Sussex Botanical Recording Society

Newsletter

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President's Message

Have you tried Googling for a plant name? A colleague was unable to name an aquatic in the Loire Valley which was growing in quantity in the river shallows and along the sandy edges; it was conspicuous, with Evening-primrose-like floating flowers. As a botanist he planned to key out this unknown plant, only to find that he could not work it out to a Family. He suspected *Onagraceae*, but was frustrated by the presence of a hypanthium. (For a diagram of this see *Field Flora of the British Isles* by Clive Stace, Glossary, p. 702.

Our Chairman recognised the description of the plant as an invasive *Ludwigia* species from S. America. Meanwhile, the finder had tried 'alien waterweed in the Loire Valley' on Google, to find two pages on the aggressive *Ludwigia* species invading waterways in southern France and beyond.

Clive Stace tells me that the keys in his British Floras include only species recorded in Britain, explaining the presence or absence of the hypanthium in keys for *Onograceae*. Clive says that he will be revising again and, as *Ludwigia grandiflora* has recently been recorded in Britain, the key will be amended.

Since Google was mentioned I have asked some botanists if they use it as an identification aid. Some were surprised, but one botanist at the Natural History Museum replied 'Oh yes, every day' – he does work mainly on exotics and googles for the illustrations. But the general concensus was that it is better to first know the name of the plant before you google!

It was pleasing to see Helen Proctor at the BSBI Exhibition Meeting in London with her well-prepared display on *The distribution of White Helleborines in Friston Forest*. It was good to have Sussex represented at this national Exhibition.

As the year turns we will very soon be in a new recording season – one of the few remaining for the collection of records still missing from the new Sussex Flora. Good plant hunting, and good wishes to you all.

Mary Briggs

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Secretary's Note

Dates for your Diary

Saturday 8th March 2008

The Annual General Meeting will be held at 2.00 p.m. at Staplefield Village Hall, followed by a showing of members' slides and finishing with tea and biscuits. The hall will be available from 1.30 p.m. Nominations for new committee members or officers, agreed by the nominee, should be sent to the Secretary a week before the A.G.M.

Saturday 1st November 2008

The Autumn Get-together will be held in Staplefield Village Hall. The doors will be open from 10.00 a.m. and the meeting will start at 10.30 a.m. There will be reports of field meetings and interesting records, and an illustrated talk. Please remember to bring a packed lunch; tea or coffee and biscuits will be available. Members are invited to bring slides to show in the afternoon, books and plants for sale, and any items of interest or specimens for display.

Rita Hemsley

In this issue

Treasurer's Note

It was decided at the last AGM to increase the annual subscription from 1st January 2008. This is the first increase in my period as Treasurer and has been introduced for the sole purpose of raising funds towards the cost of the publication of the new *Flora of Sussex*, due in the early years of the next decade.

The new subscriptions are:
Individual Member……..…£5
Joint Membership at one address…£7

Subscriptions may be paid at the AGM in March, the Autumn Get-together in November, or sent by post to me at my home address. Would members who pay by standing order please notify their banks to amend their payments.

Thank you,

Trevor Lording

Early Phenologists

by Mary Briggs, with Frances Abraham

On a cold wet dark winter's evening some friends took me for a meal at Rowfant House near Crawley. As we warmed by a welcoming blazing wood fire I saw on the wall at the side of the Elizabethan fireplace a large chart with records of first flowering, first leafing of trees and so on, dated from the 1700s. It was a brief glance only, but I was intrigued to see the records from so long ago, when they are now so topical because of climate change and global warming.

So, early in the New Year Frances agreed to come on an expedition to find out more about the chart.

The Managers at Rowfant House were welcoming when I enquired for permission, and we spent a happy morning studying the painted chart, which is framed, measures about 3ft. x 2ft, and is headed 'Lord Suffield's Remarks on Mr Marsham's Indications of Spring'. Twenty seven species are included, and for each species three dates are given: the Earliest, Latest, and the Medium Time, with the number of days between the earliest and latest dates and the number of years for which observations were taken. For example, 'Wood Anemone blows' at the earliest 16th March 1790 and the latest 22nd April 1784, the medium date being 8th April 1778. The difference is of 37 days, observed in 30 years.

The chart also includes the flowering dates of Snowdrop, Turnip and Hawthorn, and the first leafing of thirteen tree species. The remainder gives dates for various animals, such as 'Swallows appear', 'Churn Owl sings', 'Frogs and Toads croak' and 'Rooks build'. The earliest date is 1735, the latest is 1800, and the longest period of observation of a single species is 62 years. We discovered that Robert Marsham published a chart of his Indications of Spring in 1789 in the *Philosophical Transactions* of the Royal Society. Sparks and Carey (1995) relate that generations of the Marsham family continued the work, until Mary Marsham died in 1958.

