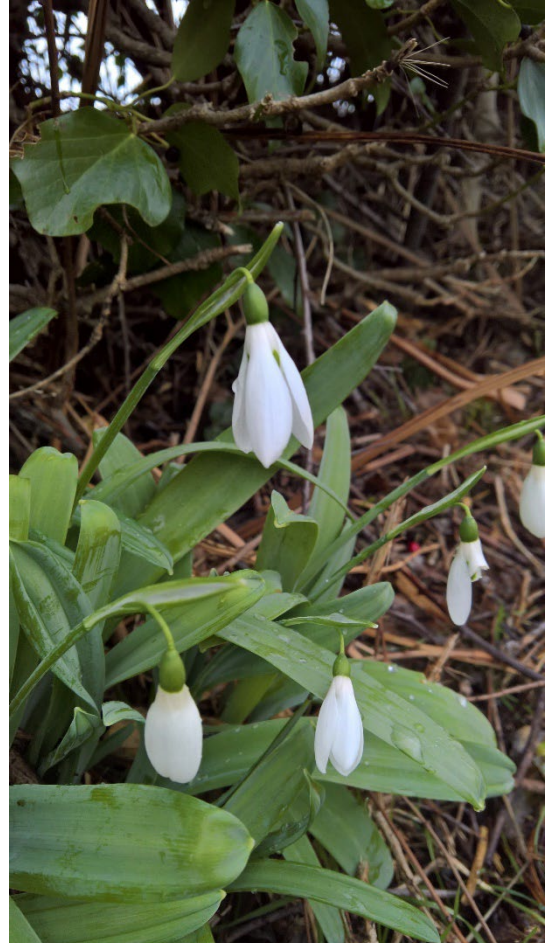


Norfolk Flora Group News - Winter Newsletter 2021-22

Welcome to the NFG Winter Newsletter !

Issue 7 ... Despite the effect of the spring 2021 limitations on group sizes and meeting up for formal events we still managed to achieve quite a lot last year, either formally or as small socially-distanced informal survey visits. By early July, the official meeting programme was finally able to commence with the BSBI event at Gt Yarmouth North Denes and Catfield Fen. Pub visits were a little constrained by recent closures and also by my unreasonable insistence that everyone had to sit outside, regardless of the weather, but we still managed to have fun.

Contributors to this edition are Mike Crewe, Bob Ellis, Mary Ghullam, Janet Higgins, Peter Lambley, Bob Leaney, Mike Padfield, Louis Parkerson, Ian Woodward, and myself; our special guest-star celebrity author Nick Acheson, and, last but by no means least; our perennial puzzle-setter, the Sedge Warbler. A special thank-you too to Suki Pryce, who has been heroically turning out articles throughout the pandemic.



Galanthus plicatus

Jo Parmenter

Feedback on the content of NFG News would, as always, be very welcome - and please do send me your articles and snippets of botanical news for inclusion in future editions.

Botanising in 2022

As far as we can tell, we should be able to run a 'normal' programme in 2022 (if indeed anything we do might be deemed normal).

Jo Parmenter

The views and opinions expressed in this Newsletter are those of the individual authors, and not of the Norfolk Flora Group, nor its membership in general.



SOME WORDS ON WEEDS

I am a dismal botanist. I get my glumes and lemmas muddled and can never be bothered to count the stamens on my bittercress. I breeze past sedges in an airy way, hoping nobody will ask. I blench when faced with dandelion sections.

I love plants though. I love them truly. They talk to me and help me navigate a landscape. I love how mossy stonecrop haunts the most-scuffed tracks on Breckland heaths; how common calamint and wild clary tell me that Norfolk's Cretaceous chalk is just beneath the soil; how the heavy scent of European gorse in April makes me seek green hairstreaks — always in the sunniest spot — and the portly queens of buff-tailed bumblebees.

Plants are a landscape's way of teaching us about soil, sunshine and water; and signposting which other organisms to look for. They are the letters, words and punctuation of the land, in which its story is written, for anyone who cares to read.

They're solar panels and climate heroes too, of course — no one reading this needs telling that — drawing carbon dioxide from the air, and water from the soil, freeing the oxygen we breathe, and bringing the sun to Earth for almost every organism to use. These facts alone should have us all in awe of plants, yodelling their praise to everyone we meet.

An elephant swaying through the bush, a blue whale flashing its outlandish tail, a million monarch butterflies about the trunk of a Mexican fir: all these and almost every other form of life are ultimately just recycled plants; enabled by the sacred alchemy of photosynthesis. And so are we. The energy with which you're reading now was captured by a plant. The last meal that you ate — still being digested in your gut — was made by plants, and every meal you ever ate before it, even when an animal had intervened to appropriate — and largely squander — the fundamental energy of plants.

And plants are beautiful. En masse across a landscape and in microscopic close-up, they're astonishing. They are the green defining almost all terrestrial habitats — and farms — against which nature's myriad other colours are relief. The grass in fields, the leaves of trees in woods, the moss and liverwort crust on shaded banks: plant green is everywhere around us, soothing us and making — in a literal sense — the habitat in which our minds evolved to thrive. In which we learned to smile. Lean in and there's exquisite beauty too: a chickweed's petals neatly cleft; the delicately furry fruits of speedwells; a goatsbeard seedhead's fractal form; and those fatal droplets on a sundew leaf.

Praise be to plants! Praise them for snaring our sun's light and making food. Praise them for sucking carbon from the atmosphere and locking it in soil. Praise them for feeding worms, for filling lungs and spiracles with oxygen. Praise them for pinning down the ground, resisting floods, delivering water slowly and sustainably. Praise bryophytes for taming the most hostile surfaces, and letting other forms of life take root.



The problem with plants is people. Vain and mindless creatures that we are, we distract ourselves with jobs and apps and mortgages, with shows on television, politics and memes; forgetting what being human really means. For being human is only possible in a world of plants. Any sane bipedal simians would have made them gods. Would hail procumbent pearlwort in a pavement crack. Would crouch in awe by every tuft of annual meadow grass. Would gently kiss the leaves of buckthorn, stroke the lissom trunks of hornbeams, rolling acorns in their palms, and crushing sea wormwood with their fingertips, flooding the wild world with its glorious scent.

We who love plants are often introspective sorts, spending time alone among them, nothing but the healing green of chlorophyll for company. Sometimes we gang together with fellow chlorophiles; but theirs is reassuring talk of stolons, nectaries and petioles. It's easy to take refuge among plants, looking downwards, through a loupe. Surely, though, our role as botanists — as much as knowing and documenting them — should be as active advocates for plants: shouting about them everywhere we go; posting a million pictures; giving a hundred talks; persuading people just what vulnerable miracles they are.

In this, the sixth extinction spasm suffered by life on Earth, being a skilful botanist is not enough. As agriculture, industry and politics conspire to banish native vegetation wholesale from the planet, we must stand up for plants; just as they, these countless millions of years since life began, have stood — and photosynthesised — for us.

Nick Acheson

Our profound thanks to Nick for writing so beautifully in praise of plants **JP**



NORFOLK PLANT NEWS FOR 2021

This is a recent initiative, so that we can share some of the more interesting plant finds of the year JP

Clerodendron bungei or Glory Flower

This was a rather unexpected find on a minor road just north of Kenninghall on one of our autumn field meetings. The keen gardeners amongst you may recognise it as *Clerodendron bungei* and it has been found at just 7 localities 'in the wild' in the UK, although is presumably more common within gardens. It is capable of suckering, and had made its way, we assume from a nearby garden, onto this road verge and thence for another 10m or so down the roadside, although it didn't appear to still be present in the garden (maybe it outgrew its welcome!?). It is a handsome plant, growing to between 1 and 2m tall, with large, dark purplish-green heart-shaped leaves and rose-pink, sweetly scented flowers which are attractive to insects. It is a native of China and was introduced to the UK in 1850. It is hardy to -5 °C and so is cut back by hard frosts, but will then send up 'vigorous, erect, woody shoots' the next summer (this appeared to be what it was doing at this site). It has escaped from gardens in North America and is naturalized across the southern states.



Clerodendron bungei

Jo Parmenter

Scorzonera hispanica Scorzonera or Black Salsify

I found a single plant of what turned out to be *Scorzonera hispanica* Scorzonera on a lane-side verge a couple of miles north-west of North Walsham, Norfolk (TG 3001232676) on 11 Oct 2021. It was growing with/near species such as *Galium album* Hedge Bedstraw, *Knautia arvensis* Field Scabious, *Petrotelephium telephium* Orpine, *Rumex acetosella* Sheep's Sorrel, *Teucrium scorodonia* Wood Sage, *Ulex europaeus* Gorse, and *Veronica chamaedrys* Germander Speedwell.



Scorzonera is grown as a vegetable for its Salsify-like roots (much more so in Europe), and occasionally survives on roadsides etc. This plant was, however, growing in the middle of an arable farmland area which has probably never produced either Salsify or *Scorzonera* commercially, and was nowhere near gardens or allotments where it might have been grown, so its origins are unclear.



Scorzonera in situ

Suki Pryce

I circulated photos of the plant to members of the Norfolk Flora Group; Jo Parmenter suggested *Scorzonera*; and determination of the species was by Richard Carter, who knows the genus from the Continent. Richard emailed us as follows: "To be certain that it is *S. hispanica* and not the rare native *S. humilis* we really need to know how wide the involucral bracts are. They should be 3-4.5 mm wide in the native species and 4-7 mm wide in *S. hispanica*."

From other clues in the photo, I think they are probably at least 5 mm wide at the base, but I can't be sure. But also the stems in *S. humilis* are 'usually' unbranched (according to Sell & Murrell), whereas - as far as I can see - the three capitula in your whole-plant photo are on a single branched stem; and the involucral bracts in *S. humilis* are obtuse at the apex, whereas in your plant they seem very markedly acute as in *S. hispanica*. So unless I am misreading your photos, I think we are fairly safe with the more likely *Scorzonera hispanica*."

These inflorescence features were confirmed a few days later (see photo of capitulum plus ruler); and I am delighted and proud to be told that this finding is apparently unusual enough to be submitted to the BSBI Newsletter Aliens and Adventives editor.



The Netherlands, Belgium, Germany and France are the world's largest producers of *Scorzonera*, where it is grown on a field scale. In Britain it is a specialist crop mainly cultivated by discerning gardeners. I grew up eating both Salsify and *Scorzonera*, as my family had French and German connections. Both vegetables have a pleasant, mild, sweet, taste, but are fiddly to prepare (long skinny roots which need peeling), which may explain their lack of popularity in the UK. I have grown them both, but they can take two years to reach a size worth lifting - again adding to their lack of appeal for gardeners. And I don't remember seeing them flower, which I hope lets me off the hook for not recognizing this specimen straight away!



Scorzonera showing involucre bracts Suki Pryce

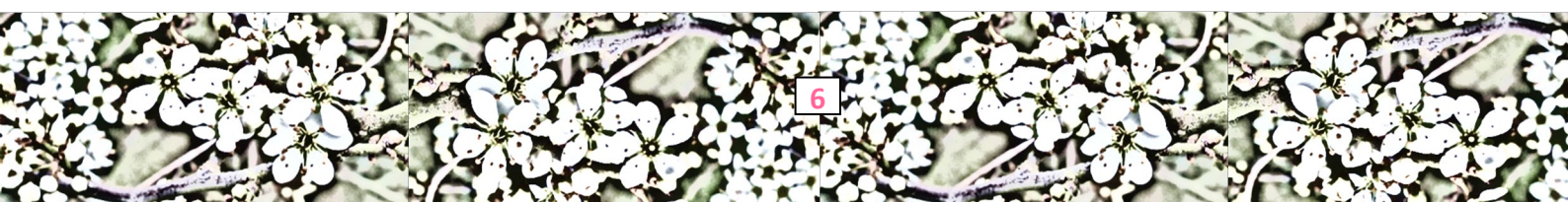
Suki Pryce

Mibora minima Early Sand-grass

After having avoided urban botanising (and people!) during much of 2020, I resolved in 2021 to undertake some 'square-bashing', focusing on visiting some of the 1-km squares in Thetford regularly over the course of the spring and summer to see how many species I could find over the course of the year. On April 24th, I visited a part of the British Trust for Ornithology's Nunnery Lakes reserve before using a narrow pathway between two houses leading from the reserve onto a residential cul-de-sac.

At the base of the fence alongside this path I spotted around 5-10 plants of an unfamiliar small grass in flower, with distinctive flowering spikes. It was clearly not an *Aira* or any of the other Breckland species, so assuming it was of garden origin I took some photos and moved on. When I reviewed the photos it seemed to closely resemble *Mibora minima* but I managed to convince myself that it wasn't this species as the spikelets didn't seem to be arranged on one side of the pedicel (at least to my eyes). It was two weeks later before I tried again to identify the grass by looking on the internet, and then posted the photos on Twitter. Twitter users confirmed quickly that it was *Mibora minima*.

I met Jo Parmenter and Bob Leaney at the site on May 8th, and we found that, in addition to the plants I had previously noticed at the base of the fence, the species was also growing in the gutter and pavement cracks further along the road, and in at least three different garden lawns, each of which were unimproved and typical of Breckland habitat, i.e. characterised by a high abundance of mosses and barer patches. JP estimated that the population consisted of at least 125-150 individual plants in total. The population seems to be well-established and it is likely that it has been here for at least 2-3 years or longer.



The species has previously been recorded in urban areas elsewhere including, in East Anglia, a population which persisted in Woodbridge from 1939 to at least 1986, and a record from Cambridge in 1989.

