp. *pyrenaicus* (Sheep's Sorrel): Wick, Wick Meadows, tracks around school, SZ1591; 01-May-18; FAW. tracks + paths near school + golf course edge. **1st for SZ19.**

***NA *Rumex pulcher* (Fiddle Dock):** St Leonard's, SZ4098; 18-Jun-19; AEB. Grid ref. SZ 40 98 masses. St Leonards, SZ40649812; 15-Jul-19; AEB. Grid ref. SZ 40645 98122. St Leonards. St Leonards, SZ40689821; 15-Jul-19; AEB. Grid ref. SZ 40689 98210. St Leonards. **1st for SZ49.**

NA *Rumex x abortivus* (*R. conglomeratus* x *obtusifolius*): Hurn, Soplex Common DWT reserve, SZ1297; 04-Jul-19; FAW & JCri. Car park entrance to grass triangle at 129973, 12890 97281. **1st for SZ19.**

NA *Rumex x sagorskii* (*R. crispus* x *sanguineus*): Christchurch Priory, Stanpit Marsh NW, Iron Boat + Central Marsh, SZ1692; 09-Jun-18; FAW. Bioblitz, comp 10b, Central Marsh. **1st for SZ19.**

***NA *Salicornia europaea* (Common Glasswort):** Northney Marina (coast and parking area at Northney Marina), SU7204; 18-Sep-19; DN & JOa. **New tetrad.** Gilkicker, SZ605975; 18-May-19; RHWa. **New tetrad.** Lock Lake, SZ677996; 04-Jul-18; RHWa **New tetrad.**

***NA *Salicornia x marshallii* (= *Salicornia pusilla* x *ramosissima*) (Hybrid Glasswort):** Farlington Marshes, SU684035; 22-Aug-19; MR & BSBI group. No pure *S. pusilla* now found at this site but best checked later in the season. **1st for SU60 since 1987.**

NA *Salix purpurea* (Purple Willow): Droxford, SU6018; 24-May-18; MR & GCo. **1st for SU61 since 1985.**

NA *Salix viminalis* (Osier): Chalton, SU7316; 02-Oct-19; AD. **1st for SU71 since 1969.**

NN *Salix x sepulcralis* (*S. alba* x *babylonica*): Breamore Park, SU1518; 21-Jul-19; FAW. Pond area 1549 1821, pond + water under road 1573 1815. **1st for SU11.** Ford Lake Valley, SU513150; 04-Jun-18; DMo. **1st for SU51.**

****NA *Salsola kali* (Saltwort):** Nr Inchmery, SZ44059862; 17-Sep-19; AEB. Grid ref. SZ 44055 98626. near Inchmery. **1st for tetrad since 1966.**

****NA *Salvia verbenaca* (Wild Clary):** Keyhaven Marsh, SZ317926; May-19; DC & Sca. **1st for SZ39.**

NN *Santolina chamaecyparissus* (Lavender-cotton): Wick East, Hengistbury Head, car park to Visitor Centre and harbour, SZ1691; 18-May-18; FAW. Road to H Head from junction, 16374 91154. **1st for SZ19.**

NN *Scilla siberica* (Siberian Squill): East Cliff, Bournemouth, SZ09239086; 21-Mar-19; DL. 1 at SZ 09237 90868. **1st for SZ09.**

NN *Sempervivum tectorum* (House-leek): Newtown, SU458108; 24-Sep-18; MWR. Naturalised on grave, cemetery, SU 4585 1086. **1st for SU41.**

NN *Setaria verticillata* (Rough Bristle-grass): Bransbury Park, SZ670994; 25-Aug-18; RHWa. **1st for SZ69.**

****NA *Silene gallica* (Small-flowered Catchfly):** A31 Ringwood, SU141051; 20-Aug-19; BB. At su14102 05128. Hundreds of plants in total spread along a c.20m section of verge grassland. **New tetrad.**

NA *Silene uniflora* (Sea Campion): Bournemouth East Cliff, cliff tops, slope up from car park, SZ0990; 29-May-18; FAW. East Cliff, down slope, along seafront, up zigzag, cliff top, on wall N side of road. **1st for SZ09.**

NN *Silybum marianum* (Milk Thistle): Michelmersh, south of, SU349258; 30-Jul-18; PM. Non-flowering plant on disturbed ground on north side of Rudd Lane at SU3491 2581. **1st for SU32 since 1975.** Southsea, SZ646980; 25-Mar-19; MR & GCo. 7 plants as weed in municipal beds and grassland. **1st for SZ69.** Southsea, SZ646982; 25-Mar-19; MR & GCo. **1st for SZ69.**

NA *Sinapis alba* (White Mustard): North Hayling (Church Farm and Churchyard area), SU7303; 02-Oct-19; DN, JOa & SDe. **1st for SU70.**

NA *Sison segetum* (= *Petroselinum segetum*) (Corn Parsley): Frenchmoor, Pug's Hole Lane (Roadside bank and ditch), SU27492928; 04-Aug-19; PW. **New tetrad.**

NN *Solidago gigantea* (Early Goldenrod): Chalton Lane, Clanfield, SU704166; 12-Sep-19; AD. Clump at back of verge. **1st for SU71.**

***NA *Sonchus palustris* (Marsh Sow-thistle):** Stanswood Bay, SZ470999; 13-Sep-19; MR. **New tetrad.**

NN *Sorbus intermedia* (Swedish Whitebeam): W of inlet, South of Harts Farm Way, SU7005; 30-Apr-19; DN & JOa. A few trees southern edge of Carpark and elsewhere. **1st for SU70.**

NN *Sorghum bicolor* (Great Millet): Bisterne (Dragon Lane) area, SU154015; 29-Sep-18; MWR. Maize (presumed pheasant cover), SU 1546 0159, with Panicum capillare and Setaria pumila. **1st for SU10.** Old Milton (cemetery area), SZ234946; 11-Oct-18; MWR. 1 plant, waste ground by Fawcetts Field recreation ground, SZ 2343 9460. **1st for SZ29.**

NA *Sparganium emersum* (Unbranched Bur-reed): St.Clair's Meadow, SU606157; 13-Jul-18; ILR. HBIC Hampshire Habitat

Survey Partnership Project 2018 Full GR: SU60661572. **1st for SU61.**

NN *Spartium junceum* (Spanish Broom): Langstone (S. Langstone and South Moor), SU7104; 30-Apr-19; DN & JOa. Near houses. **1st for SU70.**

NA *Spirodela polyrhiza* (Greater Duckweed): N of Avon Tyrrell (SU 1893 0079), SU189007; 23-Jun-19; MWR. With *Lemna* minor, the latter more frequent. **New tetrad.**

NA *Stachys x ambigua* (Hybrid Woundwort (*S. palustris x sylvatica*)): Queen Elizabeth Forest, SU7217; 02-Oct-19; AD. frequent along track west from SU725176. Appleton's Copse, SU736196; 28-Sep-19; AD. **1st for SU71.** Muscliff, Muscliff Riverside S, lane towards Redhill Ferry, SZ0995; 19-Aug-18; FAW. Bioblitz, comp 10, Riverside Walk South. **1st for SZ09.** Throop, Hicks Farm, Field G1, New cycleway, SZ111959; 30-Aug-18; FAW. New cycleway. Throop, Hicks Farm, Area G4, Throop Mill Pond, SZ112958; 01-Sep-18; FAW. Throop Mill Pond, 11242 95815. Throop, Throop Mill, SZ1195; 06-Sep-19; FAW. new cycleway cottage to main weir, path back over old weir. **1st for SZ19 since 1982.**

NN *Symphotrichum lanceolatum* (= *Aster lanceolatus*) (Narrow-leaved Michaelmas-daisy): New Barn Lane, Chalton, SU73621735; 28-Sep-19; AD. Dominant over c.15m of road verge. **1st for SU71.**

NN *Symphotrichum novae-angliae* (= *Aster novae-angliae*) (Hairy Michaelmas-daisy): Lock House Lock, Itchen Navigation, SU46251747; 02-Oct-19; VFr. Itchen Navigation. One clump growing by Lock House Lock. **1st for SU41.**

NN *Symphotrichum novi-belgii* (= *Aster novi-belgii*) (Confused Michaelmas-daisy): Romsey, SU355214; 21-Sep-18; PM. Flowering beside Albany Road. **1st for SU32.**

NN *Symphytum caucasicum* (Caucasian Comfrey): Marchwood, SU384108; 13-May-18; PM. Flowering beside cycle track at SU3849 1084. **1st for SU31.**

NN *Symphytum grandiflorum* (Creeping Comfrey): Ramsdean, SU7022; 25-Sep-18; DN. **1st for SU72.**

NN *Symphytum orientale* (White Comfrey): Woodley, SU370227; 06-May-18; PM. Flowering on south side of Woodley Lane at SU3703 2276. **1st for SU32 since 1979.** Newtown, Bishops Waltham, SU546177; 20-Apr-19; MR. N side of Winchester Road. **1st for SU51.**

NN *Symphytum tuberosum* (Tuberous Comfrey): Shedfield, SU5514; 17-May-19; GCo. On golf course rough ground. **1st for SU51.**

NN *Symphytum x hidcotense* 'Hidcote Blue' (Hidcote Comfrey): Calshot (village), SU478034; 26-Mar-19; MWR. Roadside by garden, B3053, SU 4789 0348. **1st for SU40.** Ramsdean, SU705222; 23-Apr-18; MR & MPa. **1st for SU72.**

NN *Syringa vulgaris* (Lilac): W of inlet, South of Harts Farm Way, SU701055; 30-Apr-19; DN & JOa. SU701055 about 20m S of height barrier. **1st for SU70.**

***NA *Torilis nodosa* (Knotted Hedge-parsley):** Manor Farm Country Park, SU509117; 17-Jul-19; GCo. **1st for SU51.**

NN *Trachycarpus fortunei* (Chusan Palm): Waterlooville Hulbert Road, SU687094; 21-Jun-19; AHP. About 14 small plants between SU68770940 & 68780939, 1 plant at 68800937, in grass and trees beside pavement, almost certainly bird sown, unlikely to survive to maturity. **1st for SU60.** Berry Hill, Hicks Farm, Field F4, Farm Overgrown hardstanding, SZ109960; 29-Aug-18; FAW. Farm Overgrown hardstanding area, 10990 96027. **1st for SZ19.**

***NA *Trifolium scabrum* (Rough Clover):** Whitten Pond area, SU201011; 27-May-19; MWR. Short grass, roadside, Pound Lane, SU 2010 0118. **New tetrad.**

NN *Tristagma uniflorum* (Spring Starflower): Hamble (N side), SU482070; 07-Apr-19; MWR. 1 clump, grassy roadside by garden, Satchell Lane, SU 4825 0705. **1st for SU40.**

NN *Tropaeolum majus* (Nasturtium): Ramsdean, SU7022; 25-Sep-18; DN. **1st for SU72.**

NA *Typha angustifolia* (Lesser Bulrush): Straight Mile, Romsey, SU383225; 19-Dec-18; NRJ. **1st for SU32.**

NA *Ulmus x hollandica* (Dutch Elm (*U. glabra x minor x plotii*)): Lower Toothill, SU377183; 14-May-18; MR & HFG group. **1st for SU31 since 1983.** Tadburn Meadows area, SU36672139; 18-May-19; LBa & AJBa. Alongside footpath, right at edge of stream, Tadburn Meadows (Romsey). Its grid reference is c.SU3667821391. **1st for SU32 since 1983.** Southampton (Bitterne), SU448130; 03-Oct-19; MWR. By Lances Hill car park, SU 4489 1305. **1st for SU41 since 1983.**

NA *Ulmus x vegeta* (Huntington Elm (*U. glabra x minor*)): Fontley, SU55580854; Aug-19; ABr. 'Probably vegeta'. [Needs checking out.]. **1st for SU51.**

***NA *Urtica dioica* subsp. *galeopsifolia* (Stingless Nettle):** Lower Test NR, SU366149; 05-Jun-19; MR & GCo. **1st for SU31.**

****NA *Utricularia minor* (Lesser Bladderwort):** Straight Mile, Romsey, SU383225; 24-Jul-19; NRJ. **1st for SU32.**

NN *Verbascum bombyciferum* (Broussa Mullein): Southsea, SZ647980; 15-Jul-19; MR & GCo. Planted in Rock Garden and now self-seeding over the area. Anthers heteromorphic, no glands, stem leaves not decurrent, lower stamens with filaments hairy towards base. **New VC record.**

NN *Verbascum phoeniceum* (Purple Mullein): Southsea, SZ647980; 15-Jul-19; MR & GCo. Planted in Rock Garden and now self-seeding very locally. **1st for SZ69.**

NN *Verbascum virgatum* (Twiggy Mullein): Lymington (Ferry), SZ333954; 11-Jul-18; MWR. 3 plants, SZ 3333 9540. **1st for SZ39.**

NN *Verbena bonariensis* (Argentinian Vervain): Mockbeggar, SU160096; 05-Sep-19; MWR. 2 plants, roadside gutter, New Road, SU 1602 0968. **1st for SU10.**

NA *Veronica hederifolia* subsp. *hederifolia* (Ivy-leaved Speedwell): Hayling Billy (paths on western side of monad), SU7103; 17-Apr-19; DN, JOa & SDe. W of inlet, South of Harts Farm Way, SU7005; 30-Apr-19; DN & JOa. **1st for SU70.**

NA *Veronica hederifolia* subsp. *lucorum* (Ivy-leaved Speedwell): Near West End (Oaklands House area), SU4716; 28-Apr-19; MWR. Merry Oak, SU4412; 26-Apr-19; MWR. Eastleigh (W side), SU4318; 19-Apr-19; MWR. Telegraph Woods area, SU4713; 15-May-19; MWR. Fair Oak (Pylehill area), SU4919; 10-Apr-19; MWR. Chandler's Ford (S side), SU4319; 19-Apr-19; MWR. **1st for SU41.**

****NA *Veronica scutellata* var. *villosa* (Marsh Speedwell):** Rushy Flat, SU213176; 09-Jul-19; MR, GCo & SRo. Both vars present in ephemeral pond, SU2135 1767. **1st for SU21.**

****NA *Viola lactea* (Pale Dog-violet):** Blackwell, SU435016; 10-May-19; MR & AMC. Margins of seasonally damp depression. **New tetrad.**

NN *Viola odorata* var. *odorata*: Hursley, SU4225; 17-Apr-18; MR. Roman Road, Twyford, SU482245; 17-Mar-19; MR. **1st for SU42.**

***NA *Viola riviniana x lactea*:** Rushy Flat, SU213178; 22-May-19; MR, GCo & BMD. One or two with parents, between Gorse thicket and road. **1st for SU21.**

****NA *Viola tricolor* (Wild Pansy):** St Leonards Hospital, Hospital Grounds North, SU1002; 25-May-18; FAW. St Leonards Hospital Grounds North. St Leonards Hospital South, hospital grounds S, cricket ground, SU1001; 25-May-18; FAW. St Leonards Hospital Grounds South. **1st for SU10.**

***NA *Viola x militaris* (*Viola canina x lactea*):** Turf Hill, Godshill, SU212178; 22-May-19; MR, GCo & BMD. Many in a mixed population between Gorse thicket and road. Photographs retained. **1st for SU21 since 1980.**

***NA *Vulpia ciliata* (Bearded Fescue):** Dur Hill Down (SU 1986 0135), SU198013; 23-Jun-19; MWR. A few plants. **1st for SU10.** Eastney Beach, SZ675988; 22-May-19; RHWa. **New tetrad.**

***NA *Vulpia fasciculata* (Dune Fescue):** Manor Steps, cliff-top grassland and cliff, SZ1391; 28-Jun-18; FAW. 13562 91267. **New tetrad.** Gilkicker, SZ605975; 18-May-19; RHWa. **New tetrad.**

VC12 Records

Compiled by Tony Mundell (Records up to 3 November 2019)

As usual here is my personal selection of records received in the last six months, showing a mixture of the scarcer native plants and some interesting aliens. After keeping me busy for about ten years, recording for the BSBI Atlas 2020 Project has now finished. I, and others, will be doing much less plant recording next year so the number of records shown in future editions of *Flora News* will begin to tail off.