From *British and Irish Botanists* (Boulger & Britten 1931) we found that Robert Marsham F.R.S. (1707-97) of Stratton Strawless, Norfolk, published papers on the growth of trees and kept a calendar of natural phenomena for more than 50 years. In *The Flora of Norfolk* (Petch & Swann 1968) he is described as a correspondent of Gilbert White and friend of the botanist and writer Benjamin Stillingfleet (1702-71) of Wood Norton, Norfolk. Gillian Beckett (BSBI Recorder for W. Norfolk) tells us it is said that he seldom went far from home, and was only happy when he could smell the smoke from his own kitchen chimney. There are now splendid trees at Stratton Strawless planted by Marsham. She adds that Stillingfleet was tutor to Robert Marsham's children. Female bluestockings are said to have been so called after Stillingfleet's grey-blue hosiery. Martin Sanford (BSBI Recorder for E. and W. Suffolk and editor of Watsonia) tells us that Robert Marsham, Benjamin Stillingfleet and the first Lord Suffield (1734-1810) were neighbouring landowners with large estates in Norfolk and were the keen botanists of their day.

We were still curious as to Lord Suffield's Remarks on Marsham's observations, and this is still something of a mystery, but Tim Sparks at Monks Wood kindly sent me a copy of an article by Hugh S. Gladstone, in a 1940 edition of *Notes and Queries*, in which he says that he has acquired a broadsheet entitled 'Lord Suffield's Remarks on Mr Marsham's Indications of Spring'. He adds that they are printed within an ornamental border measuring 16 3/4 inches by 11 inches, and goes on to describe the content. Gladstone's chart is plainly the same as the one at Rowfant, but the latter is larger and is hand drawn rather than printed. It seems possible that it could be the original from which the printed version was prepared. It also seems that all the dates of first observation are Marsham's, but that Lord Suffield worked out the earliest and latest sightings, the number of years covered for each phenomenon, and so on.

But how did this manuscript from Norfolk come to be in Sussex? A possible answer lies in the history of Rowfant House.

The house has the appearance of an Elizabethan mansion, and it was largely built by a Sussex Ironmaster in the late 16th century around an earlier timber-framed building. It is now a harmonious patchwork of 15th, 16th, 18th and 19th century architecture, and is set in woodland beside a lake. In 1848 it was bought by an American, Curtis Lampson, who also had a house in Norfolk, and the family kept it until 1953. Since 1953 it has been owned by a charity on behalf of the Latvian Lutheran Church in Great Britain and it is now run as a country club and venue for special functions. The Managers were not able to tell us how the Indications of Spring came to be in the house – only that Sir Winston Churchill had been very interested in it on his frequent wartime visits – but they mentioned that a book had been written about Rowfant which might be helpful.

The book, *The Rowfant Story* by Margaret Petersons (1980), does indeed provide a clue. In 1874 Curtis Lampson's daughter married the poet Frederick Locker. Lampson left Rowfant House to both of them in his will, and they took the name 'Locker-Lampson'. Astonishingly, the book adds that Locker's great grandmother was Benjamin Stillingfleet's sister. Although we will never know exactly how it happened, it seems reasonable to guess that Lord Suffield's chart could have been passed on to the family of his botanical neighbour and friend, and that it was brought to Rowfant by Stillingfleet's great great nephew on the death of his father-in-law in 1885.

Acknowledgements
Our thanks to Gillian Beckett, Arthur Hoare, Smuidrite Jinkinson, Gwen and Derek Parr, John Pope, Martin Sanford and Tim Sparks. We also thank the library of the Royal Society for their kind assistance.

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Obituary: Elizabeth Norman

by Mary Briggs

Elizabeth Norman had a long association with Sussex. Although mostly based in London, for many years Elizabeth and her family had a home at Southease, and from there she contributed many records for *The Sussex Plant Atlas* (1980). Since then, Elizabeth sent Sussex records for more recent surveys and, with her detailed knowledge of the area, she was always ready to help with queries about the Ouse Valley. Many SBRS members who also belong to the Wild Flower Society will remember Elizabeth as the Editor for some years of the WFS Magazine. We shall miss her and her keen interest in the identification of plants in the field, and we send sympathy to her family.

User-friendly x30 Hand Lens

by Nick Sturt

For those tiny but important characters there is a very serviceable x30 21mm 'optical loupe' available from Eyemagnify (www.eyemagnify.com, PO Box 8107, Grantham, Lincs NG31 9YE) at £16.99 plus P&P (currently £2.99 for one item but this reduces with the quantity of purchases). I am most grateful to Rosalind for showing me the item and providing these details. I found Eyemagnify's service efficient in the extreme.

An East Sussex B&B with Botanical Connections

by Elisabeth Sturt

To assist with recording in eastern parts of vc14, Beryl, Jenny, Judy and I booked into a very comfortable B&B not far from Rye in May, and again in June this year. It is run by Yvonne Turner whose aunt, Gwyneth Parsons, contributed records to the *Sussex Plant Atlas* and used to botanise with the much missed Breda Burt. We recommend the accommodation to other members and can confirm that there is indeed 'always a warm welcome' at The Corner House, Playden, Rye TN31 7UL. (01797 280439, www.the-corner-house.com)

Brightling Mine

by Rachel Nicholson

This is an interesting area because of the Purbeck Beds of clays, shales, and impure limestone over gypsum. Gypsum has been mined in the area since the eighteenth century. In the nineteenth century it was done on a larger scale by the SIRAP mining company, and the present mining operations began in 1964. This has resulted in a limestone area, where the mine spoil has been dumped, in the middle of High Weald woodland.