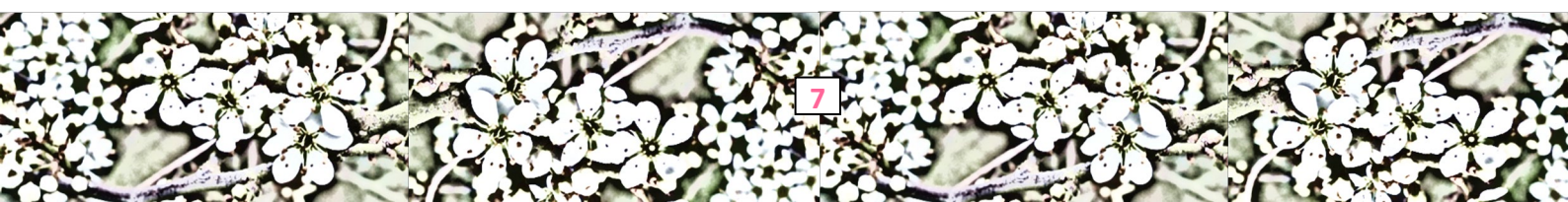


The 'lawn' population of *Mibora minima*

Jo Parmenter

So where did these plants come from? The romantic option would be that they represent a relict population that has somehow survived in the area within the sandy Brecks habitat that has enabled so many other rare annual species to persist. Whilst this possibility can perhaps not be entirely excluded, it seems fanciful and highly unlikely given the urban location of this population and the fact that Breckland has been so well-studied. A recent, human-assisted arrival seems much more likely, either through the activities and movements of local residents (or botanists?) or brought in along with garden material. There is no obvious reason for botanists to have previously visited this particular cul-de-sac, and movements of local residents or their families/friends seems the most likely explanation. Indeed, Jo spoke to a resident whose brother owns a campervan which, when he visits, is parked on the street immediately adjacent to the lawn with the highest density of *Mibora minima* (50-70 plants). This individual has travelled widely including (pre-Covid) to southern Europe. It seems very plausible that this could have been the vector of arrival.

Ian Woodward



Kidneyweed *Dichondra micrantha*

This alien species was found growing as a loose, spreading colony of stems, over an area of approximately 2.5m x 3.0m and seemingly well established in coastal dunes at Holkham, TF879452 on May 10th, 2021.

Dichondras appear to be tricky to identify to species, for a variety of reasons: A number of species are very similar; the taxonomy is unsettled, keys don't appear to exist for separating some of the similar species because they come from different parts of the world (dealing with introduced species means that source countries are irrelevant to the possibility of occurrence) and species are often misidentified in online reference sources (partly because plants can be mislabelled when offered for sale).

After much deliberation, a group consisting of *Dichondra micrantha* Urb., *D. donelliana* Tharp & M.C.Johnst. and *D. repens* J.R.Forst. & G.Forst. was identified as being distinctly similar to the Holkham plant and all were considered possible candidates.

D. repens is commonly offered for sale but plants under this name appear to be mostly (perhaps always) *D. micrantha*. True *D. repens* can be ruled out by petal and sepal shape (more pointed than in the Holkham plant). *D. donelliana* can be ruled out by the stem thickness (1-2mm thick) and size of calyx in fruit (greater than 2.5mm). This leaves *D. micrantha*, with stems less than 1mm thick and fruiting calyx less than 2.5mm).



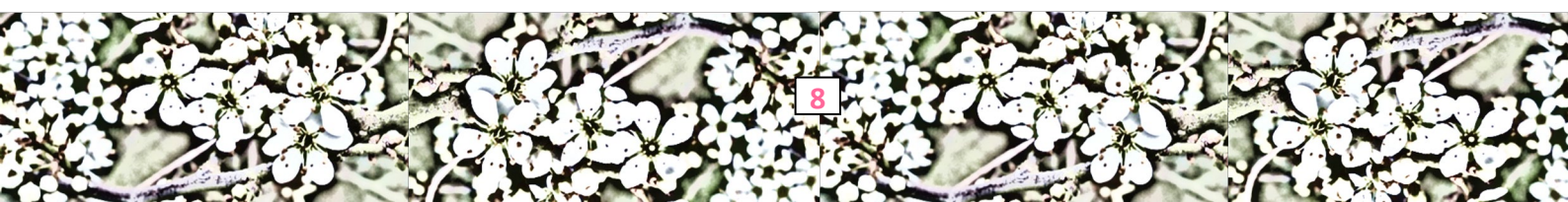
Mike Crewe

Dichondra micrantha

Mike Crewe

Urtica membranacea Mediterranean Nettle

Another first record for Norfolk, this time found at Caister-on-Sea (TG52591205 & TG52581205) in late March 2021 by the authors. Around 20 plants were observed growing in the older part of the town close to the sea, some between the pavement and a cottage wall, with further plants to the side of the same building.



This is an annual plant, and monoecious, but quite unlike *Urtica urens* in appearance, with long, deep-purple unisexual male racemes on the upper parts of the plant and overtopping the upper whorls of leaves and occasional female flowers occurring on the lower nodes of a few of the plants seen. The terminal leaf tooth is much longer than its neighbours c.f. *U. urens*. Online imagery of *U. membranacea* exactly matched our plants; *U. incisa* was noted to have much more numerous and more deeply incised leaves with a very elongated terminal tooth.



Urtica membranacea

Bob Leaney

Jo Parmenter & Bob Leaney



Sadly, shortly after he sent me this article, Peter emailed to say that he'd had to go into hospital and a little while later we received the news that he had died. He will be greatly missed. Our thoughts are with Gill and the rest of his family. JP

GENTIANA PNEUMONANTHE MARSH GENTIAN

I first came across a colony of this iconic plant when, as a teenager, I was walking across the heathlands of the high weald in Sussex in August. I remember the thrill of seeing a large colony of this beautiful plant with its distinctive electric blue flower which contrasts with the deep green of the sepals. It was growing in its usual habitat of wet heathland in company with *Erica tetralix* (cross-leaved heath) and *Molinia caerulea* (purple moor grass). Its headquarters in the British Isles are Dorset and New Forest heaths with a scattering of sites in Sussex and up through East Anglia into Lincolnshire, Yorkshire, Anglesey, Lancashire and Cumbria. It is a long lived perennial which flowers from July to October.

When I came to Norfolk, I renewed my acquaintance with this glorious gentian on Buxton Heath. Again, it was growing in wet heath in a band along the gentle slope above the valley mire. In the 1970s it was abundant. Buxton Heath was and still is Poor's Land, but at that time not otherwise managed. However, fires were often a feature of early spring whether deliberate or accidental it is hard to say. However, I do know that village children were given matches in the early spring to burn the pingos at East Walton and I suspect similar practises took place on many of our heaths. Certainly, the sound of fire engines racing to heathland fires in the 1970s and 80s was a feature of many springs. It should be emphasised that it is swift light burns between October and March and not hot burns in the summer.

Elsewhere in East Norfolk, marsh gentian was recorded from Stratton Strawless, Hainford and Horsford. Much of this land was subsequently planted up and partially drained by the forestry commission and other landowners. Now it just hangs on at an area of wet heath at Horsford. There are also records from Beeston Bog between 1992 and 1997 (Bob Ellis pers.comm).

In West Norfolk it occurs at East Winch Common which is managed by NWT and formerly at Litcham Common. The former site in an area of level wet heath, but again fed by upwelling groundwater. The gentians are protected from grazing cattle by metal cages.



Current status at sites

Locality	Date	Number
Horsford	08/08/2021	1
Buxton Heath	08/08/2021	25*
East Winch	10/08/2021	14*

* = approximate numbers as especially at East Winch the plants are in protective cages which with multi-stemmed plants can make it difficult to be precise.

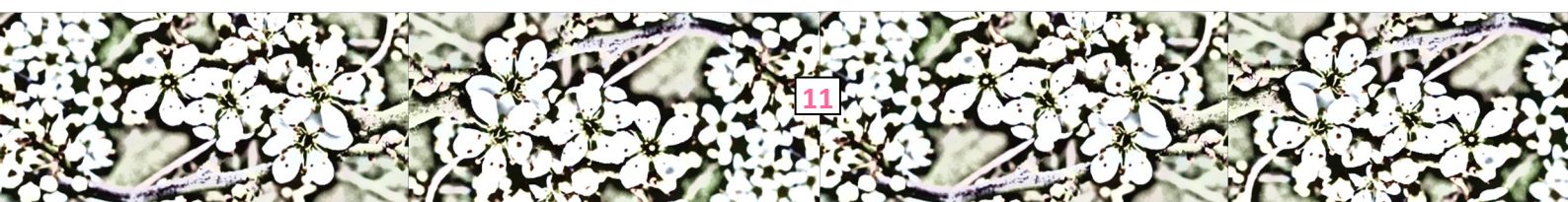
The plant is quite particular in its requirements, needing winter seepages; but can tolerate dry conditions in summer. It is a flagship species for wet heaths which have a number of other uncommon species associated with them including *Drosera rotundifolia*, *Drosera intermedia*, *Lycopodiella inundata*, the lichens *Cladonia strepsililis* and *Pycnothelia papillaria* and bryophytes like *Sphagnum compactum*, *S. molle* and *S. tenellum*. Studies have shown that for the population to continue it needs disturbance at intervals for seed to germinate. In the past, as I have indicated, fire was probably important, although the name of the former Flagcutters pub in Horsford, demolished in 2018 to make way for a roundabout, suggests disturbance through turf stripping may well have been significant. In the early 1990s Reg Land, then working for the Trust, undertook small scale turf stripping at Buxton Heath and the population responded positively. More recently, the value of turf removal in this habitat was also demonstrated at Horsford Woods where *Lycopodiella inundata* appeared in some quantity after such an action.

If we are to keep this plant in the county, I believe we need to develop a plan with NWT, taking advice from specialists elsewhere, for small scale disturbance along the lines instigated by Reg Land. We should also investigate the possible introduction of the species at Houghen Plantation which seems very suitable; and indeed I have seen a plant there in the 1990s.

Peter Lambley

Chapman, S B, Rose, R J & Clarke, R T (1989) The behaviour of populations of marsh gentians (*Gentiana pneumonanthe* L.) : a modelling approach. *J. Applied Ecology* **26** 1059-1072.

Simmonds, N.W. (1946) Biological Flora of the British Isles *Gentiana pneumonanthe* L. *J. of Ecology* **33** 295-307



EXTRAORDINARY HEADWEAR

Richard is one of the more dapper of our number, and here demonstrates to other attendees at the workshop a good way to transport brambles without getting badly lacerated



Gather ye brambles

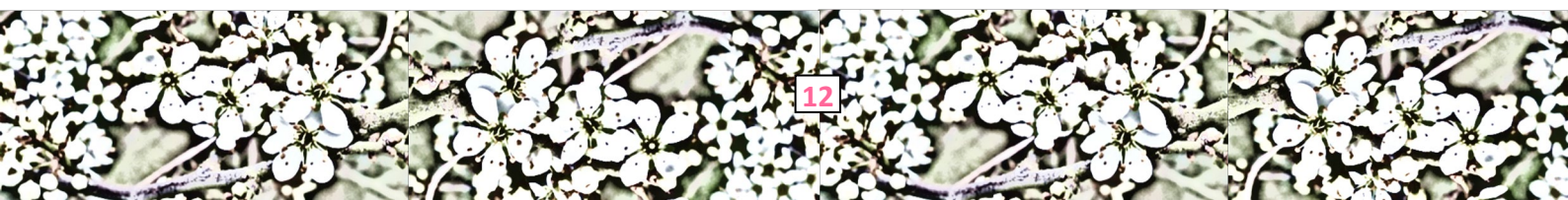
Suki Pryce

Not to be outdone, BobL certainly knows how to wear a handkerchief with panache.



At Botany Bay

Suki Pryce



This and the next article decided me on the colour theme for this year's NFG News :) JP

CALYSTEGIA, WITH SPECIAL REFERENCE TO DISTINGUISHING C. PULCHRA FROM PINK-FLOWERED FORMS OF C. SEPIUM AND C. SILVATICA

In Norfolk, we see *Calystegia pulchra* very infrequently, and most pink-flowered *Calystegia* plants (not including *C. soldanella*) are forms of *C. sepium*, or less often, *C. silvatica*. These finds usually result in some uncertainty, mainly because we don't see pink-flowered *Calystegia* often enough to get the rather involved nomenclature and ID characters into our heads.

In fact, it should be possible to name the pink-flowered taxa quite easily in the field using the usual bracteole, flower size and leaf sinus characters, along with just 3 other additional characters:

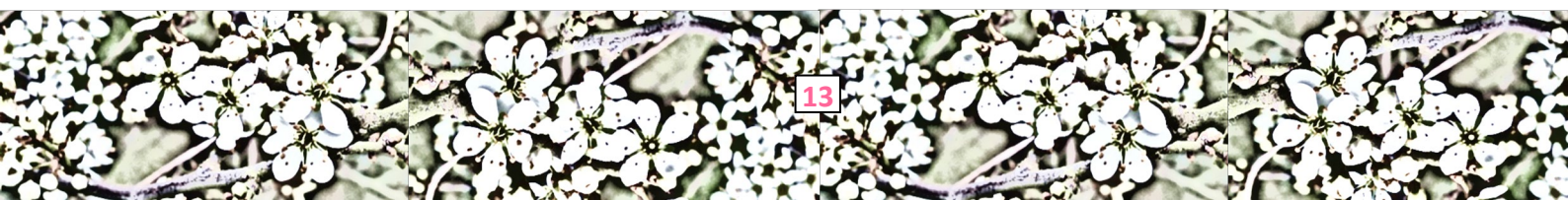
- i) Presence or absence of short hairs on the petioles, pedicels and stem apex: present in *Calystegia pulchra* and *C. sepium* ssp. *roseata*. These hairs are usually sparse and may take some finding.
- ii) Presence or absence of winging on the pedicels: present in *Calystegia pulchra* only (and then, not always)
- iii) The depth and distribution of the pink coloration on the corolla: in *Calystegia pulchra* the corolla is a deep pink on both sides and usually white stripes are present; in *C. sepium* ssp. *roseata* the corolla is also pink on both sides and again usually white striped; in *C. sepium* f. *colorata*, and occasionally in *C. silvatica* (un-named form) the pink is a very pale shade and confined to lines or blotches on the outside of the corolla only.



C. silvatica showing inflated bracts



Corolla showing white interior Mike Crewe





C. sepium showing uninflated bracts



White corolla of *C. sepium* ssp. *sepium* Mike Crewe

The Norfolk Flora Group finds *C. sepium* ssp. *sepium* f. *colorata* fairly frequently, but the other three taxa are all very scarce. This would seem to be the case elsewhere in the British Isles, other than near the west coast, or in Ireland, where *C. sepium* ssp. *roseata* is more frequent.