In the previous issue of *Flora News* I reported on the discovery of a new site for Orange Foxtail *Alopecurus aequalis* at Hogmoor Inclosure. That record of about 60 plants was a splendid find as the species seemed to be close to extinction in Hampshire. As explained in another article in this issue that colony may, or may not, have since been lost due to a bomb found close to it. At the time of writing I still do not know its fate.

The good news is that another site for Orange Foxtail has recently been found at Oakhanger Pond on MOD land. Due to natural succession over many years Oakhanger Pond had become totally overgrown with dense bushes of Grey Willow *Salix cinerea* and various trees that completely obscured and densely shaded the water. Recently the army decided to restore the pond and all the encroaching vegetation was dug out. The habitat has been greatly improved. When I visited, what I first thought from a distance looked like a dense covering of the dreaded New Zealand Pigmyweed turned out to be a solid mass of Pond Water-crowfoot *Ranunculus peltatus*. There was a wealth of other species on the rather dried-up pond bed. Apart from the Orange Foxtail, first found there by Steve Povey, there are many plants of Trifid Bur-marigold *Bidens tripartita* and some Nodding Bur-marigold *B. cernua*. These grow with extraordinary numbers of Red Goosefoot *Chenopodium rubrum* and Creeping Yellow-cress *Rorippa sylvestris*. In one spot on the mud we also found an unusual liverwort, Cavernous Crystalwort *Riccia cavernosa*, which was new for VC12 (see p.23).

In the last *Flora News* I also mentioned a potentially invasive alien water plant, Lizard's Tail *Saururus cernuus*. Since then Sarah Ball recalled that when botanising with Sarah White back on 11 August 2015 they had found an unusual plant near Overton that they could not identify. On 4 November 2019 Sarah Ball returned and re-found it, sending me a photo that is indeed a *Saururus* and probably *S. cernuus*. I have added the record below but I cannot record it on my database as it is not on the MapMate taxa list. I fear that because it is not in any flower identification books it may be getting overlooked. Incidentally Catherine Chatters showed me a photo of another *Saururus* found this year in the New Forest near Minstead, but it appeared to be a rather more delicate plant of lower stature that could be *S. chinensis*.

Amongst the native species included below I was delighted when Mary Parker and I came across a new site



Pond Water-crowfoot *Ranunculus peltatus*, dominating bed of restored Oakhanger Pond, 8 September 2019 (Tony Mundell)



Cavernous Crystalwort *Riccia cavernosa*, Oakhanger Pond, 8 September 2019 (Tony Mundell)

for Common Wintergreen *Pyrola minor*, which occupied quite a large area at Bramshott Common. Another splendid surprise was a single spike of Autumn Lady's-tresses *Spiranthes spiralis* found at Headley Gravel pit. This is the only record for it there, though it has been recorded before a few miles away in both Tadley and Burghclere.

Amongst the aliens I am often surprised at the diversity of species sown by farmers either to attract birds (probably for shooting!) or to encourage pollinating insects. Examples below include Dill *Anethum graveolens*, Gold-of-pleasure *Camelina sativa*, Garden Radish *Raphanus sativus* and Bulbous Canary-grass *Phalaris aquatica*. There also seems to be an upsurge in sowing arable land with species to increase soil fertility. In several places this year I have seen Black Mustard *Brassica nigra* being grown as a crop and then ploughed in as green manure. Even more interesting was a whole field sown with a tall whitish-flowered clover that turned out to be Egyptian Clover *Trifolium alexandrinum*, presumably being grown to fix nitrogen in the soil. I will deposit a voucher specimen of this unusual clover in the herbarium at Winchester. I will also deposit the specimen of Fenugreek *Trigonella foenum-graecum* found by Andrew Powling and Eric Clement as it is new for Hampshire.

Another increasing feature is sowings of 'wild flower' seeds. Often this comprises annuals like Cornflower *Centaurea cyanus* and Corn Marigold *Glebionis segetum* that cannot persist. Rather surprisingly, I see that Thorn Apple *Datura stramonium* is now being sown too.

HFG = Hampshire Flora Group

***Acer negundo* (Ashleaf Maple)** One tree on roadside, on opposite side to a house, but surely planted, Dunley SU4533 5398, Tony Mundell & Phil Collier 23 Sep 2019.

***Acer saccharinum* (Silver Maple)** Micheldever SU5160 3930, Anna Stewart 27 Aug 2019, det. John Poland.

***Achillea ptarmica* (Sneezewort)** Lodge Pond, a few surviving beside pond at SU8137 4297 and SU8127 4290, Tony Mundell & Cathy Wilson 12 Aug 2019. Norris Hill, Fleet, a few scattered plants at SU8330 5328,

SU8334 5325 & SU8339 5316, Tony Mundell & Dawn Nelson 21 Aug 2019. Ashford Hill NNR, several scattered plants at SU5627 6217 & SU5630 6208, Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019. Hawley Meadows SU8599 5903, one patch, Steve Bailey 2 Sep 2019.

***Agrimonia procera* (Fragrant Agrimony)** Several plants beside farm track, South Hay SU774398, Cathy Wilson 9 Aug 2019. Nothing Hill, Ecchinswell Road, a few plants on north roadside bank, either side of the track entrance SU514590 and a 25m roadside strip on south side with many plants at SU510590, Sarah Ball 4 Sep 2019. Patch beside footpath, Clatford Oakcuts SU3392 3974, Tony Mundell & Dave Pearson 26 Sep 2019.

***Alopecurus aequalis* (Orange Foxtail) Oakhanger Pond**, around 30 plants from SU7721 3461 to SU7718 3468 mainly on the margin of NE side of pond, Steve Povey 7 Sep 2019, confirmed Tony Mundell 8 Sep 2019.

***Amaranthus albus* (White Pigweed)** Arable field corner, SW of Lower Bullington SU4495 4056. Completely hairless, slender stems up to 4mm, very branched habit, leaf edges with hyaline margin, green inflorescence, Tony Mundell 3 Oct 2019.

***Anagallis tenella* (Bog Pimpernel)** Tichborne Springs SU5760 3174, on bare peat of flush close to stream, and in shorter vegetation at SU5759 3174 and SU5764 3170, Tony Mundell & Dave Pearson 31 Jul 2019. Silchester SU6225 6193, open wet heathland, Tony Mundell & Dave Pearson 15 Oct 2019.

***Anethum graveolens* (Dill)** NW of Selborne SU7334, sown to provide bird food, Andrew Powling & Eric Clement 10 Oct 2019.

***Anisantha diandra* (Great Brome)** NW of South Wonston, SU457370, abandoned arable field by track to Sutton Down Farm, Anna Stewart 22 Jul 2019. Aldershot, plants at SU8640 5056 to SU8642 5056 in three of the beds in the wall at Birchett Road side of the old Co-op car park, Fred Rumsey 30 Aug 2019. W of Over Wallop SU2781 3863 and SU2677 3874, sample collected, long awns, short pedicel, wedge-shaped spikelet, Anna Stewart 7 Sep 2019.

***Apium inundatum* (Lesser Marshwort)** Woolmer Pond SU788319 and SU790321, many small non-flowering plants along pond margins, Steve Povey & Laura Gravestock 26 Jul 2019.

***Arabis hirsuta* (Hairy Rock-cress)** N of Abbotstone Down, a very few plants on bare chalk at woodland edge SU58319 36806, only one with seed pods. Very much decreased since last found in 1997, Tony Mundell & Cathy Wilson 18 Jul 2019.

***Arctium lappa* (Greater Burdock)** Chilbolton Common SU3853 3904, locally plentiful, Tony Mundell 10 Aug 2019. Eversley Church car park SU7801 6094, several plants, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Artemisia verlotiorum* (Chinese Mugwort)** Aldershot SU8532 5046, an increasing patch in the small front garden flower bed of a house in Western Road, close to the pedestrian part that joins to Pavilion Road, Fred Rumsey 20 Aug 2019.

***Asparagus officinalis* (Garden Asparagus)** NE of Grateley, five spikes with some red fruit, beside footpath called Grateley Drove

SU2825 4284, also three spikes on grassy road verge SU2854 4263, Tony Mundell 29 Oct 2019.

***Asperula cynanchica* (Squinancywort)** N of Abbotstone Down SU5833 3685, beside footpath, Tony Mundell & Cathy Wilson 18 Jul 2019.

***Asplenium ceterach* (Rustyback)** Fob Down Farm SU5714 3396, on wall, Dave Pearson 12 Oct 2019.

***Astragalus glycyphyllos* (Wild Liquorice)** Worthy Down, disused railway SU479351, leaves present, Dave Pearson 27 Sep 2019.

***Atropa belladonna* (Deadly Nightshade)** Porton Down SU251363, several plants in area with rabbit disturbance, Pat Woodruffe & Ailsa McKee 28 Jun 2019. Stockbridge Down SU3752 3485, single plant with young fruit, just inside an enclosure, Malcolm & Christine Storey 7 Aug 2019. Porton Down SU2500 3719, large patch around fallen conifer, Pat Woodruffe 18 Aug 2019.

***Baldellia ranunculoides* (Lesser Water-plantain)** Fleet Pond, Gelvert Marsh SU8245 5499 & SU8246 5498, beneath young regenerating *Phragmites australis*, Tony Mundell 10 Sep 2019.

***Berberis vulgaris* (Barberry)** Ellisfield SU6413 4552, single bush on edge of wood beside footpath, Tony Mundell & Phil Collier 29 Jul 2019.

***Bidens cernua* (Nodding Bur-marigold)** Avington Lake SU5281 3223, on west shore, Dave Pearson 21 Aug 2019. Oakhanger Pond SU771346, many plants, though not as plentiful here as *Bidens tripartita*, Tony Mundell & Steve Povey 8 Sep 2019.

***Bidens tripartita* (Trifid Bur-marigold)** Fleet Pond SU8183 5494, single flowering plant beside the landing stage, Tony Mundell & Dawn Nelson 21 Aug 2019. Ashford Hill Meadows SU5592 6215, beside pond (which is currently dried-up), Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019. Oakhanger Pond SU771346, abundant in mud of dried-up pond, Tony Mundell & Steve Povey 8 Sep 2019.

***Blackstonia perfoliata* (Yellow-wort)** SE of Longparish SU4498 4304, seven plants on side of disused railway embankment, just south of bridge remains, on patch of bare chalk, Tony Mundell & Phil Collier 22 Jul 2019.

***Brachypodium rupestre* (Tor-grass)** Cholderton Estate, Reservoir Field area SU2453 4382, HFG 27 Jul 2019, confirmed by Paul Stanley.

***Bromopsis inermis* (Hungarian Brome)** Cholderton Estate SU2435 4383, on north verge of minor road about 20m west of the track to the reservoir, HFG 27 Jul 2019.

***Buddleja globosa* (Orange-ball-tree)** Long Sutton SU7488 4706, road verge, Tony Mundell & Phil Collier 13 Sep 2019.

***Camelina sativa* (Gold-of-pleasure)** Netherton Bottom SU3875 5622, many plants sown in arable field, Tony Mundell & Peter Billingham 10 Sep 2019. Blackmoor, in arable sown strips at SU7741 3401 and SU7710 3359, Tony Mundell & Steve Povey 12 Sep 2019. NW of Selborne SU7334, sown to provide bird food, Andrew Powling & Eric Clement 10 Oct 2019.

***Campanula glomerata* (Clustered Bellflower)** Headley Down SU8423 3564, a single plant in flower on grassy verge at junction of Gorselands Close and Furze Hill Road, very surprising as this area is on acid soil, photo taken, Tony Mundell & Dawn Nelson 1 Aug 2019. Combe SU372607, in field south of Church Lane, Peter Billingham 19 Aug 2019. Tunworth Churchyard SU6733 4844, now only a small patch of plants, 6 metres from the NW corner of the church. one in flower, just surviving the frequent mowing, but unlikely to persist much longer, Tony Mundell & Mike Harrison 22 Aug 2019.

***Campanula rotundifolia* (Harebell)** Holt Pound SU8148 4397, open grassy area, Tony Mundell & Cathy Wilson 12 Aug 2019. Combe SU372607, in field south of Church Lane, Peter Billingham 19 Aug 2019. Hay Down SU6818 4772, a flowering patch a metre across on roadside verge, Tony Mundell & Mike Harrison 22 Aug 2019.

***Campanula trachelium* (Nettle-leaved Bellflower)** NE of East Worldham, field margin beside footpath across SU741368, probably sown as part of wildflower mix, Cathy Wilson 10 Jul 2019. Cooper's

in the Wood, track verge at SU451510 & SU451511, also Egbury SU449512, track verge, Peter Billingham 31 Jul 2019. E of Ropley SU653318, on road verge, Tony Mundell, Dawn Nelson & Sophie Lancaster 7 Aug 2019.

***Carduus nutans* (Musk Thistle)** NW of South Wonston SU457370, abandoned arable field by track to Sutton Down Farm, Anna Stewart 22 Jul 2019. Kentsboro SU3170 3947, common on field boundary, Anna Stewart 12 Sep 2019.