Fourteen species which are more commonly found on chalk have been recorded here: *Anacamptis pyramidalis* (Pyramidal Orchid), *Asperula cynanchica* (Sqinancywort), *Blackstonia perfoliata* (Yellow-wort), *Catapodium rigidum* (Fern-grass), *Cirsium acaule* (Dwarf Thistle), *Clematis vitalba* (Traveller's-joy), *Cornus sanguineus* (Dogwood), *Echium vulgare* (Viper's-bugloss), *Linum catharticum* Fairy Flax), *Lithospermum officinale* (Common Gromwell), *Ononis repens* (Restharrow), *Ophrys apifera* (Bee Orchid), *Sangisorba minor* (Salad Burnet), and *Verbascum thapsus* (Great Mullein). The remaining species are the normal High Wealden flora.

The SBRS meeting at the Mine on 26th June 1999 found 176 species. An informal meeting of four members on 15th July 2007, covering much of the same ground,

recorded 174 species, but approximately 35 species, ie 20%, were in each case only found by one group.

There might be several reasons for this difference:
1. There usually seems to be a difference in the number of species recorded when two different groups survey the same area.
2. The relatively slight difference in the date. The 2007 group saw none of the four orchids recorded in 1999, while the 1999 group did not note some of the later-flowering species such as *Filipendula ulmaria* (Meadowsweet), *Sonchus arvensis* (Corn Sow-thistle) and *Stachys palustris* (Marsh Woundwort).
3. The flora may have changed in the intervening years.

Book review
by Rachel Nicholson

Plant Names Explained by Jane Sterndale-Bennett. David and Charles 2005. ISBN 0 7153 2188 9 £9.99

This book gives a novel and readable introduction to Latin plant names. Although written primarily for gardeners, it would be equally useful for botanists, both old and new.

After an interesting and helpful introduction, the attractively laid-out book is divided into sections, each headed by a letter of the alphabet. These sections are further sub-divided into:

Common descriptive terms (*glutinosus* – sticky; *pratensis* – of meadows)
What's the Latin name? (Germander speedwell – ***Veronica*** *chamaedrys*)
What's in a name? (Plant lookalikes: *arundinaceus* – like a reed; animal connections: *caprea* – a nanny goat, relating to goats)
Genus names (*Galanthus*: from Greek *gala*, milk and *anthos*, flower; *Primula*: first)

There are also sections on cultivar names and historical vignettes.

A plea about record cards
by Paul Harmes and Alan Knapp

We have mentioned some of this before but there are still problems so we ask you again to look carefully at your record cards before sending them off and to check the following:

1. That all comments etc. are legible. If you haven't much room on the card please don't try to cram in notes using minute writing - put them on a separate piece of paper and write the tetrad to which each comment refers clearly beside every comment.

2. That you have filled in your name, record date (year at least), the tetrad including the 10km square (i.e. TQ23X, not just X) and a location that covers all the records on the card.

3. Remove all question marks and other odd marks etc. - if you are unsure about a record, delete it - a record with a question over it is of no use. If you make an error and want to indicate that a crossed-off species is to be ignored, place a clear X on <u>both</u> sides of the crossing out line.

4. That all grid refs. written on the front of the card are legible and valid - a quick check for the common error of missing out or adding one digit is that all valid grid refs. have an even number of digits (for example, TQ235601241 clearly contains an error as there are 9 digits).

5. If you are sending a photocopy of the card with the front and back on separate sheets of paper, please write the tetrad and your name on both sheets (even if stapled together as they can get separated).

If you can do this it will help us enormously by speeding up the process of entering data, and will also reduce the number of queries to you.

Lotus angustissimus and *Lotus subbiflorus* in Sussex
by Alan Knapp & Frances Abraham

While recording for the new *Flora of Sussex* several species thought extinct in the county have been refound, but few have been as unexpected as the discoveries during Summer 2007 of *Lotus angustissimus* (Slender Bird's-foot-trefoil) for the first time in over 70 years and of *Lotus subbiflorus* (Hairy Bird's-foot-trefoil) for the first time ever in Sussex.

In East Sussex *Lotus angustissimus* was first found in 1798 among rocks near Hastings (also the first British record) and it was subsequently recorded at one or two other coastal sites in the Hastings area. It was last reported in 1932 but, in his *Flora of Sussex* (1937), Wolley-Dod considered that 'in the absence of a specimen it is safer to regard it as extinct at Hastings'. He also dismissed the only two records from West Sussex: at Pagham ('requires confirmation') and Worthing ('probably a casual…very doubtful').