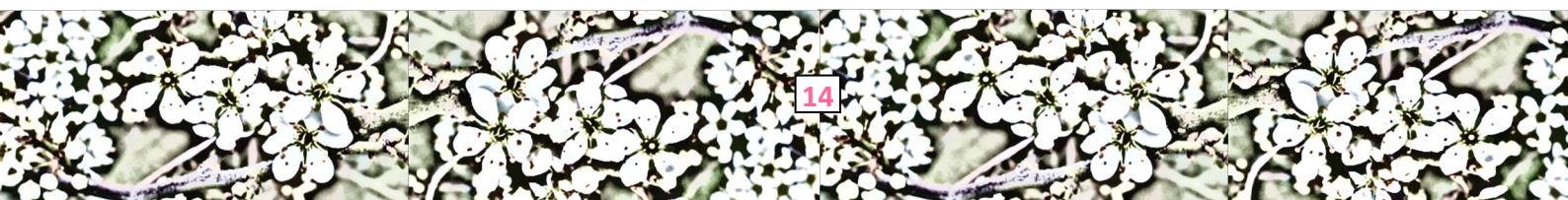


C. sepium ssp. *roseata*



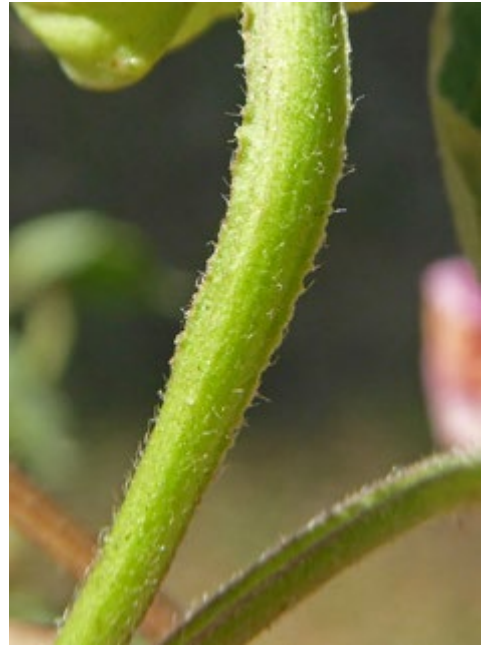
C. pulchra

Mike Crewe





C. pulchra showing inflated bracts



Hairy pedicel in *C. pulchra* Mike Crewe

One bone of contention during recording is the reliability of leaf characters in *Calystegia* and whether one should attempt to make a vegetative identification.



C. silvatica



C. sepium

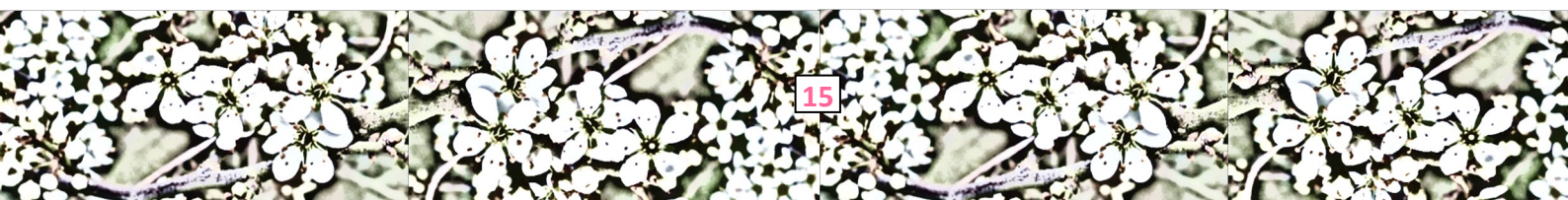


C. pulchra

Mike Crewe

Brummit (BSBI Plant Crib, 1998) states that the three species can be separated with around 90% accuracy using the following leaf characters:

- i) The shape of the leaf sinus: V-shaped in *Calystegia sepium*, rounded in *C. silvatica* and square in *C. pulchra*.
- ii) The relationship of the lowest lateral veins to the leaf sinus: running along the sinus in *C. silvatica* and *C. pulchra* and not in *C. sepium*.
- iii) Whether the upper leaf surface is matt or shiny: matt in *C. pulchra*, shiny in *C. silvatica* and *C. sepium*.



My personal view is that it is possible to make a vegetative ID of *Calystegia sepium* if the leaves are small, shiny above and have a narrowly V-shaped sinus; and of *C. sylvatica* if the leaves are large and shiny above, with a broadly rounded sinus. Unfortunately one finds many plants not in flower with either broadly v-shaped or narrowly rounded sinuses, which I don't feel can be identified. *Calystegia pulchra* should have leaves that are large, with a matt upper surface and a square sinus, but such plants should be re-checked when in flower.

The descriptions and illustrations in the 1998 Plant Crib are very helpful although the leaf sinus of both *C. sylvatica* and *C. sepium* is shown as being too wide; in fact the sinus of *C. sepium* is often so narrow that the inner edges of the two auricles overlap.

Bob Leaney

Rich, T. C. G. & Jermy, A. C. (eds.) 1998 *Plant Crib*. Botanical Society of the British Isles in association with National Museums of Wales. H. B. R. Cleal.

Sell, P.D. & Murrell, G. 2009 *Flora of Great Britain and Ireland*. Volume 3. Cambridge: Cambridge University Press.

Stace, C.A. 2019 *New Flora of the British Isles* (4th edn.). Suffolk : C & M Floristics.

PRETTY-IN-PINK PIMPERNEL

Mary and I found these pink Pimpernels alongside the usual red forms, in a sand pit/quarry on Cromer Golf Course in August 2021, where we were recording for the Cromer Green Spaces project.

There were several plants with these unusual pink flowers, but neither of us had seen this colour variant before. On circulating photos to other NFG members, it seemed that no-one else had either, except Bob Ellis - who had previously reported on a similar find on the NFG website in 2018: <https://www.norfolkflora.org.uk/node/450>

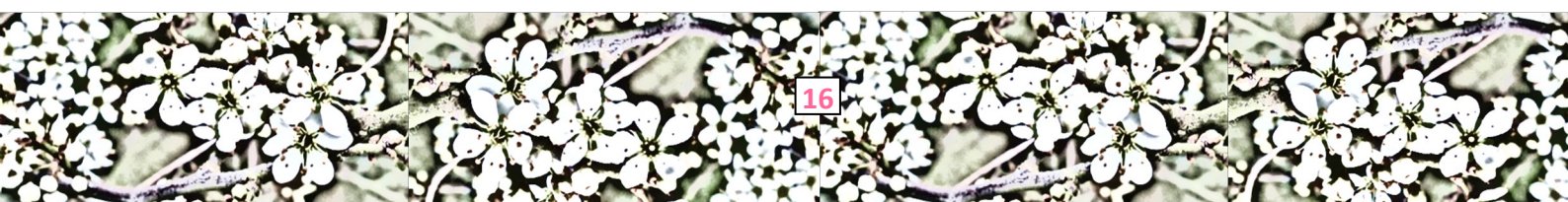
Bob's reply to my 2021 email said about our 2021 plant: "I think this is closest to var. *pallida* as the petals are largely whitish with a pink flush concentrated in the middle. In var. *carnea* the petals are fully pink. Sell and Murrell use forma rather than var. for them all so I'm not sure which is currently the accepted name. All the forma/vars (except f. *arvensis*) are scarce and (I think) unpredictable so worth a grid reference. The blue one is probably the most reported but probably because it is the most dramatic (and is confused with *Lysimachia foemina*).



Lysimachia arvensis var. *pallida* Suki Pryce

Mary and I think that our specimens look exactly like Bob's - which would make them also between *carnea* and *pallida*. But whichever they are, they're very pretty.

Suki Pryce and Mary Ghullam



DITTRICHIA GRAVEOLENS AKA STINKWEED OR STINKING FLEABANE - A FIRST FOR NORFOLK!

A population of this plant was found along the edge of the French drain on the A47 at Postwick - a very special habitat as it turns out, as it supports the very first Norfolk colony of Stinkweed.

Stinkweed is a Mediterranean species which was first recorded in the UK in 1899, but until quite recently was almost unknown until it was discovered growing along the A31 near Ringwood in Hampshire, from whence it rapidly spread along major roads in Hampshire. It remains scarce or unknown everywhere else, with a few scattered colonies in the West Midlands.

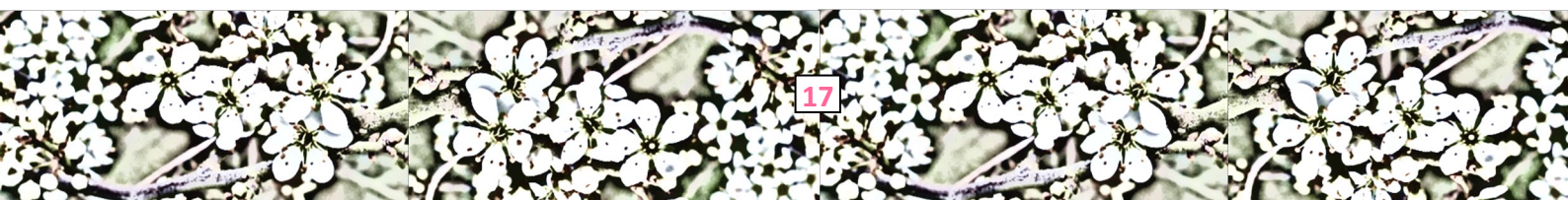
The Norfolk Stinkweed was spotted by the eagle-eyed Louis Parkerson while he was cycling to Whitlingham to see the recently discovered Ragweed *Ambrosia artemisiifolia*. He spotted a clump of plants with yellow flowers beside the A47 and stopped to take some photos as they looked very similar to a patch of plants that he had seen beside a motorway in the Midlands a few days beforehand but hadn't been able to identify at the time. After some internet searching he decided upon *Dittrichia graveolens* as a good match on both appearance and habitat and uploaded the record to iRecord, where Jo Parmenter was able to review and verify it with the help of Richard Carter, Mike Crewe and Martin Rand, who were familiar with the plant. This is the first record for Norfolk!



Dittrichia graveolens at Postwick

Jo Parmenter

Stinkweed is an annual plant of the upper saltmarsh, and the compacted, regularly salted bare ground next to the tarmac proved to be very much to its liking: our colony is over 500 plants strong, stretching along a c150m long section of the road verge from the



Postwick cycleway to the flyover; and yet curiously it does not extend into the nearby bare ground habitat next to the cycleway up to the Broadland Business Park, and so we think that it's an obligate halophyte.

It is likely to spread further along the A47, as it is now in full flower, with the spent flowers producing tiny dandelion-clocks of buff coloured seeds, each with their own tiny feathery parachute for ease of dispersal, and as our coastal climate isn't so dissimilar from that of Hampshire, we may find that it persists here.

Despite the common name, it doesn't stink - it has more of a resinous aroma and is stickily hairy, which means all sorts of roadside debris becomes attached to it. Being sticky isn't unusual in some coastal plant species - it may be a way of attracting nutrient-rich detritus to themselves.

It may be more common than we realise - but few people in their right minds walk along the edges of motorways or busy dual carriageways which provide the very heavily salted habitat it seemingly prefers. Keep an eye open if you find yourself stuck in a traffic jam, e.g. queuing for fuel on a busy main road.

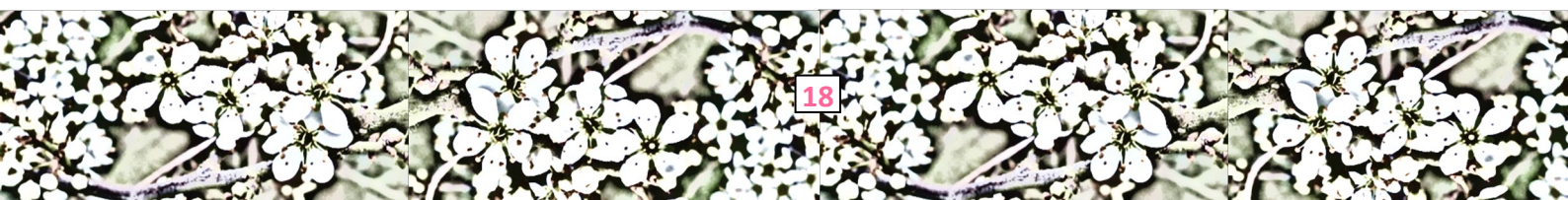
Louis Parkerson and Jo Parmenter



Dittrichia graveolens at Postwick

Jo Parmenter

PS some of you will have spotted that this article was first published in NBIS News in autumn 2021. I am aware that not everyone subscribes to the NBIS Newsletter, but if you don't, you may like to sign up, as it's a good monthly summary of nature news in Norfolk: <http://www.nbis.org.uk/ebulletins> JP



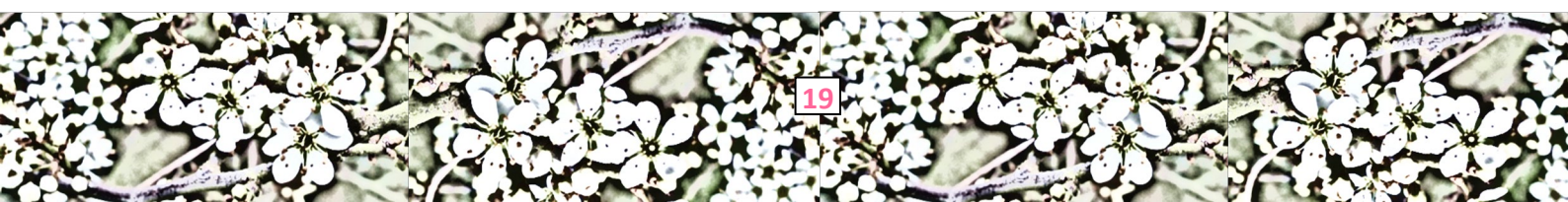
SOME PERSONAL THOUGHTS ABOUT RECORDING

The NFG in normal times has a planned programme of recording sites, the season more or less extending from April to October each year. At such meetings, depending both on the numbers of people attending, the exact purpose of the recording session and possibly the nature of the site, the group either goes out as a whole, or is split into groups of minimum two or three people. The latter arrangement obviously means more ground is covered during the course of the day, while meeting up together at the end of the day, allows notes to be compared, specimens examined and discussed and wider expertise to be disseminated across the group. However I expect virtually all the people who attend such meetings, don't just stop noting down plants or, for that matter, other groups of species, at other times or other seasons. It is well known that recording can be very addictive!! Who we record with, where we record, when we record, what we record and how we record all have implications for the nature of the subsequent data produced. This is an attempt to explore some of these implications.