***Carex arenaria* (Sand Sedge)** Shortheath Common SU7795 3716, large patch near Chestnut Farm, Tony Mundell & Cathy Wilson 30 Aug 2019.

***Carex canescens* (White Sedge)** Wyndhams Pond Marsh SU8228 5961, one or two tufts, Tony Mundell 13 Jul 2019. Fleet Pond SU8231 5488, in dried-up pool, Tony Mundell 17 Jul 2019.

***Carex echinata* (Star Sedge)** Passfield Common SU8107 3389, a few plants in very wet marshy area, Tony Mundell 16 Oct 2019. Passfield Common SU8107 3389, a few plants in very wet marshy area, Tony Mundell 16 Oct 2019.

***Carex muricata* subsp. *pairae* (Prickly Sedge)** Harewood Forest SU4052 4523, one large plant between arable field corner and footpath, Tony Mundell & Phil Collier 22 Jul 2019. Shortheath Common SU7792 3717, beside sandy track near Chestnut Farm, Tony Mundell & Cathy Wilson 30 Aug 2019. Bramshill SU7607 6109, by footpath, Tony Mundell & Isobel Girvan 6 Sep 2019. Forton SU4133 4362, on area of wasteland, several large tufts, rather surprising as not on acidic soil, but it definitely keys to this, Simon Melville & Tony Mundell 11 Sep 2019.

***Carex oederi* (Small-fruited Yellow-sedge)** Fleet Pond, Gelvert Marsh SU8245 5498, beneath young regenerating *Phragmites australis*, Tony Mundell 10 Sep 2019.

***Carex pseudocyperus* (Cyperus Sedge)** Yateley Common SU8379 5944, many plants in centre of what was a pond but is now dreadfully dried up and easy to walk across. The abundant Bogbean here looks very sick with all leaves going brown, but of course the dominant *Crassula helmsii* is thriving, Tony Mundell 13 Jul 2019.

***Carex rostrata* (Bottle Sedge)** Beside Lodge Pond SU8112 4289, all vegetative due to deep shade, Tony Mundell 12 Aug 2019.

***Carex strigosa* (Thin-spiked Wood-sedge)** S of Silchester SU6237 6072, on stream bank beside footpath, Tony Mundell & Dave Pearson 15 Oct 2019. Greatham SU7727 3058 & SU7721 3064, in roadside ditch, also SU7681 3114 & SU7686 3136 by muddy footpath, Tony Mundell & Anna Stewart 21 Oct 2019. NW of Greatham SU7681 3114 & SU7686 3136, by muddy footpath, Tony Mundell & Anna Stewart 21 Oct 2019.

***Catabrosa aquatica* (Whorl-grass)** Itchen Stoke SU5467 3271 & SU5471 3269, footpath beside River Itchen tributary, Tony Mundell & Dave Pearson 31 Jul 2019.

***Centaurea cyanus* (Cornflower)** Cholderton Estate, Romsey Road Field SU2446 4317, patches of the genuine archaeophyte in an arable field, with smaller more delicate flowers (all of them blue) than the aliens so frequently sown on road verges by councils, etc., HFG 27 Jul 2019. Weston Down Road SU505412, no obvious wild bird seed or game strip nearby, Tony Davis 29 Sep 2019.

***Centunculus minimus* (Chaffweed)** Heath Warren, at least 40 plants on south side of sandy track at SU76911 60236, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Cephalanthera damasonium* (White Helleborine)** Hacks Lane, Crawley SU4236 3548, five plants in deep leaf litter and ivy, also one within woodland edge at Chilbolton Down Farm SU4183 3636, Tristan Norton 12 Jul 2019.

***Ceratocarpus claviculata* (Climbing Corydalis)** Alice Holt Forest, beside minor track in woods from SU8132 4419 to SU8134 4420, Tony Mundell & Cathy Wilson 12 Aug 2019.

***Ceratochloa carinata* (California Brome)** South Wonston SU47478 35656, widely spread around field, Anna Stewart 2 Jul 2019.

***Chamaemelum nobile* (Chamomile)** Pyestock, Sports Field SU8358 5395, still present scattered across this playing field, Tony Mundell 20 Oct 2019.

***Chenopodium bonus-henricus* (Good-King-Henry)** In the yard at Priory Farm SU7552 3451, Cathy Wilson 18 Aug 2019.

***Chenopodium hybridum* (Maple-leaved Goosefoot)** Matterley Estate SU538279 & SU5285 2881, plant has an unusual foetid smell, Anna Stewart 29 Aug 2019. Kentsboro SU3194 3989, large plant at edge of arable field, Anna Stewart 12 Sep 2019.



Maple-leaved Goosefoot *Chenopodium hybridum*, Kentsboro 12 September 2019 (Anna Stewart)

***Chrysosplenium alternifolium* (Alternate-leaved Golden-saxifrage)** Passfield, a patch of plants c. 1m across at SU81757 33330, 3m from the bank of the Holly Water stream going towards the public footpath. I have no doubt there are other colonies nearby, Tony Mundell 16 Oct 2019. Conford, one or two plants growing with much *Chrysosplenium oppositifolium* at SU82280 32931, in carr beneath a *Ribes rubrum* thicket, a few metres from the Holly Water stream, photos taken, Tony Mundell 28 Oct 2019.

***Chrysosplenium oppositifolium* (Opposite-leaved Golden-saxifrage)** Waggoners Wells SU8589 3428, marsh near pond, Tony Mundell & Dawn Nelson 1 Aug 2019. Passfield SU8175 3330 & SU8134 3357, on banks of Holly Water stream and in swampy areas nearby, Tony Mundell 16 Oct 2019. NW of Greatham SU7682 3121, a few plants on stream bank beside footpath, Tony Mundell & Anna Stewart 21 Oct 2019.

***Cirsium acaule* (Dwarf Thistle)** N of Abbotstone Down SU5833 3685, beside footpath, Tony Mundell & Cathy Wilson 18 Jul 2019. E of Longparish SU4487 4487, on top of disused railway embankment, Tony Mundell & Phil Collier 22 Jul 2019. Gander Down SU5595 2746, relict of chalk grassland, Tony Mundell & Dawn Nelson 25 Sep 2019.

***Cirsium eriophorum* (Woolly Thistle)** Cholderton Estate SU2367 4259, in flower, beside track, HFG 27 Jul 2019.

***Clinopodium acinos* (Basil Thyme)** Porton Down SU255363, single plant just outside fence, Pat Woodruffe & Ailsa McKee 28 Jun 2019. Porton Down SU247374, two plants in middle of track, Pat Woodruffe 18 Aug 2019. Worthy Down, disused railway SU479351, still in flower, Dave Pearson 27 Sep 2019.

Coeloglossum viride (Frog Orchid) Noar Hill SU7431, just two seen, Simon & Sue Melville 7 Jul 2019. Noar Hill, single plants at SU74143 32033, SU74131 32034, SU74116 32028, SU74104 31979, SU74046 32011 & SU73985 31907, Nigel Johnson & Rosemary Webb 12 Jul 2019.

Corylus colurna (Turkish Hazel) SE of Long Sutton SU7508 4660, overhanging the public footpath but clearly originally planted, the trunk seems to be just inside the adjacent garden, photos taken of the distinctive fruits, Tony Mundell & Phil Collier 13 Sep 2019.



Turkish Hazel *Corylus colurna*, Long Sutton, 13 September 2019 (Tony Mundell)

Crataegus crus-galli (Cockspurthorn) Ropley Churchyard SU6462 3201, several bushes in churchyard hedgerow. The church is now derelict, Tony Mundell, Dawn Nelson & Sophie Lancaster 7 Aug 2019.

Crataegus persimilis (Broad-leaved Cockspurthorn) Chawton, B3006 SU7211 3764, single shrub in hedgerow on south side of road, Tony Mundell 19 Aug 2019.

Crataegus x media (C. monogyna x laevigata) N of Upton Grey, in hedgerow between two arable fields, beside footpath at SU6953 4928 & SU6958 4923, Tony Mundell 17 Aug 2019. W of Gander Down SU5445 2719, single plant in roadside hedgerow, Tony Mundell & Dawn Nelson 25 Sep 2019.

Cucurbita pepo (Marrow) N of Sutton Scotney SU4683 4004, plant with small fruits growing on compost, branched tendrils, Anna Stewart 16 Oct 2019.

Cuscuta epithymum (Dodder) Norris Hill, Fleet SU8334 5327, on Erica cinerea, Tony Mundell & Dawn Nelson 21 Aug 2019.

Cyclamen graecum (Greek Cyclamen) Headbourne Worthy SU486319, School Lane hedge banks, occasional, Martin Rand 14 Sep 2019.

Cyclamen hederifolium (Sowbread) Vann Farm SU7398 3064, already in flower with white flowers, on opposite side of road to a house, Tony Mundell, Cathy Wilson & Dawn Nelson 19 Aug 2019. Forton SU4187 4346, on road verge, opposite side to houses, Simon Melville & Tony Mundell 11 Sep 2019. Headbourne Worthy SU486319, School Lane hedge banks, Martin Rand 14 Sep 2019. SE of North Waltham SU5716 4435, in woodland, far from any house or garden, Andrew Powling & Eric Clement 3 Oct 2019.

Cyperus eragrostis (Pale Galingale) Empshott Green SU7489 3103, single plant on a grassy road verge, opposite to a house, Tony Mundell, Cathy Wilson & Dawn Nelson 19 Aug 2019. Single plant growing in tarmac by Harrow Inn, Steep SU751251, Steve Povey 20 Aug 2019.

Cyperus longus (Galingale) Upton Grey pond SU6992 4822, large flowering patch, evidently originally planted. Tony Mundell 17 Aug 2019.

Dactylorhiza praetermissa (Southern Marsh-Orchid) E of Longparish SU4487 4485, several spikes on top of disused railway

embankment, Tony Mundell & Phil Collier 22 Jul 2019. Anton Lakes, Shepherd Springs meadow, a few spikes at SU3623 4679 & SU3622 4680, also Tony Mundell & Phil Collier 22 Jul 2019.

Dactylorhiza x grandis (D. fuchsii x praetermissa) E of Longparish, on top of disused railway embankment, two spikes at SU4487 4485 and one at SU4485 4484, Tony Mundell & Phil Collier 22 Jul 2019.

Daphne laureola (Spurge-laurel) Crondall, Lee Wood, surprisingly frequent in this wood, SU7859 4733, SU7861 4738, SU7863 4740, SU7864 4733, SU7865 4734 & SU7871 4748 etc, Tony Mundell 30 Oct 2019.

Datura stramonium (Thorn-apple) Littleton, Holmes landscapers, previously a plant nursery SU453321, three mature plants, Anna Stewart 6 Aug 2019. West Meon Hut (VC12 part) SU6526, casual on gravel heap, Andrew Powling & Eric Clement 12 Sep 2019. Winchester SU486296, single large plant among a 'wild flower' planting between City Mill leat and Water Lane, Martin Rand 14 Sep 2019. SW of Over Wallop SU2685 3657, one plant seen on compost pile in garden, Anna Stewart 27 Sep 2019. Winchester, Water Lane SU4861 2957, single large plant with fruit next to River Itchen, via Winchester County Council sown wildflower mix, Anna Stewart 28 Sep 2019. N of Sutton Scotney SU4683 4004, one small plant with one fruit, Anna Stewart 16 Oct 2019.

Digitaria sanguinalis (Hairy Finger-grass) W of Over Wallop SU2771 3858, by a barn, young hairy grass with three spikes, Anna Stewart 7 Sep 2019, photo confirmed by Tony Mundell.

Dipsacus pilosus (Small Teasel) Cholderton Estate SU2345 4294, at track junction, HFG 27 Jul 2019.

Doronicum pardalianches (Leopard's-bane) E of Odiham SU7623 5042, single plant on grassy road verge near a house, Tony Mundell & Mary Parker 25 Oct 2019.

Drosera intermedia (Oblong-leaved Sundew) Fleet Pond, Coldstream Marsh SU8249 5503, many plants, Tony Mundell 17 Jul 2019. Woolmer Pond SU7865 3167, many 100's of plants in bare 'scrapes' and at the edges of ephemeral pools near the southern end of Woolmer Pond, Steve Povey & Laura Gravestock 26 Jul 2019.

Drosera rotundifolia (Round-leaved Sundew) Yateley Country Park SU837598, in old pond area, Jean Cheadle 3 Jul 2019. Woolmer Forest SU793322, scattered on *Sphagnum* sp. in bog at southern end of Cranmer Pond, Steve Povey & Laura Gravestock 26 Jul 2019.

Elaeagnus x submacrophylla (E. macrophylla x pungens) Greatham SU7769 3060, voucher specimen collected. In hedgerow beside footpath behind a plant nursery, Tony Mundell & Anna Stewart 21 Oct 2019.

Eleocharis uniglumis (Slender Spike-rush) Anton Lakes, Shepherd Springs meadow SU3629 4672, a few plants growing amongst much *E. palustris*. Dissection under a microscope showed a flower in upper glumes, Tony Mundell & Phil Collier 22 Jul 2019.

Epilobium lanceolatum (Spear-leaved Willowherb) Kingsley, still surviving here. 12 plants counted on north side of track parallel to B3004 from SU78128 37911 to SU78122 37899. Another 6 on south side of the track at SU78119 37894, Tony Mundell & Cathy Wilson 30 Aug 2019.

Epilobium palustre (Marsh Willowherb) Wyndhams Pond SU8227 5959, locally plentiful near one corner of the pond and on the adjacent marsh, but threatened by the growth of *Hydrocotyle ranunculooides*, Tony Mundell 13 Jul 2019. Passfield Common SU8109 3387, in marshy area, Tony Mundell 16 Oct 2019.

Epilobium roseum (Pale Willowherb) Long Sutton SU7436 4721, in roadside ditch, only two plants. White flowers, some glands, lower leaves on pedicels, Tony Mundell & Phil Collier 13 Sep 2019.

Epipactis phyllanthus (Green-flowered Helleborine) Porton Down SU2476 3737, about six small plants scattered under beech, Pat Woodruffe 28 Jul 2019. Wayfarer's Walk, Alresford SU5866 3302, north-eastern side of footpath at junction with Ladywell Lane, one plant with three flowers, appears to be hanging on in dense shade, vulnerable to trampling or strimming, Tristan Norton 30 Jul

2019. Hollywater Road, Bordon, 3 at SU8058 3473, 51 at SU8056 3461, 10 at SU8056 3459, 6 at SU8056 3458, 1 at SU8056 3456, 1 at SU8056 3453, 8 at SU8055 3452, 1 at SU8055 3454, 1 at SU8083 3542, 2 at SU8083 3546, 1 at SU8078 3529, 1 at SU8055 3461, Nigel Johnson & Rosemary Webb 6 Aug 2019.