In June 2007 several plants of *L. angustissimus* were found by FA in a patch of about 1m x 0.5m in a sandy field near Fittleworth in West Sussex, and a second patch was found when FA & AGK revisited the same field a few weeks later. The field has been much visited by botanists over the years because it adjoins a small area of sandy grassland with a rich flora which includes *Filago vulgaris* (Common Cudweed), *F. minima* (Small Cudweed), *F. lutescens* (Red-tipped Cudweed) and many other species of interest. The field itself has at various times been used for keeping pigs and cultivated for maize and other cereals. However, it has been fallow and apparently unmanaged for several years and has itself

acquired a rich flora, including the three *Filago* species and *Apera spica-venti* (Loose Silky-bent), as well as *Amsinckia micrantha* (Fiddleneck), *Ornithopus perpusillus* (Bird's-foot), *Trifolium arvense* (Hare's-foot Clover), *T. campestre* (Hop Trefoil), *Scleranthus annuus* (Annual Knawel), *Spergula arvensis* (Corn Spurrey) and *Spergularia rubra* (Sand Spurrey). The species most closely associated with the *Lotus* plants were *Conyza canadensis* (Canadian Fleabane), *Filago vulgaris*, *Holcus lanatus* (Yorkshire-fog), *Lolium perenne*(Perennial Rye-grass) and *Tripleurospermum inodorum* (Scentless Mayweed).

A few weeks later FA found a further colony of *L. angustissimus* on the margin of a sandy field about 400m from the first. In the past this field too has been used for pigs and various crops, but has been uncultivated for several years. Unlike the first field, it has been sown with rye grass and clover, but wide and sparsely vegetated margins support a flora similar to that of the first site, although less rich and lacking most of the rarities.

On September 2nd Dawn Nelson led an SBRS field meeting to record a farm west of Rogate, very close to the Sussex/Hampshire border. The farm is "pick your own" and has a reputation for its asparagus crop. The soil is very sandy, and recording in the morning in the "pick your own" fields produced a range of interesting species including *Amaranthus hybridus* (Green Amaranth), *Erodium moschatum* (Musk Stork's-bill), *Festuca brevipila* (Hard Fescue) and *Geranium pusillum* (Small-flowered Crane's-bill). In the afternoon we moved on to record the margins of the asparagus fields and soon came across a small patch of a very hairy *Lotus* species with rather golden yellow flowers. After some discussion we realised that it must be *Lotus subbiflorus* and, as we continued around the field edge, more plants were found. While identifying the *Lotus subbiflorus* we noticed that the feature in the key in Stace (1997) describing the number of seeds in a pod did not apply. Stace states that the number of seeds in a pod should be no more than 12. While this was true in a few cases we found that most pods had 14 seeds and a few had up to 16 seeds.

As we walked further along the field edge a plant with paler yellow flowers was noticed among the *L. subbiflorus*. On careful examination this proved to be *Lotus angustissimus*. In the end we found that the colony of *L. subbiflorus* extended in patches for 100m along the field edges and contained well over 100 plants. Among these we found two large plants of *Lotus angustissimus.* All were growing in the edge of a rough grassy strip a few metres wide around the edge of the field with such species as *Amaranthus hybridus, Artemisia vulgaris* (Mugwort), *Chenopodium album* (Fathen), *Cirsium arvense* (Creeping Thistle), *Dactylis glomerata* (Cock's-foot), *Festuca brevipila, Stellaria graminea* (Lesser Stitchwort) and *Tripleurospermum inodorum*. Searches of adjacent fields with asparagus crops failed to reveal any more colonies of either *Lotus* species, but this field had a further surprise in store. During a subsequent visit three plants of *Scorpiurus muricatus* (Caterpillar-plant), another new species for West Sussex, were found growing in the sandy edge of the field.

An obvious question is why these species have not been discovered in these areas of Sussex before. In the case of the *L. subbiflorus* site the number of plants present makes it unlikely that they would have been overlooked but, as far as we can tell, this particular area has not been well recorded in the recent past. The plants may therefore represent a native population which has been present but un-noticed for many years. However, the presence of the Mediterranean species *Scorpiurus muricatus* and of large numbers of *Amaranthus hybridus* in the same field raises the possibility that the *Lotus* species could be introductions here. The owners of the farm told us that, before planting the asparagus, they apply a mixture of chicken manure and composted garden waste from Hampshire, so it is conceivable that the *Lotus subbiflorus* originated from Hampshire.

The situation regarding the Fittleworth *L. angustissimus* is rather different. This site has been visited by many botanists but the plants here were in very small isolated patches, despite the fact that there are large areas of apparently suitable habitat all around. It is also possible that the plants only germinate occasionally and that conditions this year were especially favourable. We will certainly re-visit both sites in the next few years in order to see what happens to the populations of both species.

Acknowledgements
We would like to thank Dawn Nelson for arranging and leading the field meeting which led to the discovery of *Lotus subbiflorus*, and the sharp eyes of Kathryn Knapp who first noticed the *Scorpiurus muricatus.* We also thank the landowners of both sites.