Recording in a group has distinct advantages. Recording on one's own is particularly difficult for less experienced botanists/naturalists. There is often the assumption that it must be possible to identify every item to species level or perhaps these days that a photo of a plant in flower will be sufficient for exact identification. People expect to be able to attach a 'label' - a definitive answer- hence the danger of recording 'false positives'. While applied to common species, this may not skew data drastically in a particular area, if just its presence or absence is being recorded. It certainly has implications for other geographical areas or habitats, where something common in one area, may be very uncommon in another area, and so affecting distribution patterns, for example. (*Didymodon vinealis* Soft-tufted Beard-moss, while very common particularly on walls in England is much rarer up in Scotland in similar habitats).

Recording in a group, particularly when these groups at different meetings and times may alter, allows a wide range of expertise and interest to flourish. I think we all possibly have 'blind spots' or species or groups of species of special interest to us. This may apply even to the most experienced recorders. Recording solo means that some species may be repeatedly missed. In a group this is less likely to happen, although there has been research to show how easy it is to miss plant species while walking along the same stretch of road. This was pointed out in a previous [BSBI News](#). In my own experience a group of us walked along both sides of a narrow road and then back again and all of us totally missed seeing a flowering clump of *Clinopodium vulgare* Wild Basil on the verge until the return journey. This illustrates how much else may be missed, even by a group, let alone a solitary person. Occasionally a species name swims into one's subconscious when out recording and, low and behold, you then spot it. Presumably you have already seen it, but not 'clocked' it! I wonder how many times this happens.

The concentration of some people within a group on particular microhabitats or groups of species enables the possibility of more complete coverage. Some people may concentrate more on trees, which, interestingly enough, are a group of plants which often can be missed, even to the extent of omitting such species as oaks! Most of the time people tend to look towards the ground for plants rather than remembering occasionally to glance upwards into the tree canopy.



Others are happy to get down on their hands and knees to peer and scavenge around at tiny green things on the ground or sample drains. All this adds both to the experience of recording itself and to the range of data achieved.

As well as having special interests or blind spots, different people perceive things in different ways. Some recorders rely heavily on what is known as 'gizz', which can include such things as colour or smell. With experience they know something is different, but can't always explain why they know it is. Others rely more on morphological characters, which, at least, are more explicable. Within a group, both are probably at play in identification.

By recording throughout the year in all seasons and often in all weathers, plants in particular can be seen at all stages. It is not always necessary for flora to actually be in flower or even in fact alive to be able to be identified, although for certain species both flowers and fruit can be necessary. (Trying to key out some of the cotoneasters without both flowers and fruit can be a considerable challenge!). Books such as The Vegetative Key to the British Flora by Poland & Clement have encouraged botanists to extend their recording season and tackle more non-flowering specimens. In winter certain species, such as winter-green ferns, are more noticeable, being obscured by the dense summer vegetation of ditches & hedge banks. Arable 'weeds' are often more visible and easier to identify in late summer - hardly surprising when many are annuals.

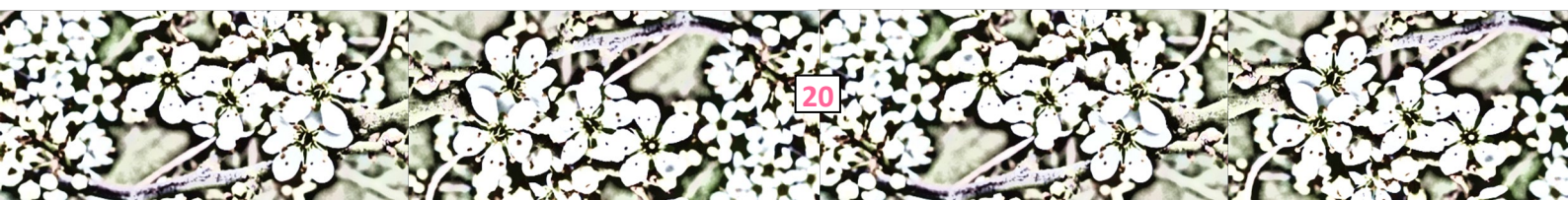
Necrobotany - that totally underrated pastime, - is also not to be sniffed at. We all practise it in some form, when we examine the dead leaves under deciduous trees. But even the dead remains of both annuals and perennial plants can provide clues to their identity. *Pimpinella saxifraga* Burnet-saxifrage is one such example. While it may be slightly controversial whether to record annuals in such a form, as they are indeed dead, they would have been alive earlier on in the season, while the above-ground died-off remains of perennials, such as creepers and bulbs, show where the plants will sprout up next season.

Recording throughout the year also means there is the opportunity to become familiar with plants or species in all their different stages. Anyone who gardens soon gets to know how to distinguish between so-called 'weeds' and garden plants. This involves being able to identify particular seedlings or young plants. This is something which is also useful for the field botanist and extends the range of potential records.



The strange allure of necrobotany:
Echium pininana at Cromer

Jo Parmenter



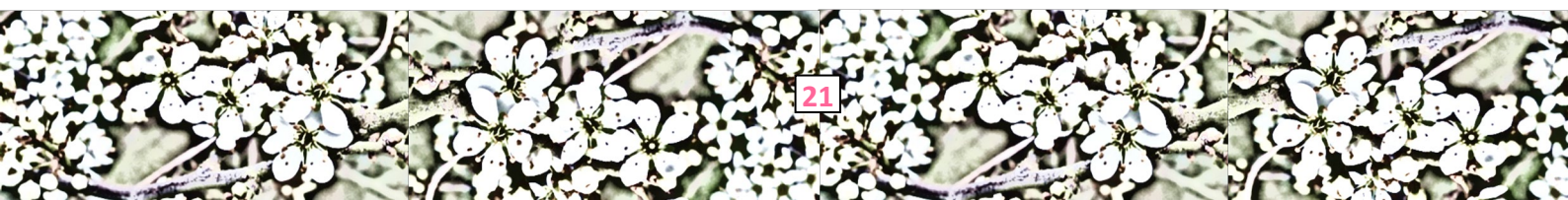
If you look at a distribution map of either a certain species or groups of species at fine scale, it may well reflect the interest of particular recorders or possibly where they live or work or even how they get to work or where they go on holiday! There are often clusters of records around a specific spot or along a particular road or railway. This reflects recorder effort. The data, of course, can be adapted to take this into account. (See, for instance, a couple of items on this theme in BSBI News no 124, September 2013 & no 128, January 2015 on this topic). Perhaps of more consequence than 'too much data' is where there is lack of data. Whenever there is national survey open to the public, such as the New Year Plant Hunt, it always seems that large areas of the country have very few participants. This may be, of course, that they are sparsely populated owing to terrain or other factors. How many people, however, are going to spend three hours searching for plants in flower at the New Year, when they may find only a couple or possibly even none? Aren't they more likely to choose, both to participate and a site where there is more chance of success? But such data or lack of it is also valuable. It is, indeed, hard to prove a negative, but at least the lack of positive data or records may well reflect real scarcity rather than that nobody has made any attempt. Long term data is, of course, especially valuable.

This is where historical data or particular interest can be so valuable. Local floras, such as Petch & Swann's and Beckett & Bull's Norfolk floras, often have lists of species thought to be extinct. This can concentrate the mind and attempts to find out if this might not be so or even if lack of historical records is a true reflection. Sometimes the relevant habitats have totally disappeared, but not always. Sometimes species have adapted to similar but 'artificial' habitats, such as has happened with so-called 'salt aliens' along main roads. At other times the spores or seeds may be lying dormant for years, until suitable conditions re-appear, as has happened with plants such as *Lythrum hyssopifolia* Grass-poly in Norfolk's resurrected ponds and possibly *Helosciadium repens* Creeping Marshwort in one of VC West Suffolk's newly-dug areas. (BSBI News no 146, January 2021).

Searching through historical records, floras, herbaria or the 150 years + of the Transactions of the Norfolk & Norwich Naturalists' Society provides a wealth of data across the board as well as a challenge to work out what species or places are being referred to when so many names have changed over time! Information in many forms is still out there to be teased out, despite the substantial research work of authors of previous floras. Being a plant detective, whether researching through historical records for a particular species or location, or tracking down some obscure subspecies on the ground, is all grist to the recording mill.

While there are many aspects to recording, possible pitfalls and room for a variety of methods and interests, the essentials for data and individual records remain the same: accuracy; sufficiency; perpetuity and some level of availability.

Mary Ghullam



FORMER PLANTS OF NORFOLK - WHERE ARE THEY NOW?

A Flora of Norfolk 'the flora' (Beckett and Bull, 1999) lists 60 higher plants that were not recorded prior to, or during the surveys for the flora. 52 of these had not been recorded since 1968. This article provides an update as to the status of these plants in Norfolk based on the more recent records mainly provided in the online atlas of the British and Irish Flora (www.brc.ac.uk/plantatlas) and lists the most likely candidates for species that might be re-discovered in the County. This will hopefully help botanists focus their efforts on certain species that are more likely to be found and where to look for them.

The main table in this article lists 53 species that were not recorded prior to, or during the surveys for the flora including species that have been re-found (or re-introduced) since the flora was published. It excludes six species listed now as extinct nationally in Stace (2019) that comprise: Three-nerved Sedge *Carex trinervis*, Jagged Chickweed *Holosteum umbellatum*, Lamb's Succory *Arnoseris minima*, Marsh Fleabane *Tephroses palustris*, Interrupted Brome *Bromus interruptus* and Violet Horned-poppy *Roemeria hybrida*. Note that the last *Carex trinervis* record was from 1886 (with a specimen in Norwich Castle Museum) was doubted to be that species but a possible hybrid with the *Carex nigra* complex (Petch and Swan, 1968). This was confirmed recently on closer examination of the herbarium specimen by Bob Leaney and Jo Parmenter as a hybrid (Jo Parmenter *pers.com*), and it is concluded *C.trinervis* is unlikely to have occurred in Norfolk. The list also excludes Clover Dodder *Cuscuta trifolium / trifolii* as not recognised as a species and now included under Dodder *Cuscuta epithimum* (Stace, 2019).

Latin and English Names are given in the table, their national distribution status and date they were last recorded. Some species listed as formerly present in the County were present after the dates given in the flora (shown as * in the table). There is a weblink to the habitat types and past or current locations, with suggestions of where to look for them or last known records. It uses a non-scientific approach on determining the likelihood of being re-found in Norfolk as follows:



Top candidate - This can include a species that is a more recent loss to the County. Suitable habitat is still present. It is an overlooked (including accessibility to habitats) or potentially difficult species to identify and hence may have been missed. It may include a species that can establish from an historic seed source or from a chance dispersal for example in newly created/disturbed habitats.



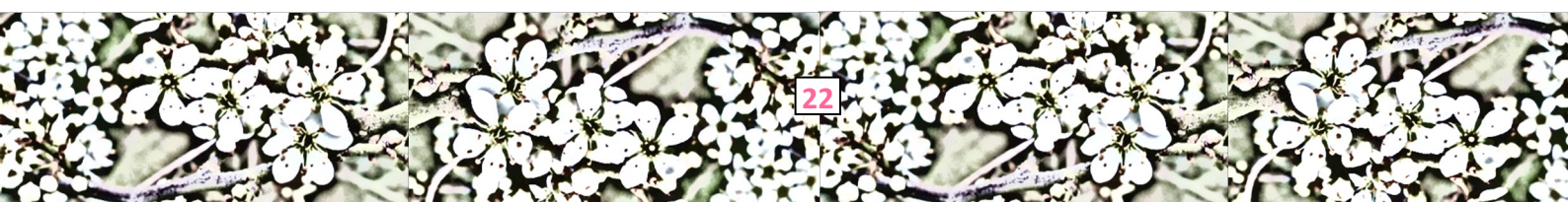
Possible - A recent or more distant loss in the County. Some limited habitats present in the County. Could be overlooked or incorrectly identified. Less likely to re-colonise without being introduced or significant changes to habitats.



Unlikely - A distant loss (>100 years). Limited habitat left in the county. A species that is unlikely to be overlooked or incorrectly identified. Unlikely to re-colonise without being introduced or significant changes to habitats.



Recorded recently - A recent record (2010 to present) as a casual or is still present.

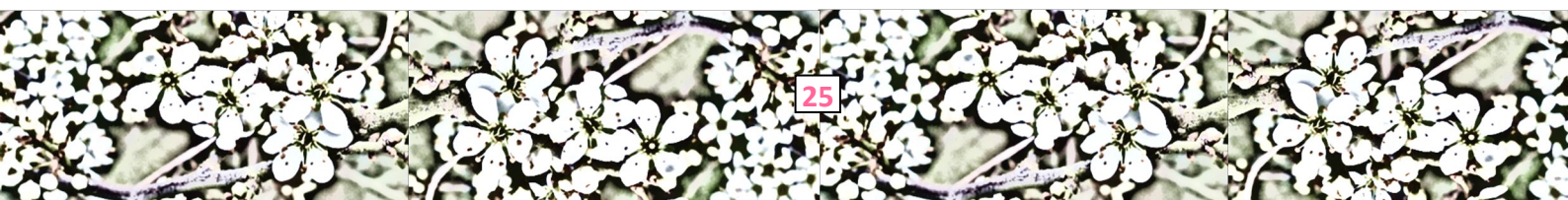


Plants listed in *A Flora of Norfolk* (Beckett & Bull, 1999) as formerly recorded in the County, their current status and likelihood of being re-found.