***Epipactis phyllanthes* var. *pendula* (Green-flowered Helleborine)** Great Pen Wood, A343 verge, 149 on east verge and 68 on west verge, between SU440619 and SU445625, all seem to be var. *pendula*, Simon & Sue Melville 12 Jul 2019. Bordon, Hollywater Road, walked from the northern end of the site at SU8069 3504 to the junction at SU8054 3423, counted 34 on west verge and 21 on east verge, they are mostly var. *phyllanthes* but about 6 are var. *pendula*, Simon & Sue Melville 31 Jul 2019.

***Epipactis phyllanthes* var. *phyllanthes* (Green-flowered Helleborine)** Hollywater Road, Bordon, most plants too gone over (or inaccessible) to determine the variety, but 20 of them determined by Rosie Webb, 8 at SU8056 3461, 1 at SU8083 3542, 1 at SU8078 3529, 1 at SU8055 3452, 1 at SU8056 3453, 1 at SU8056 3458 and 7 at SU8056 3459, Nigel Johnson & Rosemary Webb 6 Aug 2019.

***Epipactis phyllanthes* var. *vectensis* (Green-flowered Helleborine)** Great Pen Wood SU4520 6178, a single plant on east verge of minor road east of Pen Wood, this one seems to be var. *vectensis*, Simon & Sue Melville 27 Jul 2019. Hollywater Road, Bordon, most plants too gone over (or inaccessible) to determine the variety, but 5 of them determined by Rosie Webb, 1 at SU8056 3459 and 4 at SU8055 3452, Nigel Johnson & Rosemary Webb 6 Aug 2019.

***Epipactis purpurata* (Violet Helleborine)** The Shrave, Four Marks SU6793 3563, 3 clumps of stems - none flowering, Tristan Norton 24 Jul 2019. Great Pen Wood SU4525 6214, one just to the south of the car park and another just to the north, another patch with 11 spikes on the east verge at SU4527 6232, no flowers open yet, Simon & Sue Melville 27 Jul 2019. Cockshott Lane, Ashford, shown to us by Mrs Tidda Dobbs, 5 at SU7302 2666, 2 at SU7290 2662, 8 at SU7291 2661 and 3 at SU7292 2661, Nigel Johnson & Rosemary Webb 29 Jul 2019. Old Litten Lane, Ashford, shown to us by Mrs Tidda Dobbs, 1 at SU7374 2703 and 6 at SU7376 2705, Nigel Johnson & Rosemary Webb 29 Jul 2019. Ivyhouse Lane, Froxfield, shown to us by Julian Bond, 27 at SU7119 2713, 3 at SU7119 2714, 5 at SU7119 2715 and 7 at SU7119 2716, after a few weeks lorries have been along the lane and only 11 are left, Nigel Johnson & Rosemary Webb 29 Jul 2019. Gullet Lane, Soldridge SU6479 3457, six flower spikes, Tony Mundell, Dawn Nelson & Sophie Lancaster 7 Aug 2019. Alice Holt SU8005 4374, two spikes in bud on road verge close to the railway, Cathy Wilson 15 Aug 2019. The Warren SU728281, three plants, one with 5 stems & two singles, beside lane beneath beeches, Steve Povey 19 Aug 2019. Ellisfield, Merritt's Copse SU6509 4533, nine flower spikes in green fruit from a single base, beside footpath at wood edge, Tony Mundell & Phil Collier 23 Aug 2019.

***Equisetum sylvaticum* (Wood Horsetail)** SW of East Worldham SU7437, beside path between Bentley Station and Bentley Station Meadow, Cathy Wilson 10 Jul 2019.

***Equisetum telmateia* (Great Horsetail)** Ashford Chace SU741258, in plenty beside ponds and SU741260 in damp places beside path, Steve Povey 9 Jul 2019. SW of Blackmoor SU7640 3226, SU7685 3227, roadside, Tony Mundell & Steve Povey 12 Sep 2019.

***Erinus alpinus* (Fairy Foxglove)** Lasham SU6741 4271, still present where last recorded in 1999, 50 plants on roadside wall of manor farmhouse, Alison Cross & Amanda Ingham 2 Sep 2019.

***Eryngium campestre* (Field Eryngo)** Cholderton Estate, Reservoir Field SU2450 4372, one plant, planted on the reservoir, HFG 27 Jul 2019.

***Eschscholzia californica* (Californian Poppy)** Littleton SU453328, growing out of a wall, not seen in a garden, Anna Stewart 6 Aug 2019. Ashford Hill, Old Lane SU5554 6230, evidently sown on verge of lane, Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019.

***Euphorbia esula* (Leafy Spurge)** c.100 stems within track verge, woodland belt, E of Chilbolton Down Farm SU4140 3674, Tristan Norton 12 Jul 2019, photos confirmed by Tony Mundell.

***Euphorbia lathyris* (Caper Spurge)** North End SU4021 6225, in farmyard, Tony Mundell & Mary Parker 11 Jul 2019. Micheldever SU5139, a number of plants in allotments, Anna Stewart 27 Aug 2019. Kingsley SU7821 3794, beside minor road parallel to B3004, Tony Mundell & Cathy Wilson 30 Aug 2019. Brighton SU6176 3451, recently disturbed soil by roadside, Tony Mundell, Alison Cross & Amanda Ingham 4 Sep 2019. N of Sutton Scotney SU4685 4009, small plant, Anna Stewart 16 Oct 2019.

***Euphorbia oblongata* (Balkan Spurge)** North End SU4199 6251, large patch beside footpath on a farm rubbish heap of dumped soil, Tony Mundell & Mary Parker 11 Jul 2019.

***Euphorbia platyphyllos* (Broad-leaved Spurge)** Sherborne St John SU6326 5607, one plant on field margin, Alison Cross 23 Jul 2019.

***Euphorbia stricta* (Upright Spurge)** Blackmoor SU7799 3359, near War Memorial, Tony Mundell & Steve Povey 12 Sep 2019.

***Fagopyrum esculentum* (Buckwheat)** SE of North Waltham SU5745, Andrew Powling & Eric Clement. Newton Stacey SU4180 4040, arable field, Tony Mundell & Anna Stewart 8 Oct 2019. N of Sutton Scotney SU4693 4011, probably sown, Anna Stewart 16 Oct 2019.

***Fallopia baldschuanica* (Russian-vine)** Micheldever SU5139, covering one side of allotments, Anna Stewart 27 Aug 2019. E of Church Crookham SU8223 5255, beside track behind houses, Tony Mundell 2 Oct 2019. Newton Stacey SU4119 4087, in disused chalk pit, Tony Mundell & Anna Stewart 8 Oct 2019. S of Silchester SU6244 6100, roadside hedge, Tony Mundell & Dave Pearson 15 Oct 2019.

***Fallopia dumetorum* (Copse-bindweed)** Bacon Lane, c.7 plants along 12m of W side of lane verge, centred on SU84209 38717, plants 0.5 - 1m long, c.5 plants along 5m of E side of lane verge centred on SU84214 38671, plants 1-2m long, c. 6 plants along 10m of SE lane verge centred on SU84064 39599, 5 plants 2-3m long, 1 plant 0.5m long, Nik Aspey 16 Aug 2019.

***Ficus carica* (Fig)** Ellisfield SU6468 4529, roadside verge outside farm entrance, Tony Mundell & Phil Collier 23 Aug 2019.

***Filago minima* (Small Cudweed)** Ludshott Common, several plants SU8489 3595 to SU8498 3595, beside a track, Tony Mundell & Dawn Nelson 1 Aug 2019. Warren Heath, several plants beside sandy track SU7713 6018, SU7720 6016 & SU7750 6017, Tony Mundell & Isobel Girvan 6 Sep 2019. Bramshill SU7630 6103, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Filago vulgaris* (Common Cudweed)** Headley Down SU8418 3554, on road verge, Tony Mundell & Dawn Nelson 1 Aug 2019. Hogmoor Inclosure, many plants beside sandy track SU7869 3477 & SU7865 3509, Tony Mundell & Cathy Wilson 30 Aug 2019. Warren Heath SU7750 6017, several beside sandy track, Tony Mundell & Isobel Girvan 6 Sep 2019. Bramshott Common SU8552 3350, sparsely grassed area, Tony Mundell & Mary Parker 28 Oct 2019.

***Fragaria ananassa* (Garden Strawberry)** Ropley Dean SU6232, bird sown?, Andrew Powling & Eric Clement 19 Sep 2019.

***Fumaria densiflora* (Dense-flowered Fumitory)** NW of Bradley SU6218 4230, two plants in corner of arable field, Tony Mundell & Mary Parker 12 Jul 2019. Cholderton Estate, Romsey Road Field SU2455 4313, growing with *Fumaria reuteri*, HFG 27 Jul 2019.

***Fumaria officinalis* subsp. *wirtgenii* (Common Fumitory)** Hurstbourne Tarrant SU382529, edge of arable, Peter Billingham 20 Jul 2019. Charlton Cemetery area, corner of arable field at SU3494 4865, Peter Billingham 26 Aug 2019. Facombe Wood, along path/arable verge at SU386561, Peter Billingham 26 Aug 2019.

***Fumaria parviflora* (Fine-leaved Fumitory)** Cholderton Estate, Romsey Road Field, growing beside *Fumaria reuteri* at SU2455 4313 & SU2458 4312, HFG 27 Jul 2019.

***Fumaria reuteri* (Martin's Ramping-fumitory)** Cholderton Estate, Romsey Road Field SU2455 4313, scattered plants in this field,

but here growing beside *Fumaria parviflora*, *F. densiflora* and *F. officinalis*, and at SU2458 4312 growing with *F. parviflora*, HFG 27 Jul 2019.

***Galeopsis angustifolia* (Red Hemp-nettle)** Old Burghclere Lime Quarry SU471572, 150 plants, about 25% flowering, Graham Dennis 17 Jul 2019. Micheldever Spoil Heaps SU519444, five very small plants with 1 or 2 flowers, mostly 2cm tall, Graham Dennis 20 Jul 2019.

***Galinsoga quadriradiata* (Shaggy Soldier)** Fleet, Hollytrees Road SU8006 5281, several plants as a pavement weed, Tony Mundell 27 Sep 2019.

***Galium mollugo* subsp. *erectum* (Upright Hedge-bedstraw)** Cholderton Estate, Reservoir Field area SU2452 4379, on an ant-hill, far more delicate than *G. mollugo* subsp. *mollugo* (now *G. album*) and with very narrow leaves, could be mistaken for *G. pumilum*, HFG 27 Jul 2019.

***Gentianella amarella* (Autumn Gentian)** E of Longparish SU4486 4483, on top of disused railway embankment, Tony Mundell & Phil Collier 22 Jul 2019.

***Geranium columbinum* (Long-stalked Crane's-bill)** NW of Bradley SU6224 4220, single plant in middle of track, Tony Mundell & Mary Parker 12 Jul 2019. Roundwood Estate SU5092 4451, arable field edge, Phil Collier 1 Aug 2019. Forton, SU4133 4362 on area of wasteland, SU4145 4357 in a grassy field and SU4148 4346 on a grassy road verge, Simon Melville & Tony Mundell 11 Sep 2019. Clatford Oakcuts SU3334 3972, on footpath, Tony Mundell & Dave Pearson 26 Sep 2019.

***Geranium lucidum* (Shining Crane's-bill)** SE of Henley SU3316 5871, road verge, Tony Mundell & Peter Billingham 10 Sep 2019.

***Geranium pratense* (Meadow Crane's-bill)** Combe, Summer Hill area, track/road junction at SU368612, Peter Billingham 19 Aug 2019. Kentsboro SU3181 3919 & SU3190 3907 on road verge, Anna Stewart 12 Sep 2019.

***Geranium pusillum* (Small-flowered Crane's-bill)** Littleton, Holmes landscapers SU453321, hairy mericarp confirmed, Anna Stewart 6 Aug 2019. S of Eversley SU7775 6094, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Geranium rotundifolium* (Round-leaved Crane's-bill)** Norris Hill, Fleet SU8320 5342, locally plentiful on re-surfacing of imported granite gravel, Tony Mundell & Dawn Nelson 21 Aug 2019.

***Geum rivale* (Water Avens)** Itchen Stoke SU5467 3271, footpath beside River Itchen tributary, Tony Mundell & Dave Pearson 31 Jul 2019.

***Glebionis segetum* (Corn Marigold)** Hogmoor Inclosure SU7872 3526, single flowering plant on pure sand, Tony Mundell & Cathy Wilson 30 Aug 2019. Winchester, Water Lane SU4861 2958, Winchester County Council sown wildflower mix, Anna Stewart 28 Sep 2019. Hollywater Pond SU8085 3351, a curious find in flower close to the pond, presumably somebody sowed seed here, Tony Mundell 16 Oct 2019.

***Glyceria declinata* (Small Sweet-grass)** Chilbolton Common SU3917 4013, in ditch at SU3917 4013 and on edge of river at SU3892 4014, Tony Mundell 10 Aug 2019. Hogmoor Inclosure SU7867 3522, on pond edge, Tony Mundell & Cathy Wilson 30 Aug 2019. Heath Warren SU7619 6059, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Glyceria notata* (Plicate Sweet-grass)** Anton Lakes, Shepherd Springs meadow SU3621 4681, in drainage channel, Tony Mundell & Phil Collier 22 Jul 2019. Tichborne Springs SU5759 3175, several plants close to the stream, Tony Mundell & Dave Pearson 31 Jul 2019.

***Gnaphalium luteoalbum* (Jersey Cudweed)** Littleton, Holmes landscapers, previously a plant nursery SU453321, many hundreds of these plants, in various stages of maturity, Anna Stewart 6 Aug 2019.

***Hedera algeriensis* (Algerian Ivy)** Long Sutton SU7490 4706, between road verge and footpath, large shiny leaves, hairs checked with microscope, Tony Mundell & Phil Collier 13 Sep 2019.

***Hedera colchica* (Persian Ivy)** Headley Down SU8432 3580, on verge of Furze Hill Road, Tony Mundell & Dawn Nelson 1 Aug 2019.