(Edited version of a letter to be published in the BSBI Newsletter)

Ranunculus ficaria subspecies

by Alan Knapp

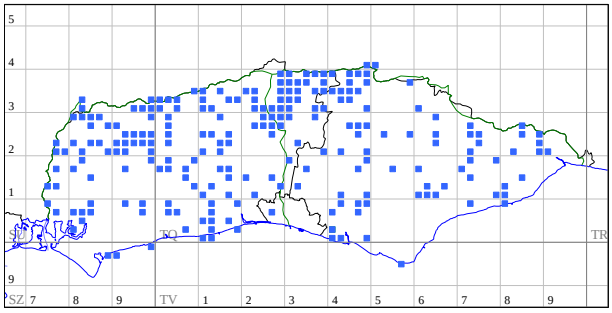
There are two common subspecies of *Ranunculus ficaria* (Lesser Celandine), *Ranunculus ficaria* subsp. *ficaria* and *Ranunculus ficaria* subsp. *bulbilifer*, and both occur widely in Sussex. They are differentiated by the presence, **after flowering,** of cream coloured tubers (sometimes referred to as bulbils) in the leaf axils of subsp. *bulbilifer*. Following a note about these subspecies in a recent BSBI News we checked our records and found that there were no records for *Ranunculus ficaria* subsp. *bulbilifer* before mid-April and the vast majority were recorded in May or early June. The reason for this is that the bulbils do not develop until the end of the flowering period.

Looking at the records for subsp. *ficaria,* it is clear that we have been recording it much too early in the year as there are many records for the period January to April. These records are invalid and we have removed them. The overall effect of this is that subsp. *ficaria* has been over-recorded and subsp. *bulbilifer* is probably under-recorded. Therefore we have two requests. Firstly, if you are recording *R.ficaria* before or during its flowering period and you cannot find the tubers, you should record it as *Ranunculus ficaria* with no subspecies (code 1649

on the recording cards). If you do find tubers then it's okay to record subsp. *bulbilifer* at any time. To record subsp. *ficaria* reliably, you must **wait until the flowers are going over** and, if there are no tubers in the leaf axils, then you have subsp. *ficaria*. Secondly, as all records for *Ranunculus ficaria* subsp. *ficaria* with dates before mid April and records which only had a year as a date have been deleted, please look out for it again at the appropriate time of year and re-submit records. A map showing all the valid records is shown here and it is clear that there are now large areas with very few records. The species lists on the SBRS web site have also been updated to remove all early records.

Finally, remember that there are two other subspecies of *Ranunculus ficaria*: subsp. *ficariiformis* and subsp. *chrysocephalus*. The former has tubers like subsp. *bulbilifer* and occurs mainly in the far SW of England. It has never been found in Sussex. The latter is a rare garden escape. We have recent records from Fittleworth and Falmer but it might occur elsewhere so, if you see a *very* large flowered Lesser Celandine near habitation, take a close look and check carefully with the key in Stace.

Ranunculus ficaria subsp. ficaria



West Sussex Field Meetings 2007

by Nick Sturt

Billingshurst/Barnes Green area 21st April

Somewhere between Billingshurst and Barns Green 25 members converged on a grid reference dictated by Brigadier 'Grassy' Knapp. Four special operations units were sent out, the reward for whose morning labours was a gentle ramble together in the afternoon around lanes gay with *Cardamine pratensis* (Cuckooflower). In this latter session the highlight was a population of more than thirty plants of *Angelica archangelica* (Garden Angelica) along a trackside. Earlier each of the four companies had brought back in excess of 100 records, many of these being the Spring woodland species most especially desired and including *Adoxa moschatellina* (Moschatel), *Allium ursinum* (Ramsons), *Anemone nemorosa* (Wood Anemone), *Luzula forsteri* (Southern Woodrush) and *Ranunculus auricomus* (Wood Buttercup). The weather was perfect, the bluebell woods at their breathtaking best, and it was a pleasure to work alongside new members and to meet again old friends whom we had not seen for some time. Alan is to be congratulated on his organisational skills which led to such a splendid day.

Worth Forest 20th May

Fourteen members walked out with owner Philip in sunshine to the accompaniment of a woodlark, beyond neglected garden grounds and into woodland punctuated with anciently pollarded beeches of massive proportions. On to some damp rides where the keen of sight pointed out *Wahlenbergia* (Ivy-leaved Bellflower) leaves, and a yellow-flowered *Potentilla* kept Rod and Elisabeth amused for ages. We tramped over the London-Brighton line past well-grown Red Oaks rising from last-year's crispy bracken, and suddenly Rita found herself being asked considerately by the co-leader if perchance she were ready to dine. Little did she realise then that lunch was fifty more plant-filled minutes away, along soggy tracks bearing *Oreopteris limbosperma* (Lemon-scented Fern) and over muddy flushes studded with *Stellaria uliginosa* (Bog Stitchwort). At the picnic cuckoos called and then we set off down into a ghyll. *Dryopteris carthusiana* (Broad Buckler-fern) in profusion here, a small stand of *Carex vesicaria* (Bladder Sedge) and general lushness winding with the stream beneath tall alders – the feeling that we were treading in the Wildwood. Members seemed reluctant to leave and on our return to the cars we set out again for damp fields, whence back at snail's pace to edge the total for the day past the 200 mark. I am extremely grateful to John, whose idea this was, to Sophie and Arthur who joined him on a preliminary visit, and of course to Philip: the enjoyment of all attending was more than evident.