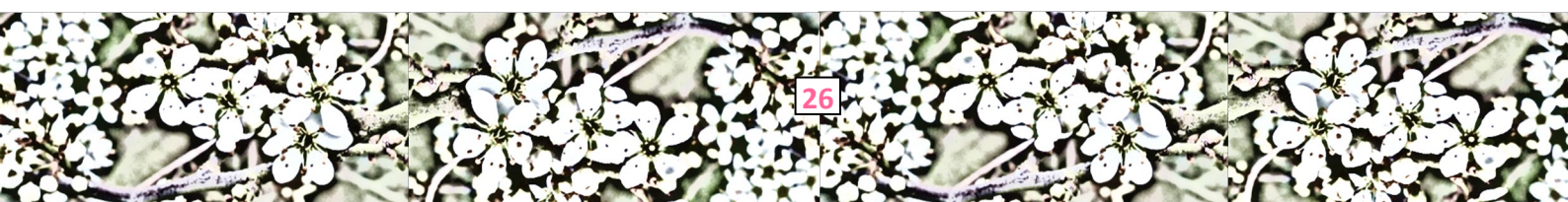
Latin Name	English Name	Last known Norfolk sighting	Distribution Status (Stace, 2019)	Likelihood of being re-found?	Habitat Notes and Locations (source <i>The Flora</i> , BRC/other weblinks)
<i>Adonis annua</i>	Pheasant's-eye	*1950 - 1969	Nationally Scarce	Possible	An annual of dry soils, chalk, disturbed ground, Breckland, mid-Norfolk Shipdham/Watton area https://www.brc.ac.uk/plantatlas/plant/adonis-annua
<i>Alchemilla glabra</i>	Smooth Lady's-mantle	1983	Common	Possible	A perennial apomict of lowland grassland, grass-heath on hillsides, roadsides and herb-rich banks kept moist by seeping water. Last recorded Wolferton, West Norfolk. https://www.brc.ac.uk/plantatlas/plant/alchemilla-glabra
<i>Alyssum alyssoides</i>	Small Alison	*1970 to 1986	Common	Top Candidate	A casual annual of arable fields, sandy tracks, pits, waste ground and docks. Breckland, west Norfolk sands. https://www.brc.ac.uk/plantatlas/plant/alyssum-alyssoides
<i>Andromeda polifolia</i>	Bog Rosemary	19th Century	Uncommon	Unlikely	A dwarf shrub of moist to wet acidic peaty ground, most abundant in lowland raised bogs. https://www.brc.ac.uk/plantatlas/plant/andromeda-polifolia
<i>Antennaria dioica</i>	Mountain Everlasting	Pre - 1930s. West of Swaffham	Common	Unlikely	A perennial of calcareous grassland. West of Swaffham and Breckland borders. Not seen in Suffolk either for 70 to 80 years. https://www.brc.ac.uk/plantatlas/plant/antennaria-dioica
<i>Aristavena setacea</i> (Deschampsia setacea)	Bog Hair-grass	1974	Nationally Scarce	Unlikely	A perennial of peaty or stony margins of shallow pools and seasonally inundated depressions on heaths, and on acid bogs. Last recorded East Winch. https://www.brc.ac.uk/plantatlas/plant/deschampsia-setacea
<i>Atriplex pedunculata</i>	Pedunculate Sea-Purslane	19th Century	Nationally Rare	Possible	An annual of coastal/saltmarsh, dune, disturbed ground. King's Lynn, Thornham, West Runton, Great Yarmouth. https://www.brc.ac.uk/plantatlas/plant/atripex-pedunculata
<i>Barbarea stricta</i>	Small-flowered Winter-cress	1983	Common	Possible	A biennial or perennial of moist places by rivers, ditches, canals and marshes, and a rare casual of waste places. Last record near River Yare, Whitlingham. https://www.brc.ac.uk/plantatlas/plant/barbarea-stricta
<i>Carex limosa</i>	Bog Sedge	1963	Common	Possible	A perennial of Sphagnum mires, margins of pools, often in standing water. Broadland, River Ant area. https://www.brc.ac.uk/plantatlas/plant/carex-limosa
<i>Chamaemelum nobile</i>	Chamomile	*2010 - 2019	Uncommon	Recorded recently	A perennial of acidic, wet, sandy commons and pastures. Recent records Crimplesham, West Norfolk https://www.brc.ac.uk/plantatlas/plant/chamaemelum-nobile

Latin Name	English Name	Last known Norfolk sighting	Distribution Status (Stace, 2019)	Likelihood of being re-found?	Habitat Notes and Locations (source The Flora, BRC/other weblinks)
Chenopodium vulvaria	Stinking Goosefoot	19th Century	Nationally Rare	Top Candidate	An annual of beaches, dunes, coastal cliffs e.g. Great Yarmouth. Recorded more recently (pre-1999) close to the border in Suffolk. https://www.brc.ac.uk/plantatlas/plant/chenopodium-vulvaria
Cicendia filiformis	Yellow Centaury	1928	Nationally Scarce	Unlikely	An annual of open, damp base-rich heathland. West Norfolk. https://www.brc.ac.uk/plantatlas/plant/cicendia-filiformis
Coeloglossum viride	Frog Orchid	1954	Common	Unlikely	A perennial of chalk grassland, pits and dunes https://www.brc.ac.uk/plantatlas/plant/coeloglossum-viride
Cuscuta epilinum	Flax Dodder	19th Century	"Very rare since 1985"	Possible	An annual, rarely perennial, rootless twining holoparasite on <i>Linum usitatissimum</i> (common flax), Flax/linseed fields? https://alienplantsbelgium.myspecies.info/content/cuscuta-epilinum
Cuscuta europaea	Greater Dodder	*2010-present	Nationally Scarce	Recorded recently	An annual, rarely perennial, rootless twining holoparasite on nettle/hops, near water, e.g. Welney, West Norfolk Fens. https://www.brc.ac.uk/plantatlas/plant/cuscuta-europaea
Epipactis purpurata	Violet Helleborine	1910	Uncommon	Unlikely	A perennial of densely shaded beech/hornbeam woods https://www.brc.ac.uk/plantatlas/plant/epipactis-purpurata
Eriophorum gracile	Slender Cottongrass	1959	Nationally Scarce	Unlikely	A perennial of bogs, transitional mires, poor fens and on the edge of Alder carr. Last recorded in Broadland Acle/Damgate area https://www.brc.ac.uk/plantatlas/plant/erriophorum-gracile
Filago pyramidata	Broad-leaved Cudweed	*1987-1999	Nationally Scarce	Possible	An annual of chalk quarries and arable on calcareous or acidic sandy soils. Last recorded Hockering, mid-Norfolk https://www.brc.ac.uk/plantatlas/plant/filago-pyramidata
Herminium monorchis	Musk Orchid	1914	Nationally Scarce	Possible	A perennial of calcareous grassland. West of Swaffham, Castle Acre, quarry floors/coastal. https://www.brc.ac.uk/plantatlas/plant/herminium-monorchis
Himantoglossum hircinum	Lizard Orchid	*2010 to present	Nationally Scarce	Recorded recently	A perennial of chalk grassland, roadsides and quarries. Recent records Drayton, Norwich and SW Norfolk. https://www.brc.ac.uk/plantatlas/plant/himantoglossum-hircinum
Huperzia selago ssp. selago	Fir Clubmoss	1903	Common	Unlikely	An evergreen perennial of acidic sandy or peaty grassland, possible in sand quarries in West Norfolk. https://www.brc.ac.uk/plantatlas/plant/huperzia-selago
Hypochaeris maculata	Spotted Cat's-ear	1904	Nationally Rare	Unlikely	A perennial of free-draining, base-rich substrates, Breckland area. https://www.brc.ac.uk/plantatlas/plant/hypochaeris-maculata

Latin Name	English Name	Last known Norfolk sighting	Distribution Status (Stace, 2019)	Likelihood of being re-found?	Habitat Notes and Locations (source The Flora, BRC/other weblinks)
Iberis amara	Wild Candytuft	*1987-1999	Nationally Scarce	Possible	An annual/biennial of arable, south facing chalk slopes, bare areas, rabbit scrapes, quarries. https://www.brc.ac.uk/plantatlas/plant/iberis-amara
Jacobaea paludosa (Senecio paludosa)	Fen Ragwort	*2000-2009	Nationally Rare	Recorded recently	A perennial of tall herb fen and ditches. Re-introduced at numerous sites including Little Ouse/Hockwold Fens. https://www.brc.ac.uk/plantatlas/plant/senecio-paludosus
Linum perenne	Perennial Flax	*1987-1999	Nationally Scarce	Possible	A perennial of grassland, dry banks and roadsides, North Norfolk coast and Brandon area. https://www.brc.ac.uk/plantatlas/plant/linum-perenne
Lycopodiella inundata	Marsh Clubmoss	*2010 to present	Nationally Scarce	Recorded recently	A perennial of wet, bare, peaty or sandy margins of lakes, pools, flushes and trackways. Recently recorded Buxton Heath, Leziate and Horsford. https://www.brc.ac.uk/plantatlas/plant/lycopodiella-inundata
Melampyrum arvense	Field Cow-wheat	19th Century	Nationally Rare	Unlikely	An annual hemiparasite of grass banks and arable margins. https://www.brc.ac.uk/plantatlas/plant/melampyrum-arvense
Mentha pulegium	Pennyroyal	1961	Uncommon	Unlikely (as a native).	A short-lived perennial of damp grassland/heathland often by the sea. Increasing as a grass-seed contaminant with two recent records in Norfolk. https://www.brc.ac.uk/plantatlas/plant/mentha-pulegium
Mertensia maritima	Oysterplant	1931	Nationally Scarce	Unlikely (as a native)	A perennial of beaches, earth and rocks tipped at the coast. Formally North Norfolk Coast. Found once as a garden throw-out/escape in Sheringham (in 2015), but not persisting. https://www.brc.ac.uk/plantatlas/plant/mertensia-maritima
Neotina ustulata (Orchis ustulata)	Burnt Orchid	19th Century	Nationally Scarce	Unlikely	A perennial of short grazed calcareous grassland and dunes. Possible in Breckland, coastal dunes, sand quarries? https://www.brc.ac.uk/plantatlas/plant/orchis-ustulata
Ophrys insectifera	Fly Orchid	1930s	Uncommon	Unlikely	Calcareous soils in open deciduous woodland and scrub, chalk-pits, disused railways, spoil heaps. https://www.brc.ac.uk/plantatlas/plant/ophrys-insectifera
Oxybasis chenopodioides (Chenopodium chenopodioides)	Saltmarsh Goosefoot	*2010 to 2019	Nationally Scarce	Recorded recently	An annual of dry brackish mud and saltmarshes, West Norfolk. Potential to occur in the East, Breydon water area. https://www.brc.ac.uk/plantatlas/plant/chenopodium-chenopodioides
Oxybasis glauca (Chenopodium glaucum)	Oak-leaved Goosefoot	*2010 - 2019	Nationally Scarce	Recorded recently	An annual of waste ground, manure heaps, damp ground near the sea, docks, tips. Recent record Burnham Overy Staithe https://www.brc.ac.uk/plantatlas/plant/chenopodium-glaucum
Oxybasis urbica (Chenopodium urbicum)	Upright Goosefoot	*1987 - 1999	Nationally Rare	Top Candidate	A casual annual of nutrient-rich cultivated and waste ground https://www.brc.ac.uk/plantatlas/plant/chenopodium-urbicum



Latin Name	English Name	Last known Norfolk sighting	Distribution Status (Stace, 2019)	Likelihood of being re-found?	Habitat Notes and Locations (source The Flora, BRC/other weblinks)
<i>Phelipanche ramosa</i> (<i>Orobanche ramosa</i>)	Hemp Broomrape	19th Century	Not in UK since 1928	Unlikely	Possible if hemp is grown more widespread (and organically) in future?
<i>Potamogeton praelongus</i>	Long-stalked Pondweed	*2010 to present	Uncommon	Recorded recently	A perennial of deep >1m mesotrophic water in lakes, rivers, canals and major drains. Recently recorded River Bure near Coltishall and River Wissey near Stoke Ferry, also the River Waveney and River Thet post 2020. https://www.brc.ac.uk/plantatlas/plant/potamogeton-praelongus
<i>Potentilla verna</i> (<i>P. neumanniana</i>)	Spring Cinquefoil	1955	Nationally Scarce	Unlikely	An apomictic perennial of dry chalk grassland https://www.brc.ac.uk/plantatlas/plant/potentilla-neumanniana
<i>Primula elatior</i>	Oxlip	1987-1999	Nationally Scarce	Possible	A perennial of woodlands on damp chalky boulder-clay soils. https://www.brc.ac.uk/plantatlas/plant/primula-elatior
<i>Pulicaria vulgaris</i>	Small Fleabane	*1930 to 1949	Nationally Rare	Unlikely	An annual of sandy places flooded in winter/ponds, horse grazed. Broadland. https://www.brc.ac.uk/plantatlas/plant/pulicaria-vulgaris
<i>Pulsatilla vulgaris</i>	Pasqueflower	19th Century	Nationally Scarce	Unlikely	A perennial, possible as a garden escape. https://www.brc.ac.uk/plantatlas/plant/pulsatilla-vulgaris
<i>Ranunculus omiophyllus</i>	Round-leaved Crowfoot	19th Century	Common	Possible	An annual or short-lived perennial of wet soils, pond margins, acidic soils. https://www.brc.ac.uk/plantatlas/plant/ranunculus-omiophyllus
<i>Ranunculus parviflorus</i>	Small-flowered Buttercup	1894	Common	Possible	An annual of dry disturbed ground, coastal, quarries, building sites around Norwich? https://www.brc.ac.uk/plantatlas/plant/ranunculus-parviflorus
<i>Scirpus sylvaticus</i>	Wood Club-rush	*2010 - 2019	Common	Recorded recently	A perennial of wet woodlands, wet pastures, river margins. Recent record Gaywood River, West Norfolk https://www.brc.ac.uk/plantatlas/plant/scirpus-sylvaticus
<i>Scleranthus perennis</i> ssp. <i>prostratus</i>	Perennial Knawel	*2010 to present	Nationally Rare	Recorded recently	A biennial or short-lived perennial of acidic sandy soils in open grassland and bare areas, Re-introduced, Breckland area only. https://www.brc.ac.uk/plantatlas/plant/scleranthus-perennis-subsp-prostratus
<i>Spartina maritima</i>	Small Cord-grass	*2010 - 2019	Nationally Scarce	Recorded recently	A perennial of tidal mudflats and bare ground behind sea walls. Recorded at Brancaster https://www.brc.ac.uk/plantatlas/plant/spartina-maritima
<i>Teucrium scordium</i>	Water Germander	19th Century	Nationally Rare	Unlikely	A perennial of dune-slack pools, reed-fen, clay-pits and the banks of rivers, ponds and ditches. Formerly West Norfolk Fens. https://www.brc.ac.uk/plantatlas/plant/teucrium-scordium