***Helleborus foetidus* (Stinking Hellebore)** Ellisfield SU6436 4546, start of footpath near a house, Tony Mundell & Phil Collier 29 Jul 2019. Greatham SU7738 3029, churchyard of ruined disused church, Tony Mundell & Anna Stewart 21 Oct 2019.

***Herminium monorchis* (Musk Orchid)** Noar Hill SU7431, around 40-50 seen, Simon & Sue Melville 7 Jul 2019.

***Hieracium spilophaeum* (a Hawkweed)** Snoddington Road, Shipton Bellinger SU2466 4474, on roadside cutting, John Moon 31 Jul 2019, specimen det. Tony Mundell.

***Hordeum secalinum* (Meadow Barley)** Longstock Road, Stockbridge SU352352, a few spikes in verge outside cottages, Martin Rand & Ginnie Copsey 26 Aug 2019.

***Hottonia palustris* (Water-violet)** Blackwater Valley SU8873 5160, a large patch several metres across in bed of nearly dried-up pond, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Hydrocotyle ranunculoides* (Floating Pennywort)** Fleet SU8101 5363, a few plants in the Basingstoke Canal overflow at the start of the Brookly Stream. I heard that the Environment Agency had found it and were intending to remove it. As there are only a few plants that are not obvious I suspect that these are the survivors after the Environment Agency tried to eradicate it. I have passed the information on that it is still there as the Brookly Stream empties into Fleet Pond, Tony Mundell 2 Oct 2019.

***Hyoscyamus niger* (Henbane)** NW of Bradley SU6218 4230, two plants in corner of arable field, Tony Mundell & Mary Parker 12 Jul 2019. Matterley Estate SU548293, a few plants in field, Anna Stewart 12 Aug 2019. Kentsboro SU3092 3829, 20 plants at edge of field, Anna Stewart 12 Sep 2019.

***Hypericum elodes* (Marsh St John's-wort)** Fleet Pond, Fuglemere Marsh SU8236 5481, in dried-up pool, Tony Mundell 17 Jul 2019. Silchester SU6218 6190, boggy area on open wet heath, Tony Mundell & Dave Pearson 15 Oct 2019.

***Hypericum humifusum* (Trailing St John's-wort)** Heath Warren, six plants on south side of sandy track at SU76911 60236 and flowering patch of several plants on north side at SU7695 6023, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Hypericum maculatum* (Imperforate St John's-wort)** Steep SU7425, near pond, Steve Povey 9 Jul 2019. Ford Lane SU7178 4932, arable field corner, one plant amongst several *H. x desetangsii* with *H. perforatum* nearby, Tony Mundell 17 Aug 2019.

***Hypericum pulchrum* (Slender St John's-wort)** Round Bush Copse SU3961 4528 & SU3955 4521, beside paths, Tony Mundell & Phil Collier 22 Jul 2019. W of Bagmore SU6533 4403, ride in wood, Tony Mundell & Phil Collier 29 Jul 2019. Ludshott Common SU8506 3538, in dried stream bed, Tony Mundell & Dawn Nelson 1 Aug 2019. Ashford Hill NNR SU5655 6225, beside footpath, Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019. Bramshill SU7633 6102, by footpath, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Hypericum tetrapterum* (Square-stalked St John's-wort)** Passfield Common SU8107 3389, a few plants in very wet marshy area, Tony Mundell 16 Oct 2019.

***Hypericum x desetangsii* (*H. maculatum* x *perforatum*)** Ford Lane SU7178 4932, arable field corner, several plants with a single *H. maculatum* and *H. perforatum* nearby, Tony Mundell 17 Aug 2019. E of Church Crookham SU8205 5290, former sewage works, Tony Mundell 2 Oct 2019.

***Hypopitys monotropa* (Yellow Bird's-nest)** Porton Down SU250373, two seed heads in beech woodland, Pat Woodruffe 18 Aug 2019.

***Impatiens capensis* (Orange Balsam)** Itchen Stoke SU5461 3268, footpath beside River Itchen tributary, Tony Mundell & Dave Pearson 31 Jul 2019. Fleet Pond SU8184 5494, beside the landing

stage, Tony Mundell & Dawn Nelson 21 Aug 2019. River Blackwater SU8414 6083 & SU8362 6095 on Hampshire side, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Inula helenium* (Elecampane)** Ellisfield SU6309 4523, two metres tall, flowers now over, on wasteland outside allotments between a manure heap and a bonfire site, Tony Mundell & Phil Collier 23 Aug 2019.

***Isolepis setacea* (Bristle Club-rush)** Norris Hill, Fleet SU8324 5337 & SU8325 5335, dozens on sandy track, Tony Mundell & Dawn Nelson 21 Aug 2019. Heath Warren SU7691 6023, one plant on south side of sandy track, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Jasminum nudiflorum* (Winter Jasmine)** Itchen Abbas SU5345 3298, on roadside, Dave Pearson 23 Jul 2019.

***Juncus subnodulosus* (Blunt-flowered Rush)** North End SU4117 6255, edge of lake, Tony Mundell & Mary Parker 11 Jul 2019.

***Kickxia elatine* (Sharp-leaved Fluellen)** NW of South Wonston SU457370, abandoned arable field by track to Sutton Down Farm, Anna Stewart 22 Jul 2019. Porton Down SU255363, just inside fence, several plants, Pat Woodruffe & Ailsa McKee 28 Jul 2019. Cole Henley, W of A34, track/arable verge at SU453502, Peter Billingham 13 Aug 2019. N of Hurstbourne Tarrant SU3855, field edge west of path, Peter Billingham 26 Aug 2019. Crawley SU4320 3474, carpet of plants in field corner, c. 3 square metres patch, Tristan Norton 17 Sep 2019.

***Kickxia spuria* (Round-leaved Fluellen)** South Wonston SU47463 35561, Anna Stewart 2 Jul 2019. NW of South Wonston SU457370, Anna Stewart 22 Jul 2019. Cole Henley, W of A34, track/arable verge at SU454501, Peter Billingham 13 Aug 2019. Facombe Wood, along path/arable verge at SU386560, Peter Billingham 26 Aug 2019. W of Over Wallop SU2678 3873, one plant, Anna Stewart 7 Sep 2019.

***Koeleria macrantha* (Crested Hair-grass)** Cholderton Estate, Reservoir field SU246438, on an ant-hill, HFG 27 Jul 2019. Chilbolton Common SU3869 3935, on an ant-hill, Tony Mundell 10 Aug 2019.

***Lactuca virosa* (Great Lettuce)** Chilbolton Common SU3859 3900, beside mown track, Tony Mundell 10 Aug 2019.

***Lamium amplexicaule* (Henbit Dead-nettle)** NW of South Wonston SU457370, abandoned arable field by track to Sutton Down Farm, Anna Stewart 22 Jul 2019. Roundwood Estate SU507443, arable field edge, Phil Collier 1 Aug 2019.

***Lamium hybridum* (Cut-leaved Dead-nettle)** NW of Bradley SU6263 4284, in arable field corner, Tony Mundell & Mary Parker 12 Jul 2019.

***Laurus nobilis* (Bay)** Greatham SU7725 3059, on road verge, main stem badly damaged by deer rubbing off bark with their antlers, Tony Mundell & Anna Stewart 21 Oct 2019.

***Legousia hybrida* (Venus's-looking-glass)** Roundwood Estate SU507443, arable field edge, Phil Collier 1 Aug 2019. Kentsboro SU3188 3977, 10 + plants re-flowering, arable field recently ploughed, Anna Stewart 12 Sep 2019.

***Legousia speculum-veneris* (Large Venus's-looking-glass)** Malshanger Estate, along field margin from SU5710 5365 via corner at SU5738 5393 to SU5760 5379. More sparse in latter, but c.1,500 plants in all, and very dense in the field corner, Alison Cross 10 Jul 2019.

***Leycesteria formosa* (Himalayan Honeysuckle)** Empshott Green SU7449 3101, roadside, Tony Mundell, Cathy Wilson & Dawn Nelson 19 Aug 2019.

***Lithospermum arvense* (Field Gromwell)** Cholderton Estate, private garden SU2389 4236, from seed introduced into pure gravel in a garden, HFG 27 Jul 2019.

***Lithospermum officinale* (Common Gromwell)** Forton SU4162 4336, on grassy road verge at junction, Simon Melville & Tony Mundell 11 Sep 2019. Kings Worthy SU4803 3455, path on disused railway, Anna Stewart 6 Oct 2019.

***Littorella uniflora* (Shoreweed)** Fleet Pond, Gelvert Marsh SU8245 5499, many plants under young *Phragmites australis*, Tony Mundell 10 Sep 2019.

***Lolium multiflorum* (Italian Rye-grass)** West Meon Hut (VC12 part) SU6526, casual, on gravel heap, Andrew Powling & Eric Clement 12 Sep 2019. NE of Stratfield Saye SU7138 6284, voucher specimen collected, on grassy road verge adjacent to an arable field, growing not far from *Lolium x boucheanum* on same verge. 90cm tall tufted plant, awns 6-7mm, c.8 florets per spikelet, rachis scabrid on edges as well as on all surfaces, Tony Mundell 30 Oct 2019.

***Lolium x boucheanum* (L. perenne x multiflorum)** NE of Stratfield Saye SU7123 6284, voucher specimen collected, grassy roadside verge bordering arable field, with *L. multiflorum* nearby. 47cm tall tufted plant, short 3-4mm awns, only 5-6 flowers per spikelet, rachis scabrid on edges only, no young leaves to check leaf folding, Tony Mundell 30 Oct 2019.

***Lotus corniculatus* var. *sativus* (Alien Bird's-foot-trefoil)** Charlton Cemetery area, corner of arable field at SU3494 4865, Peter Billingham 26 Aug 2019.

***Lycium chinense* (Chinese Teaplant)** E of Church Crookham SU8220 5260, beside track behind houses. No thorns, leaves widest below middle, Tony Mundell 2 Oct 2019.

***Lysichiton americanus* (American Skunk-cabbage)** Darby Green pond SU8351 6033, several plants, Tony Mundell & Dawn Nelson 15 Jul 2019. Chilbolton Common SU3874 3956, many plants on riverside, Tony Mundell 10 Aug 2019. S of Eversley SU7784 6095, two plants in ditch behind the church, close to a large private pond, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Malva alcea* (Greater Musk-mallow)** Whitchurch, N of Harroway, track/arable verge at SU4536 5028, Peter Billingham 13 Aug 2019, confirming earlier find by Pete Flood on 2 Aug 2019 (see main photo on front cover).



Greater Musk-mallow *Malva alcea*, showing the epicalyx segments, Whitchurch, 13 August 2019 (Peter Billingham)

***Malva neglecta* (Dwarf Mallow)** E of Bighton SU6201 3477, single flowering plant on road verge, Tony Mundell, Alison Cross & Amanda Ingham 4 Sep 2019.

***Medicago polymorpha* (Toothed Medick)** SE of East Worldham SU7537, several plants on bank in Inhams Rd, near junction with Lower Neatham Mill Lane, Cathy Wilson 23 Jul 2019.

***Mentha x smithiana* (Tall Mint (*M. aquatica* x *arvensis* x *spicata*))** Empshott Green SU7483 3103, a huge flowering colony on roadside verge extending 18m x 6m. Curiously *M. x gracilis* was recorded from this same spot in 1980, but I am certain our plant is *M. x smithiana*. Voucher collected. Calyx (including teeth) measures 4.0 to 4.5mm and is tubular (not campanulate) with tube twice as long as wide. Stamens well exerted, inflorescence, and especially stem, suffused reddish-purple. Upper bracts cuspidate at tip, Tony Mundell, Cathy Wilson & Dawn Nelson 19 Aug 2019.

***Mentha x verticillata* (Whorled Mint (*M. aquatica* x *arvensis*))** Quetta Park SANG SU8144 5067, large flowering patch in damp

area beside new board-walk. Voucher specimen collected, Tony Mundell & Dawn Nelson 21 Aug 2019. Faccombe Wood SU388569, Peter Billingham 26 Aug 2019.

***Menyanthes trifoliata* (Bogbean)** Yateley Common SU8211 5962, in small pond north of Wyndhams Pond, Tony Mundell 13 Jul 2019. Swelling Hill Pond SU6626 3289, several places on pond margin, Tony Mundell & Cathy Wilson 18 Jul 2019. Tichborne Springs SU5761 3173, in patch of shorter vegetation, Tony Mundell & Dave Pearson 31 Jul 2019. Lodge Pond SU8113 4283, beside pond in deep shade, Tony Mundell & Cathy Wilson 12 Aug 2019.

***Mercurialis annua* (Annual Mercury)** Charlton Cemetery area, corner of arable field at SU3494 4865, Peter Billingham 26 Aug 2019. W of Gander Down SU5463 2739, many plants along edge of arable field, Tony Mundell & Dawn Nelson 25 Sep 2019.

***Myosotis arvensis* var. *sylvestris* (Field Forget-me-not)** Ellisfield SU6445, flowers 5mm across, Tony Mundell & Phil Collier 29 Jul 2019.

***Myosotis laxa* subsp. *caespitosa* (Tufted Forget-me-not)** Waggoners Wells SU8624 3453, on county border in a stream, Tony Mundell & Dawn Nelson 1 Aug 2019. Alice Holt SU7983 4288, one or two surviving plants on muddy edge of pond, Tony Mundell & Cathy Wilson 12 Aug 2019.

***Myosoton aquaticum* (Water Chickweed)** Blackwater Valley SU8859 5294, flowering patch beside the now fenced-off pond, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Myriophyllum spicatum* (Spiked Water-milfoil)** SE of East Worldham SU7534 3770, in pond beside footpath, Cathy Wilson 23 Jul 2019.

***Narthecium ossifragum* (Bog Asphodel)** Basingbourne Park SU808525, 170 spikes counted, Dave Harrison 22 Jul 2019.

***Neotinea ustulata* (Burnt Orchid)** Ladle Hill SU478567, var. *aestivalis*, total count of 118, though on 30 June we did a rough count at 130. Most are very small this year, some no more than 2cm tall, and may have dried up during the intervening fortnight, Simon & Sue Melville 14 Jul 2019.

***Neottia nidus-avis* (Bird's-nest Orchid)** Porton Down SU252373, two seed heads, Pat Woodruffe 18 Aug 2019.

***Nymphoides peltata* (Fringed Water-lily)** Swelling Hill Pond SU6626 3291, abundant across pond, Tony Mundell & Cathy Wilson 18 Jul 2019.

***Oenothera cambrica* (Small-flowered Evening-primrose)** Littleton, Holmes landscapers SU453321, a private site formerly a plant nursery, Anna Stewart 21 Aug 2019, specimen det. John Poland.