Midhurst Common 16th June

Tension in the air as sixteen members focused on Bruce: he was looking relaxed, but *could* he do it? Through heathy woods, diversions into boggy areas and roadsides, Alan's pencil flickering across the card. Acclaim for the selection of weeds in Bruce's allotment, including *Misopates orontium* (Weasel-snout), *Oenothera x fallax* and *Erysimum cheiranthoides* (Treacle Mustard), and then to Bruce's HQ where we notched up many more species, pride of place going to *Carex muricata* subsp. *lamprocarpa* (Prickly Sedge) in some quantity. Having had flaming June in April this year, April showers in June were not really surprising but they could not dampen spirits – and some members playfully tossed crumbs to Alan who had forgotten to bring his lunch. Via Carron Lane to the cemetery where *Danthonia decumbens* (Heath Grass) and *Nardus stricta* (Mat-grass) in profusion delighted; here we also spotted what looked like shiny red wigs spread out on the slope: closer examination revealed *Cuscuta epithymum* (Dodder) only just coming into flower. Filing through more allotments, admiring *Agrostema githago* (Corncockle), and back onto the Common where a short search located little spires of *Pyrola minor* (Common Wintergreen), first discovered here by Robin Crane of SWT fame in, I think, the 1970s. We scoured part of the old Midhurst Whites site where *Blackstonia perfoliata* (Yellow-wort) put on a fine show. Alan announced that the 300 mark had been passed, but that was not the end, for species were still being spotted and still up the magical Middleton sleeve *Eriophorum angustifolium* (Common Cotton-grass)… So with 340 species another SBRS record smashed, but perhaps, as

we cheered him by the cars, I detected in Bruce's eyes just a glimmer of anxiety: how could he top this one?

West Thorney 19th August

The big horizons of Thorney pregnant with cloud yet no rain fell upon the party of 20 in the virtually unrecorded square of SU70L. Almost all of the maritime specialities surrendered eventually, notably *Cakile maritima* (Sea Rocket), *Inula crithmoides* (Golden-samphire), *Atriplex laciniata* (Frosted Orache), *Bupleurum tenuissimum* (Slender Hare's-ear) and *Carex divisa* (Divided Sedge). The differences between *Oenanthe pimpinelloides* (Corky-fruited Water-dropwort) and *C. lachenalii* (Parsley Water-dropwort) were displayed, while a small tip permitted a comparison of *Conyza sumatrensis* (Guernsey Fleabane) with *C. bilboana*. Members from both vice counties worked in harmony and it was especially good to welcome our Treasurer, who, it must be said, comported himself with decorum and did not allow the words 'subscription', 'overdue' or 'exterminate' to pass his lips. After our return to the cars a further sortie suggested itself and we kept the Knappmeister happy with more additions to the card, notably Roy's find of *Peplus portulacoides* established along a runway. We were greatly in the debt of Anne: her impressive knowledge of birds – and indeed plants – is only matched by her understanding of botanists, so that at times she was able to muster the kind of patience to which only the saintliest could aspire.

Durleighmarsh Farm 2nd September

The Goodwood Revival meeting was not the only place where examples of Lotus were being enjoyed on this first weekend in September. North-west of there Alan and fourteen others were poring over a specimen that was neither *L. corniculatus* (Common Bird's-foot-trefoil) nor *L. pedunculatus* (Greater Bird's-foot-trefoil). Was it *L. angustissimus* (Slender Bird's-foot-trefoil)? No, apparently not… but then again Yes. Definitely. And there's more… But this patch looks different again. Could it be *L. subbiflorus* (Hairy Bird's-foot-trefoil)? Don't be daft! Well, these were nearly the words of the unnamed sceptic… whose scepticism proved totally without foundation. This was into the afternoon session in about the sixth field. A good range of arable weeds had been acquired by then with nearly all the usual suspects on this sort of sandy soil plus a large amount of *Amaranthus hybridus* (Green Amaranth). In the morning Rosalind had specialised in enormous versions of native sedges established in well-nourished pick-your-own beds, a magnificent *Carex ovalis* (Oval Sedge) immediately topped by a monster *C divulsa* (Grey Sedge). Tony showed off *Festuca brevipila* (Hard Fescue) and the blue-green mats of this dogged our steps throughout the day. Still a little dazed after moving house the day before, Dawn conducted proceedings admirably and received lavish thanks at the end of the trail in the car park before members exposed themselves to the temptations of the Farm Shop.

East Sussex field meetings 2007

by Pat Donovan, Helen Proctor & Frances Winch

Stonegate Station 28th April (PD)

To the accompaniment of nightingales singing in the trees behind the up platform, 116 species were recorded in the space of half an hour in the car park, including, appropriately, *Lathyrus latifolius* (Broad-leaved Everlasting-pea, or, more simply, Railway Pea).