Latin Name	English Name	Last known Norfolk sighting	Distribution Status (Stace, 2019)	Likelihood of being re-found?	Habitat Notes and Locations (source <i>The Flora</i> , BRC/other weblinks)
<i>Thesium humifusum</i>	Bastard-toadflax	*1970-1986	Nationally Scarce	Possible	A hemiparasitic perennial on short, grazed, chalk grassland. Rarely on clays or calcareous sandy soils near the coast. Last records south of Cockley Cley, West Norfolk and Breckland. https://www.brc.ac.uk/plantatlas/plant/thesium-humifusum
<i>Trifolium squamosum</i>	Sea Clover	1830	Nationally Scarce	Possible	An annual of upper saltmarshes, tidal creeks, brackish meadows. https://www.brc.ac.uk/plantatlas/plant/trifolium-squamosum
<i>Utricularia intermedia</i>	Intermediate Bladderwort	*2010-2019	Uncommon	Recorded recently	A perennial, insectivorous herb of shallow, oligotrophic water in acidic and peaty sites. Recent record near Catfield/River Ant. Previous records West Norfolk, e.g. Roydon. https://www.brc.ac.uk/plantatlas/plant/utricularia-intermedia-sl
<i>Valerianella rimosa</i>	Broad-fruited Cornsalad	*2010-2019	Uncommon	Recorded recently	An annual of arable, spoil tips, quarries. A recent record south of Briston, North Norfolk. https://www.brc.ac.uk/plantatlas/plant/valerianella-rimosa
<i>Veronica verna</i>	Spring Speedwell	*2010-present	Nationally Rare	Recorded recently	An annual of sandy soils, occurring in uncultivated short grassland and rabbit warrens. Re-introduced in a few places in Breckland, e.g. Weeting Heath. https://www.brc.ac.uk/plantatlas/plant/veronica-verna
<i>Viola stagnina</i> (<i>V. persicifolia</i>)	Fen Violet	1936	Nationally Rare	Unlikely	A perennial of damp peaty or clayey, base-rich soils in seasonally wet fens. Formerly West Norfolk Fens. https://www.brc.ac.uk/plantatlas/plant/viola-persicifolia
<i>Vulpia unilateralis</i>	Mat-grass Fescue	1979	Nationally Scarce	Possible	Annual of bare stony ground, dry banks and grassy tracks on chalk and limestone; also on railway ballast, walls and rubbish tips. Last seen Sturston Warren and Riddlesworth West Norfolk. https://www.brc.ac.uk/plantatlas/plant/vulpia-unilateralis

Fourteen species have been refound since the work undertaken for the 1999 flora, including Lizard Orchid *Himantoglossum hircinum* (Photo 1), Wood Club-rush *Scirpus sylvaticus*, Saltmarsh Goosefoot *Oxybasis chenopodioides*, Oak-leaved Goosefoot *Oxybasis glauca* and re-introductions to Norfolk from local populations in Suffolk / Cambridgeshire of three species; Fen ragwort *Jacobaea paludosa*, Perennial knawel *Scleranthus perennis* Ssp.*prostratus* and Spring Speedwell *Veronica verna*.

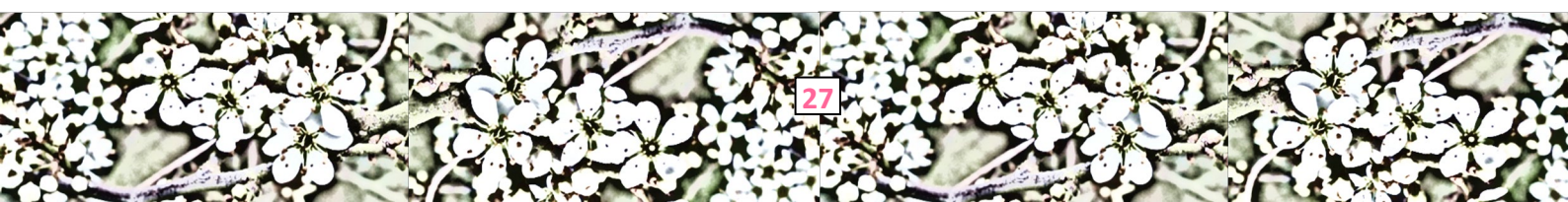


Photo 1. Lizard Orchid *Himantoglossum hircinum*



Source: Mike Padfield (Drayton, Norwich 2015)

Photo 2. Stinking Goosefoot *Chenopodium vulvaria*



Source: Rolf Wißkirchen, CC BY-SA 3.0, via Wikimedia Commons

Of those species not yet refound there are three top candidates to look for; Stinking Goosefoot *Chenopodium vulvaria*, Upright Goosefoot *Oxybasis urbica* and Small Alison *Alyssum alyssoides*. Stinking Goosefoot *Chenopodium vulvaria* (Photo 2) is one of the top candidates as it has been recorded more recently close to the border in Suffolk and may turn up on beaches or dunes particularly around Great Yarmouth. Upright Goosefoot *Oxybasis urbica* (Photo 3) is another top candidate as recorded fairly recently (1990s) and is a casual annual of nutrient-rich cultivated (of which Norfolk has plenty) and waste ground. Small Alison was recorded in the 1980s and is a casual annual of arable fields, sandy tracks, pits, waste ground and docks. It is present in Suffolk and could turn up in Breckland or other suitable habitat in West Norfolk.

Photo 3. Upright Goosefoot *Oxybasis urbica*

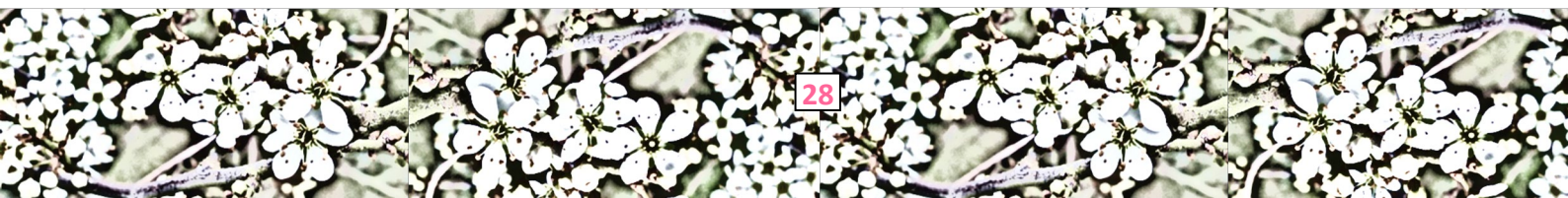


Source: Trosanzenvoet, Saxifraga-Rutger Barendse

Photo 4. Fly Orchid *Ophrys insectifera* unlikely to be found?



Source: Mike Padfield



There are 16 possible and 20 unlikely species that have yet to be re-found. Of the latter, two of these species are unlikely to be recorded as natives but have been recorded as either rare grass seed contaminants (*Pennyroyal Mentha pulegium*) or rare garden escapes/throw-outs (Oysterplant *Mertensia maritima*).

Survey effort may be best deployed to find the three top candidates and the 16 possible species, as well as looking for new sites for recently recorded species listed in the table. There are also other rare/scarce species still found in Norfolk for which recent population records may be lacking and also worth a visit, including known (Holkham Dunes) and historic sites (Edgefield Woods) for Creeping Lady's-tresses *Goodyera repens*. Recently re-found species such mudwort *Limosella aquatica* and grass-poly *Lythrum hyssopifolia* may turn up in new locations such as restored field ponds, and potential new balancing ponds around the Norwich Northern Distributor Road?

The 20 unlikely to be found species should still be on our radars as some may turn up as casuals but specific searches for these are probably best deployed elsewhere. Use the descriptions and links in the table and also local knowledge to help track down the locations to check where they were last found (often with repeated visits throughout the year) and check other suitable locations. For particular species that depend on specific habitat requirements, the habitat should either still be present or else a newly created habitat (e.g. a quarry, restored heathland), but note that many species may survive in field margins, disturbed ground and roadside verges and may be short lived annuals or sporadic in their appearance. The habitat of some species may be difficult or not possible to access (e.g. saltmarsh, deep wetlands, quarries, cliffs) so alternative survey methods (e.g. by boat or supervised access) might be needed.

Many of these species are critically endangered or threatened (Stroh *et al.*, 2014) and are of conservation value. The habitat where they are located may be important and management may be required to protect existing and previously unknown colonies of these species. It is therefore important that species records should be sent to the relevant county recorders for East or West Norfolk and if needed BSBI referees, with the landowner notified of any important finds. Information to include recorder name, date, population estimate/area covered, grid references, photos and where permitted or required a specimen collected.

While it is good to see some recent records of species not recorded in the 1999 flora there are a number of species now classed as Extinct and many others with little hope of being re-found. There are also many species waiting to be re-discovered in Norfolk and new species to the County, (particularly aliens) as well as new sites for existing species, so there is still plenty to look for which is half the fun of plant recording.

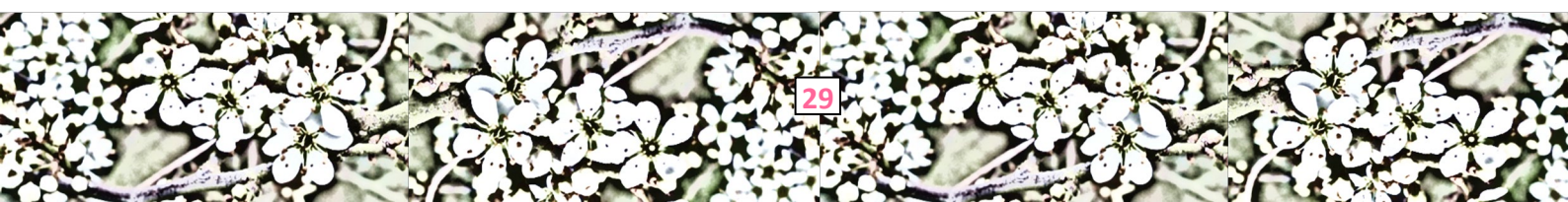
Mike Padfield

Beckett, G & Bull, A. (1999) *A Flora of Norfolk*.

Stace, C. (2019) *New Flora of the British Isles*, 4th edition.

Stroh, P.A. et al (2014) A Vascular Plant Red List for England. https://bsbi.org/wp-content/uploads/dlm_uploads/England_Red_List_1.pdf

Online atlas of the British and Irish Flora <https://www.brc.ac.uk/plantatlas/>



MY FAVOURITE ROADSIDE NATURE RESERVE: METTON RNR

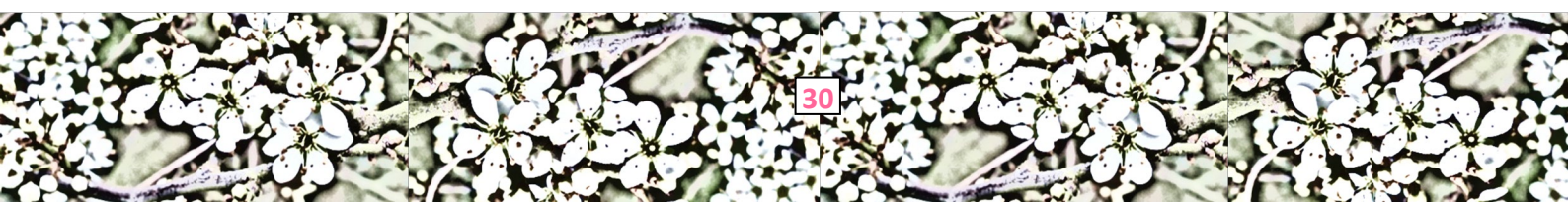
Metton RNR comprises quite narrow light-soil banks on both sides of the lane running downhill from the B1436 towards Metton, and has arable land on either side. It is best known for its wonderful display of *Saxifraga granulata* Meadow Saxifrage in late spring, but is also rich in other taxa - some 74 species in all; and this is perhaps all the more notable because of the intensively farmed land by which it's flanked.

I have visited and admired the site since my early days in North Norfolk; and surveyed it informally in 2013. I did so again in 2016 with the help of fellow NWT surveyor Sally Sharman, helped by Chris Roberts' list from 2010, when she had surveyed it officially for Norfolk County Council (NCC). The table below shows taxa of particular interest, with some informal notes. Well worth a visit in Meadow Saxifrage season.

Taxa of Particular Interest at Metton RNR (T = NCC Target species for the site)

<i>Asplenium adiantum-nigrum</i> T	Black Spleenwort	Not found in any of these surveys
<i>Agrimonia eupatoria</i>	Agrimony	
<i>Alchemilla</i> sp (prob <i>A. mollis</i>)	Lady's-mantle	Not seen since 2013
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	
<i>Centaurea nigra</i>	Common Knapweed	
<i>Centaurea scabiosa</i> T	Greater Knapweed	
<i>Galium verum</i>	Lady's Bedstraw	
<i>Hylotelephium telephium</i>	Orpine	Increasing? Espec on W side '21
<i>Hypericum perforatum</i>	Perforate St John's Wort	
<i>Knautia arvensis</i>	Field Scabious	
<i>Lathyrus pratensis</i>	Meadow Vetchling	
<i>Leucanthemum vulgare</i>	Ox-eye Daisy	
<i>Lotus corniculatus</i>	Common Bird's-foot Trefoil	
<i>Ononis repens</i> T	Common Restharrow	
<i>Orobanche elatior</i> T	Knapweed Broomrape	At least 23 spikes '21
<i>Pimpinella saxifraga</i>	Burnet-saxifrage	Quite plentiful '21
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	
<i>Rumex acetosa</i>	Common Sorrel	
<i>Rumex acetosella</i>	Sheep's Sorrel	
<i>Saxifraga granulata</i> T	Meadow Saxifrage	Continues to thrive '21
<i>Silene vulgaris</i>	Bladder Campion	
<i>Thalictrum minus</i> T	Lesser Meadow-rue	Not on 2010 list, seen '13, '16, '21
<i>Trisetum flavescens</i>	Yellow Oat-grass	

Suki Pryce

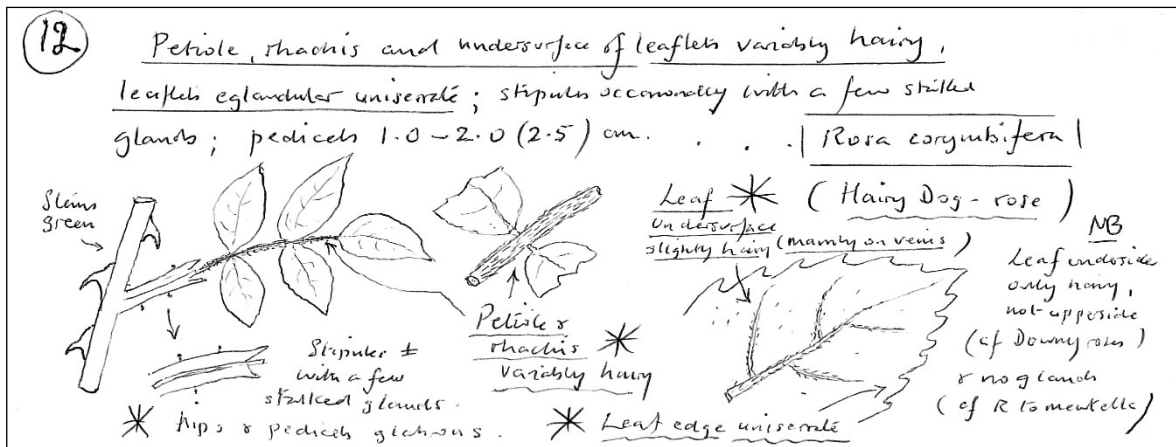


ROSE WORKSHOP AT WHEATFEN

Bob Leaney and Alex Prendergast led a fascinating and informative workshop on Norfolk Roses in September at Wheatfen. Bob Leaney has since updated the learning materials to produce an ID guide which can be obtained from the Norfolk Flora Group website: https://www.norfolkflora.org.uk/pdf/Roses_RML_key_2021.pdf.