***Oenothera perangusta* (an Evening-primrose)** Hogmoor Inclosure SU7861 3559, keys to *O. perangusta* var. *rubricalyx* in BSBI *Oenothera* Handbook. Voucher specimen collected. Many plants (and many other *Oenothera* taxa in same area), petals only 15mm long by 12mm wide, hypanthium 30-32mm (so too long for *O. rubricalyx* though stems are bright red) with septate hairs and glandular hairs near hypanthium base. Sepals red-striped, stipe bright red with long red-based curved hairs and short septate hairs. Immature ovary (when still in flower) covered in glandular hairs. Long curved hairs and short septate hairs on capsules. Styles slightly shorter than stamens, Tony Mundell & Cathy Wilson 30 Aug 2019.

***Ononis spinosa* (Spiny Restharrow)** Chilbolton Common, in many places, e.g. SU3907 4005, SU3912 4013, SU3892 3999, Tony Mundell 10 Aug 2019.

***Onopordum acanthium* (Cotton Thistle)** W of Over Wallop SU2670 3859, a number of plant rosettes on field boundary and adjacent to spoil heap, Anna Stewart 7 Sep 2019.

***Orobanche elatior* (Knapweed Broomrape)** B3420 verge, Newton Stacey SU430385, 5+ spikes visible within tall neutral grassland along verge, Tristan Norton 11 Jul 2019. Stockbridge Down SU3753 3488, several old plants inside enclosure with *Centaurea scabiosa*, Malcolm & Christine Storey 7 Aug 2019. Whitchurch, N of Harroway, track/arable verge at SU4540 5013, Peter Billingham 13 Aug 2019.

***Orobanche hederæ* f. *monochroa* (Ivy Broomrape)** Winchester, Alresford road SU4899 2946, yellow form, Anna Stewart 10 Jul 2019. Alresford SU5883 3250, four spikes on west side of entry into the Station Road car park for the Watercress Line, Richard & Sue Bullock 25 Aug 2019.

***Orobanche minor* (Common Broomrape)** Track to Sutton Down Farm SU458369, no obvious host, Anna Stewart 22 Jul 2019. E of Nether Wallop SU3121 3622, a number of small plants, no obvious host, Anna Stewart 5 Sep 2019. Forton, on area of wasteland SU4132 4364 and on grassy road verge SU4148 4346, Simon Melville & Tony Mundell 11 Sep 2019.

***Panicum capillare* (Witch-grass)** Littleton, Holmes landscapers, previously a plant nursery SU453321, Anna Stewart 6 Aug 2019, photo (confirmed by Tony Mundell), sample, distinctive, much branched panicle with terminal spikelets, hairs on underside of leaves. Attractive ornamental grass.

***Papaver argemone* (Prickly Poppy)** Roundwood Farm, nr Micheldever Station SU512446, arable field edge, Phil Collier 1 Aug 2019. Newton Stacey SU423408, several plants noted at SW edge of arable margin, Tristan Norton 19 Sep 2019. Chilbolton Down Farm SU4191 3609, one large plant, Tristan Norton 20 Sep 2019.

***Papaver dubium* (Long-headed Poppy)** South Wonston SU47862 35471, Anna Stewart 2 Jul 2019. Brown Candover SU5789 3932, on road verge, whitish latex, Tony Mundell & Cathy Wilson 18 Jul 2019. Roundwood Estate SU507443, arable field edge, Phil Collier 1 Aug 2019. Newton Stacey SU4236 092, one plant, SW corner of field, Tristan Norton 19 Sep 2019. Chilbolton Down Farm SU418363, two large plants, Tristan Norton 20 Sep 2019.

***Papaver hybridum* (Rough Poppy)** South Wonston SU4762 565, Anna Stewart 2 Jul 2019. Roundwood Estate SU512446, arable field edge, Phil Collier 1 Aug 2019. Test Valley Golf Course SU5186 4502, single plant in barish ground, Malcolm & Christine Storey 7 Aug 2019. Kentsboro SU3170 3947, 20+ plants at edge of arable field, Anna Stewart 12 Sep 2019. Chilbolton Down Farm SU421366, single plant within northern weedy margin, Tristan Norton 20 Sep 2019.

***Papaver lecoqii* (Yellow-juiced Poppy)** SE of East Worldham SU7537, on bank in Inhams Rd, close to junction with Lower Neatham Mill Lane, several plants, Cathy Wilson 23 Jul 2019.

***Parthenocissus inserta* (False Virginia-creeper)** E of Church Crookham SU8203 5288, covering part of boundary fence of former sewage works, Tony Mundell 2 Oct 2019.

***Persicaria amplexicaulis* (Red Bistort)** Yateley, Vigo Lane SU8174 5904, still persisting here, spread along 4m length of grassy road verge on south side, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Persicaria minor* (Small Water-pepper)** Heath Warren, eight flowering plants amongst many *P. hydropiper*, beside a puddle on a sandy track, SU7624 6049, single flowering plants beside puddles at SU7623 6052 & SU7637 6044, Tony Mundell & Isobel Girvan 6 Sep 2019.

***Persicaria wallichii* (Himalayan Knotweed)** Stodham, large colony beside B2070, London Road, just east of Puetts Lane for 15+ m at SU779257, also a clump beside the B2070 just east of Stodham Lane at SU775255, Steve Povey 5 Aug 2019.

***Petroselinum segetum* (Corn Parsley)** S of Long Sutton, scattered plants along 20m of arable field edge, SU7439 4639 to SU7441 4630, Tony Mundell & Phil Collier 13 Sep 2019.

***Phalaris aquatica* (Bulbous Canary-grass)** Crondall SU7855 4733, plants 120cm tall from a sowing, together with a robust tall form of *Cynosurus cristatus*, in a strip along arable field edge bordering Lee Wood, near the footpath, Tony Mundell 30 Oct 2019.

***Phalaris canariensis* (Canary-grass)** W of Over Wallop SU2677 3874, a few clumps, on field boundary, Anna Stewart 7 Sep 2019.

***Physocarpus opulifolius* (Ninebark)** Bramshott Common SU8569 3347, specimen retained, an arching shrub c. 2m high x 2m wide, beside footpath, presumably originally planted, Tony Mundell & Mary Parker 28 Oct 2019.

***Pilosella aurantiaca* (Fox-and-cubs)** West Worldham SU742368, roadside, Cathy Wilson 7 Jul 2019. North End SU4133 6213, on verge of lane at a corner, Tony Mundell & Mary Parker 11 Jul 2019. Ellisfield SU6446 4578, road verge outside a house, Tony Mundell & Phil Collier 29 Jul 2019.

***Pilularia globulifera* (Pillwort)** Woolmer Pond SU790321, many plants along pond margins, Steve Povey & Laura Gravestock 26 Jul 2019. Fleet Pond, Gelvert Marsh SU8240 5507, several patches amongst much *Eleogiton fluitans*, Tony Mundell 10 Sep 2019.

***Pinus contorta* (Lodgepole Pine)** Kingsley SU7824 3793, beside B3004 on sandy roadside bank. Two trees, one fallen and prostrate but still alive. New housing development soon to start here so there may not survive, Tony Mundell & Cathy Wilson 30 Aug 2019.

***Pinus radiata* (Monterey Pine)** Moundsmere, beside track SU6277 4344 & SU6288 4345, Tony Mundell & Mary Parker 12 Jul 2019. Preston Oak Hills, beside track SU6309 4346, Tony Mundell & Mary Parker 12 Jul 2019.

***Poa angustifolia* (Narrow-leaved Meadow-grass)** Littleton, New Road SU4553 3256, three plants in area, two under a Cherry, one under road sign, Anna Stewart 1 Jul 2019.

***Poa compressa* (Flattened Meadow-grass)** SW of Micheldever SU5124 3651, small clump under Hornbeam, Anna Stewart 23 Jul 2019.

***Poa humilis* (Spreading Meadow-grass)** Yateley, by track at SU81284 61079, north of road, Tony Mundell & Dawn Nelson 15 Jul 2019. Blackmoor SU7793 3359, roadside, Tony Mundell & Steve Povey 12 Sep 2019.

***Polemonium caeruleum* (Jacob's-ladder)** Easton SU506325, obviously a garden escape but at least 200m from nearest property, Dave Pearson 4 Sep 2019, photos confirmed by Tony Mundell.

***Polygonum rurivagum* (Cornfield Knotgrass)** Roundwood Estate SU5095 4452, arable field edge, Phil Collier 1 Aug 2019.

***Polygonum* sp. (a Knotgrass)** Ellisfield SU6498 4536, edge of arable field. Voucher specimen collected. Keys to *P. agrestinum* in Sell & Murrell (not on MapMate taxa list but quite common) but that taxa is included within *P. rurivagum* in Stace and in the BSBI Docks and Knotweeds Handbook. Sell & Murrell define *P. rurivagum* in a stricter sense, requiring longer (2mm) leaves than the plant found, and longer silvery ochrae, Tony Mundell & Phil Collier 23 Aug 2019.

***Polypogon monspeliensis* (Annual Beard-grass)** Petersfield SU744240, single plant on recently disturbed ground beside lane, Steve Povey 10 Jul 2019. Littleton, Holmes landscapers, previously a plant nursery SU453321, hundreds of plants, long pointed ligule serrated at tip, each glume with an awn, Anna Stewart 6 Aug 2019. Hogmoor Inclosure SU7867 3522, in open sandy area by children's play park, Tony Mundell & Cathy Wilson 30 Aug 2019.

***Polypogon viridis* (Water Bent)** Norris Hill, Fleet SU8320 5342, plentiful on imported granite gravel, Tony Mundell & Dawn Nelson 21 Aug 2019. Pyestock, The Fairway SU8365 5395, many plants as pavement weed, Tony Mundell 20 Oct 2019. Rye Common SU7731 5030, opposite side of road to houses, Tony Mundell & Mary Parker 25 Oct 2019.

***Polystichum aculeatum* (Hard Shield-fern)** North End, six plants beside an old path at SU4138 6214 and at least three plants at SU4059 6163 with many *P. setiferum* nearby, Tony Mundell & Mary Parker 11 Jul 2019. Ellisfield, verge of sunken lane SU6405 4584 and beside footpath SU6458 4520, Tony Mundell & Phil Collier 29 Jul 2019. Empshott Green SU7442 3103, roadside of a sunken lane, Tony Mundell, Cathy Wilson & Dawn Nelson 19 Aug 2019. Rushmore Down area, beside track north of Rushmore Farm at SU348543. Peter Billingham 20 Oct 2019. Greatham SU7719 3066, on roadside bank/ditch, Tony Mundell & Anna Stewart 21 Oct 2019.

***Polystichum setiferum* (Soft Shield-fern)** North End, many on roadsides or ditches at SU4063 6168, SU4116 6261, SU4120 6258, SU4124 6198 & SU4125 6200, Tony Mundell & Mary Parker 11 Jul 2019. Ellisfield SU6405 4584, verge of sunken lane, Tony Mundell & Phil Collier 29 Jul 2019. Empshott SU7440 3103 & SU7508 3104,

sunken lanes, Tony Mundell, Cathy Wilson & Dawn Nelson 19 Aug 2019. Dukes Park, North Camp SU8813 5288, stream bank, Tony Mundell & Dawn Nelson 28 Aug 2019. Rushmore Down area, beside track north of Rushmore Farm at SU344541, Peter Billingham 20 Oct 2019. Greatham SU7749 3026, roadside ditch, Tony Mundell & Anna Stewart 21 Oct 2019.

***Polystichum x bicknellii* (*P. aculeatum* x *setiferum*)** Ellisfield SU6408 4583, verge of sunken lane, both parents nearby, Tony Mundell & Phil Collier 29 Jul 2019.

***Potamogeton crispus* (Curled Pondweed)** North End SU4117 6255, edge of lake, Tony Mundell & Mary Parker 11 Jul 2019.

***Potamogeton obtusifolius* (Blunt-leaved Pondweed)** Yateley, at least a dozen large healthy plants in pond between SU8239 6044 and SU8237 6040, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Potamogeton pectinatus* (Fennel Pondweed)** River Blackwater SU8373 6094 & SU8413 6084, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Potentilla recta* (Sulphur Cinquefoil)** Kingsley SU7828 3796, beside B3004, Tony Mundell & Cathy Wilson 30 Aug 2019.

***Prunus padus* (Bird Cherry)** Ludshott Common SU8433 3543, one tree at track junction 1 Aug 2019. Kings Worthy SU4906 3460, dark bark, strong smell, Anna Stewart 5 Oct 2019.

***Prunus serotina* (Rum Cherry)** Alice Holt Forest SU8134 4420, by minor track in woods, Tony Mundell & Cathy Wilson 12 Aug 2019. River Blackwater SU8384 6095, a mature tree and several young ones beside footpath by river, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Pterocarya fraxinifolia* (Caucasian Wingnut)** Ellisfield SU6394 4591, suckers from a huge tree in a garden have penetrated beneath the garden wall and come up in the road verge, Tony Mundell & Phil Collier 29 Jul 2019.

***Puccinellia distans* (Reflexed Saltmarsh-grass)** Dunley SU4584 5305, pavement weed on bridge over A34, Tony Mundell & Phil Collier 23 Sep 2019.

***Pyrola minor* (Common Wintergreen)** Bramshott Common, a large colony under Birch/Sallow trees on east side of track, extending between SU85805 32947, SU85808 32964, SU85808 32942 and SU85815 32941, Tony Mundell & Mary Parker 28 Oct 2019.

***Quercus petraea* (Sessile Oak)** North End SU4168 6232, a large tree on a field boundary beside footpath, Tony Mundell & Mary Parker 11 Jul 2019. Ludshott Common SU8428 3545, beside track, possibly *Q. x rosacea* but seems close enough in the spectrum to be called *Q. petraea*, Tony Mundell & Dawn Nelson 1 Aug 2019. Ashford Hill, Redlands Copse SU5664 6213, several mature trees in this area are either *Q. petraea* or *Q. x rosacea*, only a few examples were carefully identified, Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019. Crondall, Lee Wood SU7872 4748, a seedling close to a large parent tree, Tony Mundell 30 Oct 2019.

***Quercus x rosacea* (*Q. petraea* x *robur*)** Ludshott Common SU8500 3593 & SU8491 3536, long 20mm petioles, stellate and simple hairs on leaf underside, with an occasional intercalary vein on a few leaves, some leaf bases with auricles, others more cuneate, Tony Mundell & Dawn Nelson 1 Aug 2019. Ashford Hill, Redlands Copse SU5664 6208, SU5666 6210 & SU5666 6214, Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019.