On a disused bridge just north of the station there was a crop of ferns: *Asplenium trichomanes* (Maidenhair Spleenwort), *A. adiantum-nigrum* (Black Spleenwort) and the rare *Ceterach officinarum* (Rustyback), soon to become rarer as the now redundant bridge is due to be demolished in the near future.

Passing through a small wood where *Adoxa moschatellina* (Moschatel), *Ranunculus auricomus* (Wood Buttercup) and *Orchis mascula* (Early Purple-orchid) grew, and then over two barren arable fields, we crossed the rail tracks into a set-aside field, where Alan found *Bromus racemosus* (Smooth Brome). At the edge of the wood near our lunch stop there was a fine multi-stemmed specimen of *Tilia cordata* (Small-leaved Lime) along with *Crataegus laevigata* (Midland Hawthorn).

Returning by way of a damp wood, *Cardamina bulbifera* (Coralroot Bittercress) was scattered along the edges of the ride, especially where the canopy was less dense. Records from the three tetrads visited totalled 239.

Beech Estate 2nd June (PD)

Ashburnham Meadows, which form part of the Beech Estate, have been in Countryside Stewardship since 1994 and were last visited by the Society in 1998. Many of the fields are unimproved, typically with such species as *Genista tinctoria* (Dyer's-greenweed), *Rhinanthus minor* (Yellow-rattle) and *Dactylorhiza fuchsii* (Common Spotted-orchid). Some have been improved and others 'enhanced' with local seed. One in particular, Jameson's Meadow, visited previously and rich in species, had deteriorated considerably after grazing was stopped following a problem with *Oenanthe crocata* (Hemlock Water-dropwort). Both *Dactylorhiza fuchsii* (Common Spotted-orchid) and *D. maculata* (Heath Spotted-orchid) grew in the field by Bunces Barn, where we stopped for lunch. The barn was near-derelict in 1998 but has now been totally restored and re-thatched, with its history displayed in pictures on the walls inside.

The discovery of a bull in one field meant a diversion down a track, where there were several clumps of *Sedum telephium* (Orpine) on the banks and *Festuca pratensis* (Meadow Fescue) and *Carex laevigata* (Smooth-stalked Sedge) on the grass verges. The track led to the Old Coach Road, its banks containing many plants more commonly associated with chalk, for example *Bromus erecta* (Upright Brome), *Sanguisorba minor* (Salad Burnet), *Briza media* (Quaking-grass) and *Leontodon hispidus* (Rough Hawkbit).

Flatropers Wood 30th June (FW)

This Sussex Wildlife Trust reserve is at the eastern end of the county and is mainly coppiced ancient woodland. Among the trees, we noted many young *Frangula alnus* (Alder Buckthorn) and some *Larix kaempferi* (Japanese Larch).

A National Grid powerline crosses the reserve and includes a possibly unique pylon, having been patched after an attack by an ecowarrior. Under the line is an open heathy ride, with *Erica tetralix* (Cross-leaved heath) and *Calluna vulgaris* (Ling) growing together. A small pond and boggy area showed much variety, including two good patches of *Viola palustris* (Marsh Violet), not in flower. The flowers of *Hydrocotyle vulgaris* (Marsh Pennywort) were much more noticeable than usual, and *Salix aurita* (Eared Willow) was growing nearby.

We returned to the cars for lunch as the only areas of drier ground seemed to be occupied by wood ants – and soon after setting out again, the rain started. At least, when we sheltered on the edge of an interesting nearly-cleared boggy area, we were surrounded by abundant *Scutellaria minor* (Lesser Skullcap). We cut short our day with some very soggy field guides and 168 records.

Hackhurst Farm, Lower Dicker 14th July (HP)

Seventeen members assembled at Hackhurst Farm, where the owner, Clarissa Hallings-Pott, introduced the group to the farm. The route included two woods, one with ponds. The old London coach road, now a wooded bridleway, dissects the farm, and parkland, formerly part of the Chatsworth Estate, provides a particularly pleasing landscape.

Two tetrads, TQ51R and TQ51Q, produced about 125 plant species each. A large bush of *Ruscus aculeatus* (Butcher's-broom) was found in Caldicotts Wood. Other good ancient woodland indicator species found here or by the bridleway included *Adoxa moschatellina* (Moschatel), *Euphorbia amygdaloides* (Wood Spurge), *Melica uniflora* (Wood Melick), *Moehringia trinervia* (Three-nerved Sandwort) and *Ranunculus auricomus* (Wood Buttercup). *Dactylorhiza fuchsii* (Common Spotted-orchid) was also recorded.

The parkland field, possibly never ploughed, had a good number of species including *Carex ovalis* (Oval Sedge), *Centaurium erythraea* (Common Centaury) and *Lotus corniculatus* (Common Bird's-foot-trefoil). Members were able to study the difference between *Phleum pratense* (Timothy) and *P. bertolonii* (Smaller Cat's-tail). The hybrid *Stachys* x *ambigua* was late compared with one of its parents *S. sylvatica* (Hedge Woundwort). The hybrid *Rumex crispus* x *obtusifolius* was also noted.