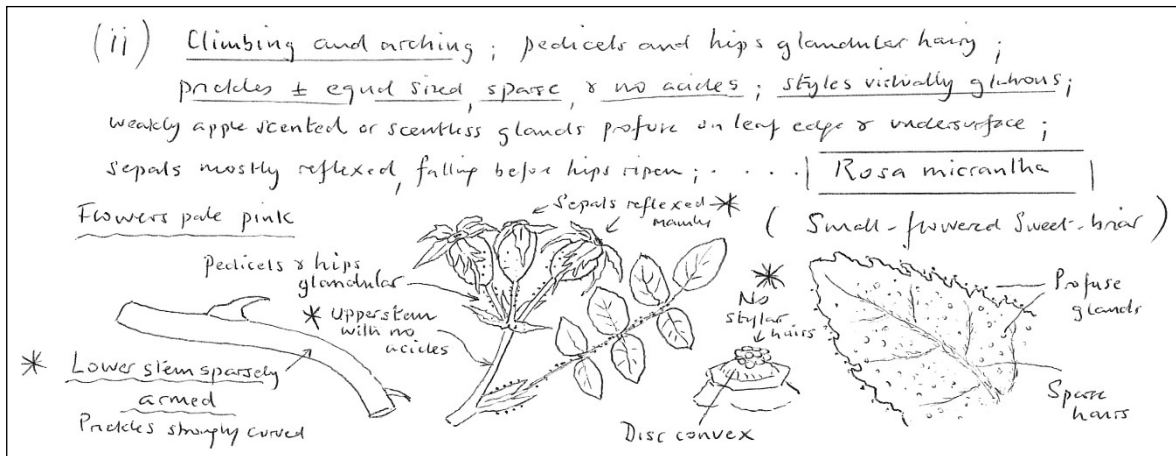
After a morning of study we were keen to use the knowledge we had gained on prickles, sepals (posture and glands) and leaves (texture, odour, colour and serration), so armed with Bob's illustrated key and mindful of his "spotting characteristics" we took a walk around Wheatfen to see how many rose species we could find.

We walked down the path between Home Marsh and Wood Carr and spotted our first rose. Starting at the beginning of the key, we checked the styles which were not fused into a column and the ripe hips were red. We then examined mature prickles- these were curved. Next we checked the leaf characteristics and the presence and location of glands. The leaves were hairy on the undersurface and uniserrate and there were only a few glands on the petioles. Considering the combination of all these characters, this plant keyed out as Hairy Dog-rose *Rosa corymbifera*

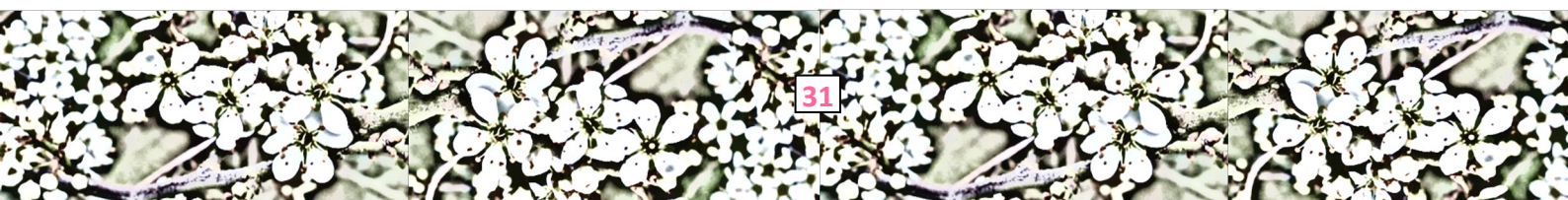


Excerpt from Bob Leaney's illustrated key

Walking a bit further along the path, Alex drew our attention to a large plant arching and climbing up into a tree. We followed a similar route in the key but this time ending up at the Sweet-briars. These have scented glands on the hairy leaf undersurface and glands on the pedicels and hips. This plant keyed out as Small-flowered Sweet-briar *Rosa micrantha*.



Excerpt from Bob Leaney's illustrated key



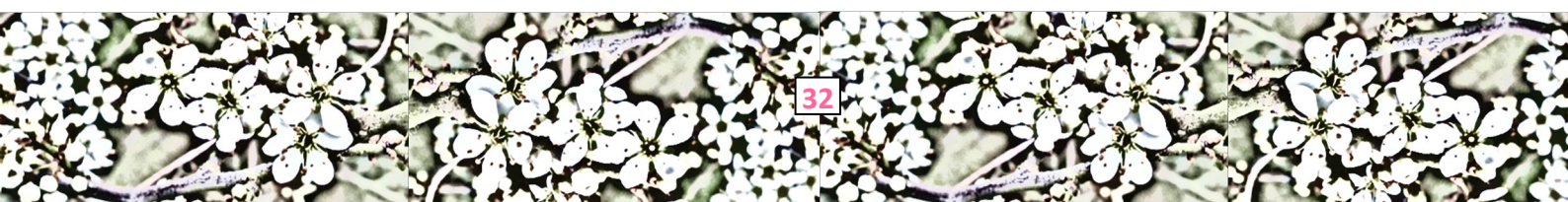
Then things became a bit more complicated. The next two plants appeared to be intermediate between species, suggesting they were hybrids, which is not an uncommon phenomenon for roses. As we did not feel confident recording hybrids we decided to send them off to Roger Maskew who is the BSBI referee for roses. We took samples of stems that included several sprays of leaves and some hips. These were carefully placed in a plastic bag, together with a mature prickle and put in the fridge as soon as we got home. They were then posted the next morning so they could reach the referee in the best possible condition. We were very pleased to have a reply in the post a few days later which included with the following identifications together with this tip: "Always try and remember to consider *all* the characters when attempting a determination, and not focus on just one or two"

Specimen 1. We had keyed this out to the *Rosa canina* group. Although it was very close to *R. canina*, there were a few glands typical of *R. squarrosa* and the leaves were irregularly uniserrate, with some tending towards biserration. We had come to the conclusion that this was possibly *Rosa x insignis*, the hybrid between *R. canina* and *R. squarrosa*. This was confirmed by the referee who commented that "you did well to recognise what is probably a widespread but overlooked hybrid"

Specimen 2. We were almost back at the study centre when we spotted a rose plant on the right hand side of the path just past the cottage. This one really confused us as it had small hips and strongly hooked prickles, characteristic of *Rosa tomentella*. It was uniserrate with hairs on the underside of the leaf, characteristic of *R. corymbifera*. There were a few glands at the bottom of the hips, which confused us. This was understandable as the Rose referee said "With this combination of characters we are only realistically left with a choice between *R. corymbifera* and the hybrid *R. canina x R. tomentella (R. x dumetorum)* and separating them can often be quite a problem. However, the rather small hips and strongly hooked prickles with long acuminate points, both *R. tomentella* characters, suggest it is the hybrid. The only problem is the few glands at the tops of the pedicels and the base of the hips, which do not occur in either of the parent species. So my conclusions are, this is probably *R. x dumetorum* with slight introgression from something glandular". Therefore we were unable to name this rose for recording purposes.

We all gained a much better understanding of these lovely plants and how to best go about recording them. We learnt that many of the roses we encounter can be identified to species level but also that we are likely encounter hybrids and some plants which have such a mix of characteristics that they cannot be identified. We look forward to a new season of recording looking carefully at rose plants and using Bob Leaney's illustrated key, which will hopefully contribute to a more comprehensive picture of the distribution of *Rosa* species throughout Norfolk.

Janet Higgins & Bob Ellis



LUNCHSPOT OF THE YEAR, 2021

We botanists are rather discerning when it comes to selecting just the right place to have lunch. The process begins about an hour and a half after we start the day's recording, at around 1215, when someone (and its almost always Mary) mentions lunch, and continues until we find somewhere suitable. The factors involved in the selection process include shade if its very hot; sunshine if it's a cooler day; shelter from wind or rain; and, ideally, somewhere to dangle our little legs, as some of us find it less easy these daysto rise to the vertical after spending time seated or semi-horizontal.

We reckoned that this location on Beeston Common with a well-appointed pill-box and view of Beeston Bump was as close to idyllic as we are ever likely to find!



Botanists and Beeston Bump

Mike Padfield

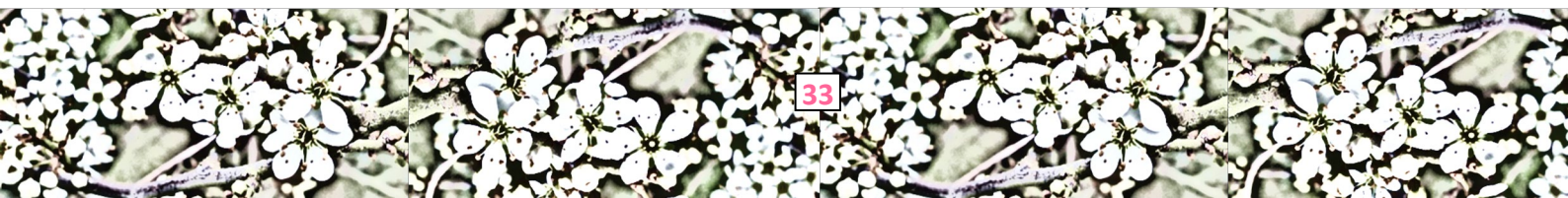
So I am sure you are all now wondering about the less-than-idyllic locations. We had some very strong contenders, but the 'second from worst' spot goes to "The Portacabin", where some of our number sought shelter from the wind, alongside a long-dead rabbit and the bin.

Fortuitously, the rabbit was sufficiently dead that there was no discernible pong.



The Portacabin

Jo Parmenter



The same cannot be said of "Duck-farm View" I had never thought to use the male cones of *Cedrus deodar* in quite this way, but never let it be said that botanists are not innovative.



A dry, if rather smelly spot beneath the trees

Jo Parmenter

Jo Parmenter

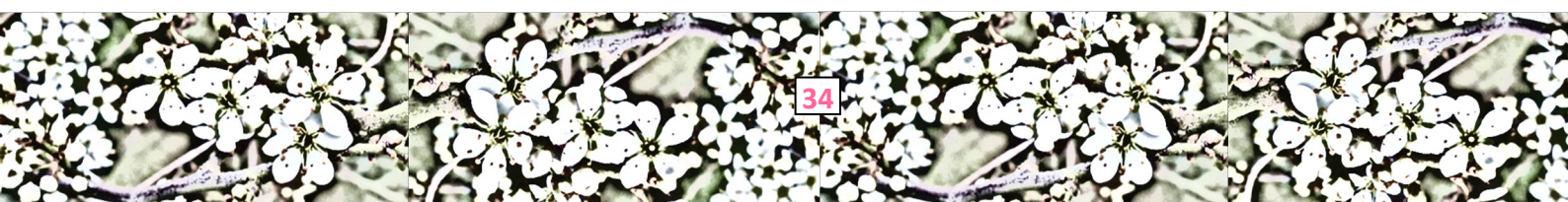
EXERCISE YOUR BOTANICAL SKILLS AT HOME IN YOUR COFFEE BREAK

<https://gift.uni-goettingen.de/shiny/BotanizeR/>

The BotanizeR Shiny application (Weigelt et al. 2021) allows you to test and improve your botanical knowledge for a defined set of species based on a defined set of images and ecological and morphological descriptions. You can choose from six different lists: the complete flora of Britain and Ireland (UK_Ireland - 2945 species), the flora of Sussex (UK_Ireland_Sussex - 706 species), the complete flora of Germany (Germany - 4639 species), species common in forests and grasslands around Göttingen, Germany (Germany_BioDiv 174 species), woody species from Germany with additional images of buds (Germany_winter - 128 species), forest indicator species from Germany (Germany_summer 214 species). So there is plenty to keep you busy throughout the year and an additional interest for me is that I can practice my German botanical skills. The quality of the pictures is variable but there is lots of additional information that can help with the identification such as family, ecology and UK maps. There is even English name, but maybe that is cheating, however you still have the challenge of spelling the species name correctly.

Janet Higgins

Weigelt, P., Denelle, P., Brambach, F. & Kreft, H. (2021) A flexible R package with Shiny app to practice plant identification for online teaching and beyond. *PLANTS, PEOPLE, PLANET*, <https://doi.org/10.1002/ppp3.10226>.



NORFOLK FLORA GROUP PUB OF THE YEAR, 2021

... and now it's time to reveal the NFG Pub of the Year for 2021!!!! (or at least the second half of it, when we finally got to go to the pub again after a long dry spring).

We once again scored pubs on a total of 10 categories, with a maximum score of 5 and a minimum score of 0 available for each. The total was divided by the number of categories which we were able to score (not everyone needed to go the toilet and a pandemic is not the time to force them to go against their will).

The categories this year also included COVID safety: some pubs were extremely careful, and some had even gone to the trouble and expense of building outdoor shelters so that we could sip our beverages without getting wet; others rather less so. However, running a pub in these times is far from easy, and I think all that managed to stay open and serve drinks deserve a round of applause.