***Ranunculus aquatilis* (Common Water-crowfoot)** River Hart, nr Hazeley Heath, one patch in river at SU76598 58154, but most of river now too shaded for it, Tony Mundell & Dawn Nelson 15 Jul 2019.

***Ranunculus lingua* (Greater Spearwort)** Avington Lake SU5284 3216, at edge of lake, Dave Pearson 1 Jul 2019. Fleet Pond SU8183 5493, at pond edge by observation platform, Tony Mundell 17 Jul 2019. Swelling Hill Pond SU6626 3291, scattered on pond edges, Tony Mundell & Cathy Wilson 18 Jul 2019.

***Ranunculus peltatus* (Pond Water-crowfoot)** Oakhanger Pond SU771346, abundant in mud of dried-up pond that has recently been

cleared of dense shading *Salix* by the army. Some plants flowering allowing identification, Tony Mundell & Steve Povey 8 Sep 2019.

***Ranunculus sceleratus* (Celery-leaved Buttercup)** Darby Green Pond SU8351 6036, six plants on mud, Tony Mundell & Dawn Nelson 15 Jul 2019. Yateley Green Pond, on pond edge SU8110 6095 and SU8107 6099, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Raphanus sativus* (Garden Radish)** Blackmoor SU7710 3359, arable sown strip, Tony Mundell & Steve Povey 12 Sep 2019. NW of Selborne SU7334, sown to provide bird food, Andrew Powling & Eric Clement 10 Oct 2019.

***Rhododendron luteum* (Yellow Azalea)** Ludshott Common SU8472 3536, beside a dried up stream in a gully, Tony Mundell & Dawn Nelson 1 Aug 2019.

***Rhynchospora alba* (White Beak-sedge)** Woolmer Forest SU7924 3231, small colony in bog at SW corner of Cranmer Pond growing among Cranberry, Steve Povey & Laura Gravestock 26 Jun 2019.

***Ribes rubrum* (Red Currant – scarce form)** River Blackwater SU8412 6088, the scarce form with whitish berries beside the riverside footpath, photos taken of the berries, Tony Mundell & Dawn Nelson 28 Aug 2019.



Red Currant *Ribes rubrum*, white-fruited form, River Blackwater, 28 August 2019 (Tony Mundell)

***Rorippa amphibia* (Great Yellow-cress)** N of Hartley Wintney SU7691 5813, in the River Hart beside footpath, Tony Mundell & Dawn Nelson 15 Jul 2019. River Blackwater SU8413 6084, many plants on edge of river, Tony Mundell & Dawn Nelson 28 Aug 2019.

***Rorippa sylvestris* (Creeping Yellow-cress)** Oakhanger Pond SU771346, frequent around margins of pond, Steve Povey 4 Sep 2019.

***Rosa arvensis* x *canina* (*Rosa* x *irregularis* (f x m))** Noar Hill, at SU74084 31886, two bushes on either side of path, *Rosa arvensis* female x *Rosa canina* group Dumales, Tony Mundell, Steve Povey & Gareth Knass 13 Aug 2019.

***Rosa micrantha* (Small-flowered Sweet-briar)** Cholderton Estate, Reservoir Field area, single bushes at SU2452 4382 & SU2459 4386, HFG 27 Jul 2019. Chilbolton Common, bushes at SU3849 3899 & SU3853 3904, Tony Mundell 10 Aug 2019. Frith End SU8155 3966, Abbots Wood Inclosure, southern end, Gareth Knass 14 Sep

2019. W of Lower Bullington SU4443 4114, roadside, Tony Mundell 3 Oct 2019. Hurstbourne Priors SU4319 4698 & SU4316 4695, the latter possibly the hybrid with *R. canina*, Tony Mundell & Tony Davis 9 Oct 2019.

***Rosa micrantha* x *canina* (*Rosa* x *toddiae* (f x m))** Noar Hill SU73984 31940 & SU73998 31927, Tony Mundell, Steve Povey & Gareth Knass 13 Aug 2019.

***Rosa rubiginosa* (Sweetbriar)** North End SU4027 6221, in hedge, Tony Mundell & Mary Parker 11 Jul 2019. Cholderton Estate, Reservoir Field area, single bushes at SU2453 4382 & SU2458 4384, HFG 27 Jul 2019. A31, W of Tichborne SU5438 2955, on SE side of A31, Tony Mundell & Dave Pearson 31 Jul 2019.

***Rosa rugosa* (Japanese Rose)** Kentsboro SU308398, housing estate, Anna Stewart 12 Sep 2019.

***Rosa spinosissima* (Burnet Rose)** Micheldever SU5139, in allotments, freely spreading, Anna Stewart 27 Aug 2019. Nether Wallop SU3022 3655, presumably planted, Anna Stewart 5 Sep 2019. E of Henley SU3352 5923, voucher specimen collected, clearly originally planted at junction of track and road, with houses nearby, Tony Mundell & Peter Billingham 10 Sep 2019.

***Rosa stylosa* (Short-styled Field-rose)** Noar Hill SU73898 31913, beside main path near Quarry Pit, Tony Mundell, Steve Povey & Gareth Knass 13 Aug 2019. SW of Lower Bullington SU4467 4079, by woodland path, Tony Mundell 3 Oct 2019.

***Rosa stylosa* x *canina* (*Rosa* x *andegavensis* (f x m))** Noar Hill SU7395 3192, near Quarry Pit, Tony Mundell, Steve Povey & Gareth Knass 13 Aug 2019.

***Rosa tomentosa* x *canina* (*Rosa* x *scabriuscula* (f x m))** SW of Oakley SU56513 48353. Glandular bi-serrate on leaf margins, glandular & downy on leaflet undersides and on petiole & rachis. Glands are resin scented. Pedicels are glandular with downy rose type glands. The pedicels are consistently too short for *R. tomentosa*, and the hips are unusually shaped for that species. The prickles are mostly arcuate, but some are more hooked. The bush is arching and the stylar orifice is narrow, Gareth Knass 10 Oct 2019.

***Rosa* x *andegavensis* (*Rosa stylosa* x *canina* (fxm or mxf))** Noar Hill SU73897 31937, now under a *Salix caprea*, on top of steep bank of Quarry Pit, Tony Mundell, Steve Povey & Gareth Knass 13 Aug 2019. Newton Stacey SU4160 4069, beside footpath, Tony Mundell & Anna Stewart 8 Oct 2019.

***Rosa* x *dumalis* (*Rosa caesia* x *canina*)** Frith End SU8155 3966, Abbots Wood Inclosure, southern end, Gareth Knass 14 Sep 2019.

***Rosa* x *irregularis* (*Rosa arvensis* x *canina* (fxm or mxf))** Noar Hill SU73881 31952, SU7402 3215 & SU74087 31881, Tony Mundell, Steve Povey & Gareth Knass 13 Aug 2019. SE of Long Sutton SU7504 4638, in hedgerow by footpath, photos taken, Tony Mundell & Phil Collier 13 Sep 2019. Greatham SU7685 3095, on roadside opposite a house. Climbing up many metres, Tony Mundell & Anna Stewart 21 Oct 2019.

***Rosa* x *nitidula* (*Rosa canina* x *rubiginosa* (fxm or mxf))** NW of Micheldever Station SU4910 4577, three separate bushes in roadside hedge, Tony Mundell 15 Sep 2019.

***Rosa* x *toddiae* (*Rosa canina* x *micrantha* (f x m or m x f))** Ibthorpe SU3791 5386, Peter Billingham 25 Aug 2019 - original record of 4/9/2010 was determined by R. Maskew. Hurstbourne Priors SU4315 4694, voucher specimen kept. Beside footpath a wood edge with *R. micrantha* nearby. This plant has remarkably large diameter stems climbing over 4m up, Tony Mundell & Tony Davis 9 Oct 2019.

***Ruscus aculeatus* (Butcher's-broom)** Lodge Pond SU8124 4305, beside pond, Tony Mundell & Cathy Wilson 12 Aug 2019. Greatham, roadside bank at SU7753 3021, and SU7758 3016 at start of footpath, Tony Mundell & Anna Stewart 21 Oct 2019. E of Odiham SU7675 5034, roadside, six large bushes, Tony Mundell & Mary Parker 25 Oct 2019.

***Sagina nodosa* (Knotted Pearlwort)** Porton Down SU247374, a few plants in flower in middle of track, Pat Woodruffe 18 Aug 2019.

Sagittaria sagittifolia (Arrowhead) River Blackwater SU8409 6091, a few plants confined to where light can reach the river - most is badly shaded, Tony Mundell & Dawn Nelson 28 Aug 2019.

Sagittaria subulata (Narrow-leaved Arrowhead) Shortheath Pond, still hanging on in the pond margin amongst *Carex rostrata* at SU7759 3686 to SU7758 3685, but not flowering. There is now doubt about the correct name for this plant. I have taken a specimen and some plants for Richard Lansdown to grow on for identification, Fred Rumsey 8 Sep 2019.

Salix purpurea (Purple Willow) Longparish SU4466 4493, large patch in marsh between River Test and footpath, Tony Mundell & Phil Collier 22 Jul 2019. Fleet Pond SU8203 5530, in corner of pond with boat landing stage, Tony Mundell 10 Sep 2019. Lower Bullington, roadsides near River Dever, SU4492 4121 & SU4525 4133, Tony Mundell 3 Oct 2019.

Salix triandra (Almond Willow) River Wey, Anstey SU7330 4050, one large tree showing the characteristic peeling bark, beside footpath close to River Wey, Cathy Wilson 15 Aug 2019.

Salix x reichardtii (S. caprea x cinerea) Forton SU4135 4364, on area of wasteland, Simon Melville & Tony Mundell 11 Sep 2019. NE of Stratfield Saye SU7147 6282, roadside, Tony Mundell 30 Oct 2019.

Salix x smithiana (S. viminalis x caprea) Lodge Pond SU8135 4302, overhanging the pond, voucher specimen collected, Tony Mundell & Cathy Wilson 12 Aug 2019. Cliddesden Pond SU6313 4916 & SU6314 4917, several bushes on pond edge, varying in leaf length and width, voucher specimens collected, Tony Mundell & Mike Harrison 22 Aug 2019. Dukes Park, North Camp SU8833 5289, beside footbridge over A331, Tony Mundell & Dawn Nelson 28 Aug 2019.

Salvia pratensis (Meadow Clary) Cholderton Estate, Reservoir Field area SU2461 4384, one plant seen here, but apparently there are several more nearby, HFG 27 Jul 2019.

Salvia verbenaca (Wild Clary) Headley Down SU8439 3582, on verge of Seymour Road, Tony Mundell & Dawn Nelson 1 Aug 2019.

Sambucus ebulus (Dwarf Elder) Easton, on banks of a stream at SU51151 32297, Dave Pearson 9 Jul 2019. Hurstbourne Priors SU4385 4640, frequent along 25m section of verge centred on this grid reference, Tony Davis 9 Oct 2019. Old Highways Depot, Heckfield SU726612, patch of bushes on pile of old road chippings, Tony Davis 13 Oct 2019.

Sanguisorba officinalis (Great Burnet) Swan Lake Park SU8348 6064, two clumps, Jenny Sibley 24 Jul 2019.

Sasaella ramosa (Hairy Bamboo) E of Church Crookham SU8230 5250 & SU8273 5280, large patches beside track, presumably originally from dumped garden rubbish. Voucher specimen retained, Tony Mundell 2 Oct 2018.

Saururus cernuus (Lizard's Tail) A near monoculture in boggy ground by ponds under trees, beside a track on outskirts of Overton SU51525 50288, Sarah Ball & Sarah White, re-found 4 Nov 2019 where previously found (but not recognised) on 11 Aug 2015. Photo confirmed Tony Mundell.

Scabiosa columbaria (Small Scabious) Cholderton Estate, Reservoir Field area SU2447 4368, surprisingly growing beside *Teucrium scorodonia*, HFG 27 Jul 2019. Gander Down SU5595 2746, relic of chalk grassland, Tony Mundell & Dawn Nelson 25 Sep 2019.

Scirpus sylvaticus (Wood Club-rush) Waggoners Wells SU8589 3428, marsh near pond, Tony Mundell & Dawn Nelson 1 Aug 2019. Hollywater Pond SU8085 3351, in several places on pond margin, Tony Mundell 16 Oct 2019. Passfield SU8170 3322, beside footpath and nearby in swamp, Tony Mundell 16 Oct 2019.

Scutellaria galericulata (Skullcap) Lodge Pond SU8112 4289 & SU8128 4291, beside pond, Tony Mundell & Cathy Wilson 12 Aug 2019. Oakhanger Pond SU771346, in great quantity around the margins of pond, Steve Povey 4 Sep 2019.

Scutellaria minor (Lesser Skullcap) Heath Warren SU7695 6023, flowering patch on north side of sandy track, Tony Mundell & Isobel Girvan 6 Sep 2019. Silchester SU6226 6193, open wet heathland, Tony Mundell & Dave Pearson 15 Oct 2019.

Sedum spurium (Caucasian-stonecrop) Kingsley SU7818 3795, still present on disused minor road parallel to B3004, Tony Mundell & Cathy Wilson 30 Aug 2019. Greatham SU773303, on walls of ruined disused church, Tony Mundell & Anna Stewart 21 Oct 2019.

Sedum telephium (Orpine) Bordon, Hollywater Road, one on west side at SU8063 3490 and one on east side at SU8061 3479., Bill Wain 24 Jul 2019. Empshott SU7498 3103, on road verge, Tony Mundell, Cathy Wilson & Dawn Nelson 19 Aug 2019.

Senecio squalidus (Oxford Ragwort) NE of Stratfield Saye SU7177 6268, beside roundabout, Tony Mundell 30 Oct 2019.

Senecio sylvaticus (Heath Groundsel) Ludshott Common SU8426 3547 & SU8519 3570, Tony Mundell & Dawn Nelson 1 Aug 2019.

Senecio viscosus (Sticky Groundsel) North End SU4020 6223, in farmyard, Tony Mundell & Mary Parker 11 Jul 2019. NW of Micheldever Station SU4910 4586, two plants on road verge beside a farm, Tony Mundell 15 Sep 2019. Greatham SU7769 3034, on area of bare clinker, Tony Mundell & Anna Stewart 21 Oct 2019.

Setaria pumila (Yellow Bristle-grass) N of Hurstbourne Tarrant SU3855, field edge, west of path, sown with Sweet corn, Peter Billingham 26 Aug 2019. S of Long Sutton SU7432 4662, sown arable strip, Tony Mundell & Phil Collier 13 Sep 2019. W of Red Rice SU3213 4123, arable field edge, Tony Mundell & Anna Stewart 30 Sep 2019. Newton Stacey SU4124 4086, arable sown field, Tony Mundell & Anna Stewart 9 Oct 2019.

Setaria verticillata (Rough Bristle-grass) Upper Bullington SU4687 4111, bristles with retrorse barbs, specimen det, John Poland also confirmed by Tony Mundell, Anna Stewart 16 Oct 2019.

Setaria viridis (Green Bristle-grass) Long Sutton SU7338 4673, arable sown headland strip, Tony Mundell 17 Aug 2019. E of Steep SU751251, single plant growing by Harrow Inn, Steve Povey 30 Aug 2019.

Silene noctiflora (Night-flowering Catchfly) Magdalen Hill Down SU5070 2919, three plants on south arable strip, Anna Stewart 18 Jul 2019. Roundwood Estate SU512446, arable field edge, Phil Collier 1 Aug 2019.

Silybum marianum (Milk Thistle) Norton, livery stables SU467412, on a sandy drive at the livery, Moya Grove 5 Aug 2019, photos confirmed by Tony Mundell.

Sison amomum (Stone Parsley) Steep SU742259, in plenty by waterfall, Steve Povey 9 Jul 2019. Sherborne St John, all along field margin from SU6326 5607 to SU6350 5594, Alison Cross 23 Jul 2019. SE of Wyck SU7669 3897, several plants beside hedge in arable field margin, Cathy Wilson 9 Aug 2019.

Solidago virgaurea subsp. virgaurea (Goldenrod) Waggoners Wells SU8575 3422, beside footpath, Tony Mundell & Dawn Nelson 1 Aug 2019.

Spergula arvensis (Corn Spurrey) S of Silchester SU6268 6097, arable field, Tony Mundell & Dave Pearson 15 Oct 2019.

Spergularia marina (Lesser Sea-spurrey) Basingstoke, Winklebury SU6129 5244, beside Winklebury Way, Tony Mundell 27 Jul 2019. Kentsboro SU303396, car park and surrounds, Anna Stewart 12 Sep 2019. Dunley SU4584 5305, pavement weed on bridge over A34, Tony Mundell & Phil Collier 23 Sep 2019. Heckfield Heath SU7261, several places along roadside, Tony Davis 13 Oct 2019. Greatham SU7746 3057, road verge, Tony Mundell & Anna Stewart 21 Oct 2019.

Spergularia rubra (Sand Spurrey) Ludshott Common, locally plentiful SU8473 3591 to SU8477 3592, beside a track, also SU8521 3577, on a main track, Tony Mundell & Dawn Nelson 1 Aug 2019.

Spiranthes spiralis (Autumn Lady's-tresses) Headley Gravel Pit, a single flowering plant at SU51151 62688, beside a path, Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019. Noar Hill, many

plants flowering in short turf, particularly either side of main central path around SU740 319, Steve Povey 1 Sep 2019.

***Stachys arvensis* (Field Woundwort)** Roundwood Estate SU8429 3575, arable field edge, Phil Collier 1 Aug 2019.

***Stachys byzantina* (Lamb's-ear)** Headley Down SU8429 3575, on verge of Furze Hill Road, Tony Mundell & Dawn Nelson 1 Aug 2019. S of Kingsclere SU5280 5671, beside footpath in gateway to telephone tower, Tony Mundell 6 Oct 2019.

***Teucrium botrys* (Cut-leaved Germander)** Micheldever Spoil Heaps SU519444, 30 plants, mostly very small non-flowering plants but a few larger flowering, Graham Dennis 20 Jul 2019. Micheldever Spoil Heaps (W of railway) c. 10 plants at SU51911 44639 on bare patch, patch of seedlings at SU51926 44682 at bottom between two ridges, several mature plants at SU51932 44679 on bare slope, lots of 1m high Birch over the vegetated ground, bare areas still OK but rest will soon be Birch forest, Malcolm Storey 17 Aug 2019.

***Thalictrum flavum* (Common Meadow-rue)** Longparish SU4460 4491, large patch in marsh between River Test and footpath, Tony Mundell & Phil Collier 22 Jul 2019. Lower Bullington SU4565 4127, in wet meadow, Tony Mundell 3 Oct 2019.

***Thelypteris palustris* (Marsh Fern)** Fleet Pond, Gelvert Marsh SU8240 5506, SU8241 5507, SU8242 5507 & SU8243 5505 mixed with *Dryopteris carthusiana*, Tony Mundell 10 Sep 2019.

***Thesium humifusum* (Bastard-toadflax)** Cholderton Estate, Reservoir Field area, growing on top of the reservoir at SU2450 4372 and at least six plants in a small area at SU2452 4383, HFG 27 Jul 2019. Porton Down SU249367, many plants on northern edge of track, Pat Woodruffe & Ailsa McKee 28 Jul 2019. Porton Down SU252371, widespread on both sides and centre of track, Pat Woodruffe 18 Aug 2019.

***Trachystemon orientalis* (Abraham-Isaac-Jacob)** Lower Bullington SU4545 4117, beside footpath, Tony Mundell 3 Oct 2019.

***Trifolium alexandrinum* (Egyptian Clover)** W of Newton Stacey SU4018 4023, in large numbers, sown across an arable field at Gravelhill Farm. Voucher specimen collected, Tony Mundell & Anna Stewart 8 Oct 2019.

***Trifolium fragiferum* (Strawberry Clover)** Darby Green sports field, a single vegetative plant at SU83594 60245, close to the *Trifolium subterraneum* plants. Identified from the leaves, including the minutely mucronate leaf teeth. Very droughted, Tony Mundell & Dawn Nelson 15 Jul 2019.

***Trifolium incarnatum* subsp. *incarnatum* (Crimson Clover)** S of Clatford Oakcutts SU3358 3800 & SU3392 3832, area of arable field sown for bees, etc. Tony Mundell & Dave Pearson 26 Sep 2019.

***Trifolium subterraneum* (Subterranean Clover)** Darby Green sports field SU8359 6024, SU8359 6025 & SU8360 6025, but very droughted, Tony Mundell & Dawn Nelson 15 Jul 2019.

***Trigonella foenum-graecum* (Fenugreek)** SE of North Waltham SU577457, in harvested arable field, voucher specimen retained, Andrew Powling & Eric Clement 3 Oct 2019.

***Turritis glabra* (Tower Mustard)** Woolmer, Lincborough SU8140 3345, 13 fruiting spikes in open area by footpath, Tony Mundell 16 Oct 2019.

***Ulmus laevis* (European White-elm)** Andover SU3766 4655, a large tree at junction of Pilgrims Way and River Way close to The Swallow Public House, Andrew Brookes 28 Jul 2019, photos including the characteristic fruits with long pedicels confirmed by Tony Mundell.

***Ulmus minor* (Small-leaved Elm)** Popley, Basingstoke SU6284 5371, beside Abbey Road, Andrew Brookes 28 Jul 2019.

***Urtica dioica* subsp. *galeopsifolia* (Stingless Nettle)** W of Bagmore SU6570 4480, beside track in shade, Tony Mundell & Phil Collier 29 Jul 2019. Waggoners Wells, by shady track at SU8567 3417 and in marsh by pond at SU8589 3428, Tony Mundell & Dawn Nelson 1 Aug 2019. Chawton Park Wood SU6757 3610, beside shady track, Tony Mundell, Dawn Nelson & Sophie Lancaster 7 Aug 2019. Alice Holt Forest SU8006 4318, beside track in shade,

Tony Mundell & Cathy Wilson 12 Aug 2019. W of Newton Stacey SU4095 4068, beside wet, shady footpath, Tony Mundell & Anna Stewart 8 Oct 2019.

***Urtica urens* (Small Nettle)** NW of Bradley SU6212 4232, single plant in arable field corner, Tony Mundell & Mary Parker 12 Jul 2019. Blackmoor SU7780 3360, roadside, single plant neat gateway, Tony Mundell & Steve Povey 12 Sep 2019.

***Vaccinium oxycoccos* (Cranberry)** Woolmer Forest SU7924 3231, small colony in bog at SW corner of Cranmer Pond, Steve Povey & Laura Gravestock 26 Jul 2019. Shortheath Common, still very plentiful around margins of *Sphagnum* bog to the SW of Shortheath Pond at and around SU774367, Steve Povey 4 Sep 2019.

***Valeriana dioica* (Marsh Valerian)** Conford SU8230 3292, in carr near to Holly Water stream, Tony Mundell 28 Oct 2019.

***Valerianella dentata* (Narrow-fruited Cornsalad)** Roundwood Estate SU507443, arable field edge, Phil Collier 1 Aug 2018. Netherton Bottom SU3875 5622, Tony Mundell & Peter Billingham 10 Sep 2019. Kentsboro SU3092 3829, many plants growing beside Henbane in arable field corner, Tony Mundell & Anna Stewart 30 Sep 2019.



Narrow-fruited Cornsalad *Valerianella dentata* fruits, Netherton Bottom 10 September 2019 (Tony Mundell)

***Verbascum phlomoides* (Orange Mullein)** Cholderton Estate, Reservoir Field area SU2444 4384, SU2447 4372, SU2447 4374 & SU2448 4322, HFG 1 Aug 2019.

***Veronica polita* (Grey Field-speedwell)** Roundwood Estate SU509445, arable field edge, Phil Collier 1 Aug 2019. S of Long Sutton SU7442 4628, arable field edge, several plants, Tony Mundell & Phil Collier 13 Sep 2019.

***Veronica scutellata* var. *scutellata* (Marsh Speedwell)** Alice Holt Forest, SU7985 4286, one or two surviving plants on muddy edge of pond, Tony Mundell & Cathy Wilson 12 Aug 2019. Ashford Hill Meadows SU5591 6215, bed of pond (which is now dried-up), Tony Mundell, Sarah Ball & Mary Parker 26 Aug 2019.

***Viburnum opulus* subsp. *trilobum* (American Guelder-rose)** NW of Micheldever Station SU4964 4520, in roadside hedge, Tony Mundell 15 Sep 2019. Egbury SU4446 5210, roadside hedge, Tony Mundell & Phil Collier 23 Sep 2019. N of Hurstbourne Priors SU4353 4723, roadside, Tony Mundell & Tony Davis 9 Oct 2019.

***Vicia sativa* subsp. *sativa* (Common Vetch)** Blackmoor SU7710 3359, arable sown strip, Tony Mundell & Steve Povey 12 Sep 2019. Newton Stacey SU4180 4040, arable field, apparently sown, Tony Mundell & Anna Stewart 8 Oct 2019.

***Viola hirta* (Hairy Violet)** E of Longparish SU4486 4483, on top of disused railway embankment, Tony Mundell & Phil Collier 22 Jul 2019. Kentsboro SU303396, car park and surrounds, Anna Stewart 12 Sep 2019. Kings Worthy SU4803 3441, many plants under hedge, Anna Stewart 6 Oct 2019.

***Zannichellia palustris* (Horned Pondweed)** Longparish SU4444 4488, in River Test, Tony Mundell & Phil Collier 22 Jul 2019.

The Hampshire and Isle of Wight Wildlife Trust Flora Group aims to monitor the status and promote conservation of the flora of the two counties and develop skills of those members interested in flora.

This edition of *Flora News* was put together by Catherine Chatters and John Norton. Many thanks to everyone who contributed. If you have any comments or would like to submit articles or photographs for inclusion in a future issue please contact:

Catherine Chatters, Flora Group Secretary

Ivy Cottage, Ashurst Bridge Road, Totton, Southampton SO40 7EA

Tel: 023 8086 3920, e-mail: Catherine.Chatters@hiwwt.org.uk

When submitting digital photographs, please reduce the size of each image to no larger than 2MB and please include your own name in the filename, along with description of subject and date taken for inclusion in the caption. Please include English and scientific names of any plants.

If you would like to send in your plant records, please see the Hants Plants website:

<http://www.hantsplants.org.uk> for information, including downloadable forms, or contact your relevant vice-county Recorder:

VC11: Martin Rand

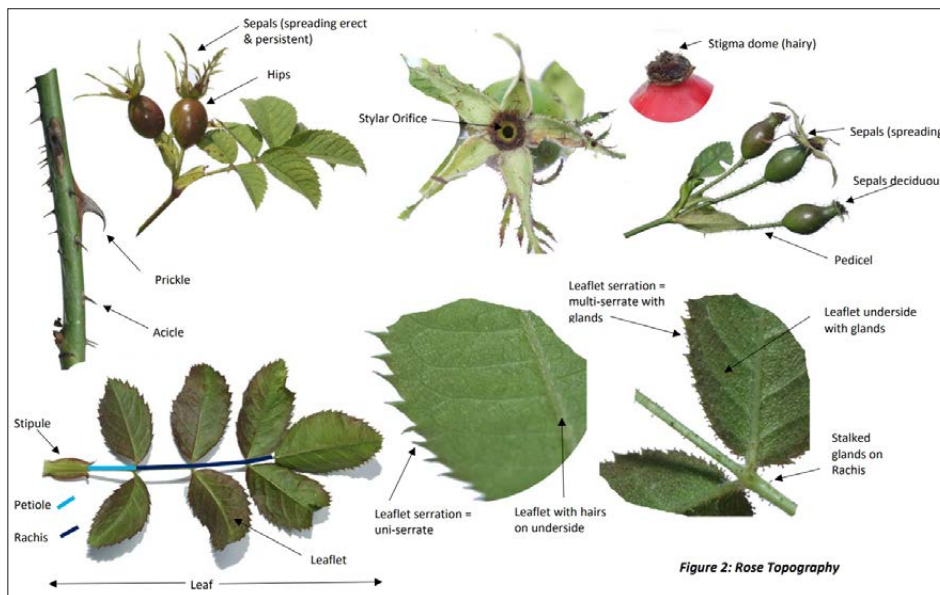
3 Kings Close, Chandler's Ford, Eastleigh, SO53 2FF

Tel: 07531 461442, e-mail: VC11recorder@hantsplants.net

VC12: Tony Mundell

38 Conifer Close, Church Crookham, Fleet GU52 6LS

Tel: 01252 614516, e-mail: argmundell@btinternet.com



Rose topography chart produced by Gareth Knass for the Rose Workshop held on 17 August 2019. See p. 7.

If you would like to join Hampshire & Isle of Wight Wildlife Trust and become a member of the Flora Group please contact our Membership Team on 01489 774400 or visit our website for further details: www.hiwwt.org.uk. Visit us on Facebook under *Hampshire Flora Group*.

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