On a couple of occasions we ended up in a different pub to the one we'd planned to be in, due to closures and reduced opening hours, and once we landed in Richard's garden, so you will find that the final list of pubs visited doesn't match the programme. We managed to successfully score 12 pubs this year despite these set-backs.

I have not provided details of the scoring this time around, as I think the pubs we scored early on in the field season took a little while to get up to speed and running smoothly again after a period of closure, and I don't want to be unfair to any of them in about any minor lapses in a quality pub experience during what must have been a very difficult period. This was illustrated by the Larling Angel, which we visited twice, and by the second time it had a purpose-built green oak garden shelter which sent its rating soaring.

In third place, we have the [The Angel, Larling](#).

In second place, we have the [The Chequers, Hainford](#).

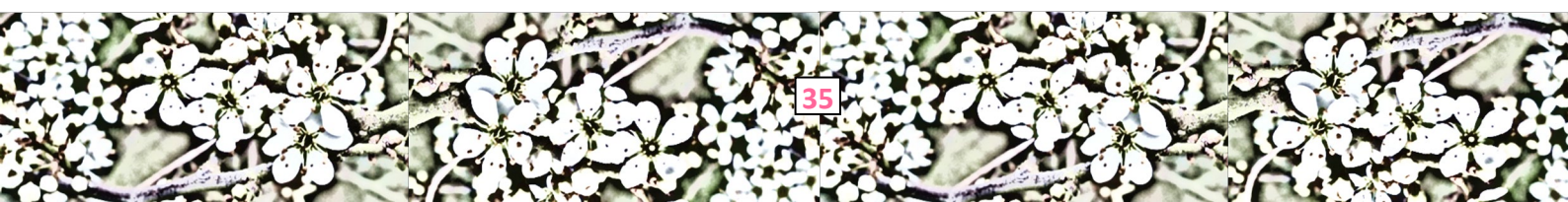
In first place, the winner of the NFG Pub of the Year Award for 2021 is ...

******* [THE WHITE LION, WHEATACRE](#) *******

The White Lion re-opened quite recently following a period of closure and scored well due to friendly staff and a large, attractive garden.

Thank you all for taking part and to the various pubs for managing to keep up the good work under constantly changing circumstances.

Jo Parmenter

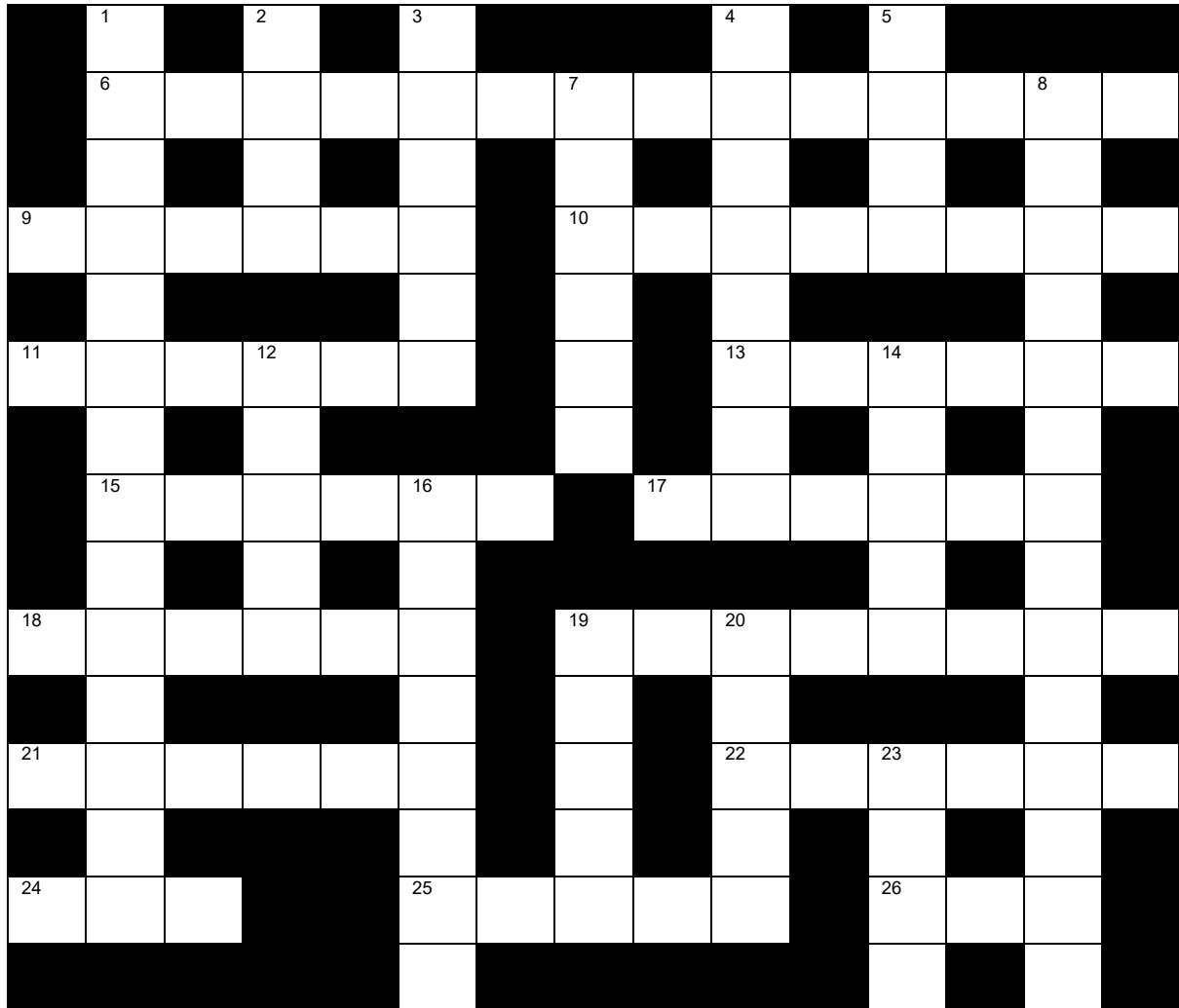


NORFOLK FLORA GROUP CROSSWORD 2022

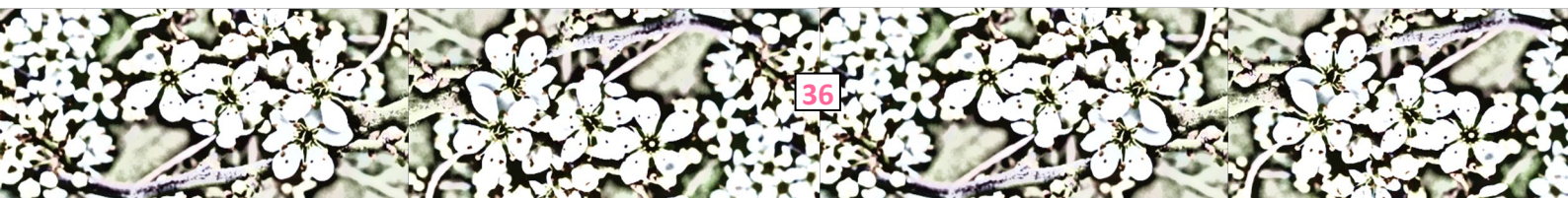
It's arrived!!

Herewith Sedge Warbler's latest creation. I am told that he's currently reclining in a deckchair somewhere in sub-Saharan Africa, so this might have exhausted his little feathery brain. Prepare to be boggled.... JP

THE CROSSWORD



HANDY SPACE FOR SCRIBBLINGS:



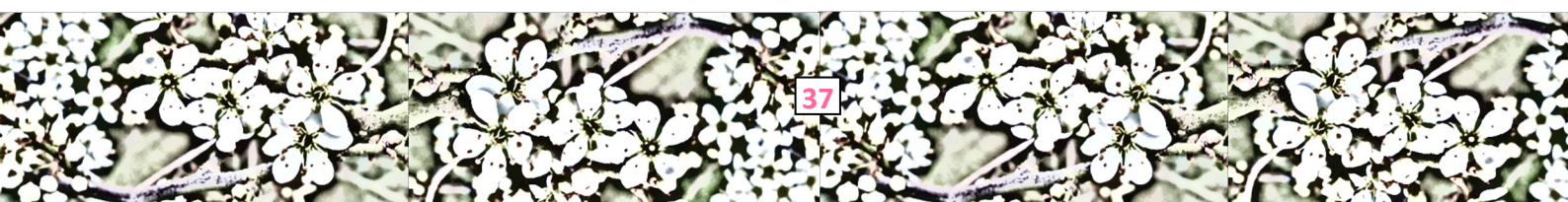
THE CLUES.....

Across

6. The 'common' campion? (6,8)
9. Furry fruit (6)
10. Aristocratic greenery (4,4)
11. Yum, yum a dormouse (6)
13. Initially, one red nose and two ears seemed decorative (6)
15. Plants with a good foundation are well (6)
17. Tree known as a 'living fossil' (alternative spelling) (6)
18. Concurred that there is a hunger (6)
19. Hooked plant in my mattress (8)
21. Leeks and garlic at the big London theatre - no parking at the front and no publicity inside (6)
22. Popular prebiotic fibre (6)
24. Tree before and after burning (3)
25. Flaubert's literary heroine with no bee in her bonnet but with eggs in her basket (5)
26. This tree is regularly bedlam (3)

Down

1. Fern beloved by the Queen (and it sounds like Donny, Jimmy etc like it too) (7,7)
2. E.g. the McParmenters? it's all relative (4)
3. Bless you! Add wort for a member of the yarrow family (6)
4. Favourite flowers of a famous Antipodean (8)
5. Split in two? By a bit of lethal force! (4)
7. Foxy grass? (6)
8. Things which do not make sense! [like this crossword?! that's a sedge warbler joke] (14)
12. Land area characterized by its soil, wildlife, climate and vegetation (5)
14. Can be deadly in the shade (5)
16. The blue flower we used to name in the woods (8)
19. I hear bacardi alcopop is good for grass (5)
20. This girl is in 24 hours (5)
23. Prickly in painful examination (4)

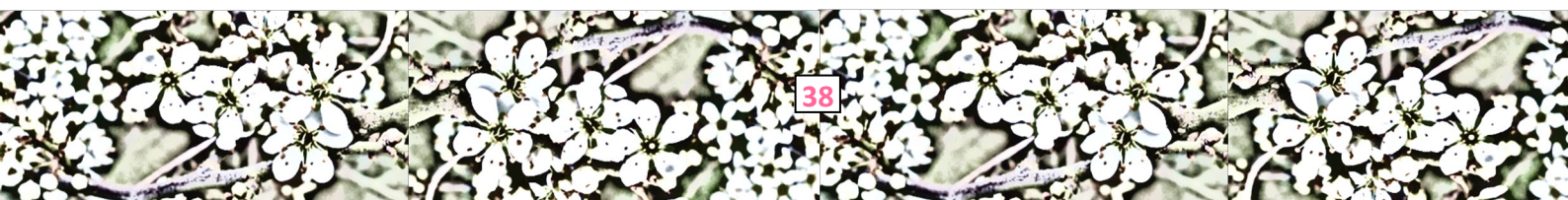


ANSWERS TO THE NORFOLK FLORA GROUP CROSSWORD 2021

1	O	2	R	C	3	H	I	4	D	A	5	C	E	6	A	E	7	P	8	N		
		A		A			O		L		N			9	H	O	Y	A				
10	S	P	R	I	N	G	S	E	D	G	E											
		E		R			R		G									11	A	R	C	
12	T			13	S			O												M	I	
14	H	A	T	L	E	S	S			15	S	E	A	M	O	S	S					
								17	E	L	D	E	R					G			S	
18	L	I	O	N														19	P	E	R	U
								20	A	L	B	U	M								T	S
							22	I	C	Y			23	M	I	C	R	O	B	E		
																						S
24	R	O	W							25	R	C					26	C		27	P	
							28	B	O	G	A	S	29	P	H	O	D	E	L			
30	M	A	R	L																		
							31	T	C	A	R	E	X	R	E	M	O	T	A			

Sedge Warbler

So - who got them all right? I didn't. Apparently my brain isn't good at cryptic clues.... Hey ho. One day I will find out what it IS good at. JP



..... LOOKING FORWARD TO THE 2022 FIELD SEASON

Badley Moor and environs - The lovely landowner has invited us to have a look at Badley Moor and some of the developing tufa-features along the River Tud.

Beguiled by Brett Wood - This is one of NWT's newest nature reserves, and we will be going along to have a look at its spring woodland flora.

Brilliant Brambles - This year's bramble workshop will be held at Wayland Wood NWT Reserve.

Broadland Country Park - we will hold a summer meeting at this amazing site; part of the extensive acid mire, heath and woodland complex northwest of Norwich.

Burnham Deepdale - Jason and Nathan welcome us to an extensive and carefully managed mixed farm in the northwest of the county.

Gooderstone Water Gardens - Ernest and Coral Hoyos have kindly invited us to visit the gardens, and associated fen and wet meadows.

Gunton Park - our friends at Gunton Park have invited us back for a third time, and we hope to visit the furthest flung parts of the landholding, finishing up at the Gunton Arms, with its interesting artwork!

Here be Dandelions - Alex Prendergast is going to run 2 workshops, one at New Buckenham to look at common ruderal species and those of neutral grassland, and one looking at the more specialist dandelion flora of Ringstead Downs.

Kelling Cat Pits and Hangs Valley - Carl Sayer is going to introduce us to one of his favourite places - and perhaps one of the most intriguingly named sites in the county.

Scintillating Salt Marshes - We will visit some of the salt marshes along the North Norfolk coast, not once but twice this year, with a survey visit putting into practice what we will learn on Alex Prendergast's proposed *Limonium* workshop.

Sculthorpe Moor - We've not been to this site for a number of years now, and should see some interesting fen and mire habitats.

Stonehouse Farm - Richard has kindly asked us back to look at some of his landholdings along the Rivers Thet and Little Ouse.

Wildflowers Revealed - This year, BobL will reveal the wonders of Ashwellthorpe Wood NWT reserve to us. The day will include a learning-focused event for budding botanists in the morning and then those who wish to stay on for recording in the afternoon can do so.

Winged Things - Bob Ellis will take us on a foray in search of green-winged orchids in South Norfolk.

Wiveton Hall - BobL has arranged for us to have a look at some of the arable land and woodland on this North Norfolk Estate.

Jo

Some of these are of course the spring-period visits we had to postpone from 2020,...