Michael Fish's forecast showers did not materialise and the meeting was blessed with warm, dry, sunny weather all day.

Battle 28th July (PD)

After gathering in the car park of Battle Great Wood, members were promptly despatched by Alan in groups to four different tetrads around Battle, three in the town and one in Great Wood itself, a popular place for dog walking (and watering) and horse riding. Several exotic trees have been planted, but fortunately Peter Davys was on hand to identify many of them.

In the town Alan's group found the uncommon *Epilobium lanceolatum* (Spear-leaved Willowherb), *Sedum telephium* (Orpine) and *Chaenorhinum origanifolium* (Malling Toadflax), the latter being apparently an introduction from Kent. In the cemetery *Euphrasia anglica* (English Eyebright), *Leontodon hispidus* (Rough Hawkbit) and one tall spike of *Epipactis helleborine* (Broad-leaved Helleborine) were recorded.

After lunch we joined up to walk the damp sandy rides in Great Wood, and were shown *Radiola linoides* (Allseed) by the morning's group who found it. The number of new records in the four tetrads totaled 548.

Burdock as a Bat Trap

by Arthur Hoare

While out with Alan Knapp checking up on an *Epipactis* record we found a bat caught on a burdock. Intriqued, I returned later to ascertain the identity of the bat, which turned out to be *Myotis daubentonii* (Daubenton's Bat) entangled upon an *Arctium minus* (Lesser Burdock). Unfortunately the poor creature had died where it was ensnared; the hooks on the burrs were caught in its fur and wing membrane, holding it firmly, and making it impossible to escape. This unusual occurrence has been reported to the Sussex Biological Records Centre

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Spring Recording

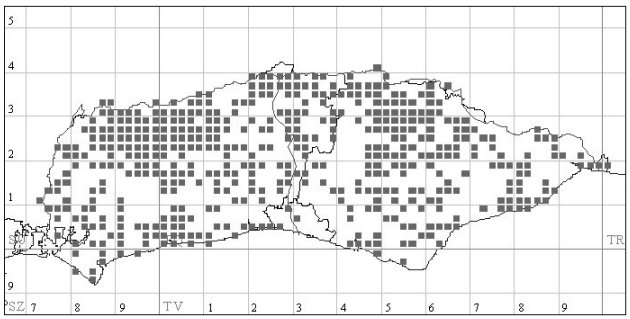
by Alan Knapp

Some species appear to be under-recorded because they can only be identified for a short period in the spring, and we'd like to ask you to look out for them so that we can fill in some gaps in the record maps.

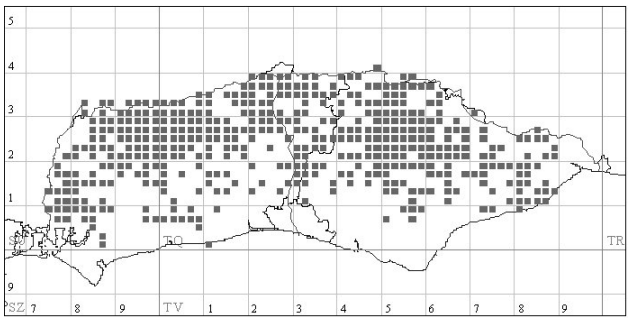
Some of these are common species and we include distribution maps for six of them: *Alopecurus pratensis* (Meadow Foxtail), *Anemone nemorosa* (Wood Anemone), *Cardamine pratensis* (Cuckooflower), *Ranunculus ficaria* (Lesser Celandine), *Veronica hederifolia* (Ivy-leaved speedwell) and *Viola riviana* (Common Dog-violet). Please take a look at the gaps on the maps below and send in the records for any of the missing tetrads. Everyone can take part in this as they are all easily recognisable species. Send records to Alan Knapp and please remember to include the name, location, tetrad (or grid ref.) and date recorded. Even if you only make one or two finds, send in the records.

There are also some less common species such as *Adoxa moschatellina* (Moschatel), *Narcissus pseudonarcissus* ssp. *pseudonarcissus* (Wild Daffodil) and *Viola reichenbachiana* (Early Dog-violet) which need more recording early in the year, so please keep an eye out for them as well. It pays to go out early as some species are now flowering much earlier than they used to. For example, the Wild Daffodils in a small patch of woodland in NE Crawley which used to start flowering in March are now often in full flower by the third week in February and are going over by the end of March.

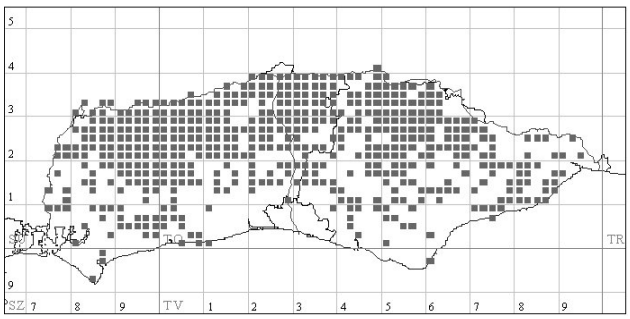
Alopecurus pratensis



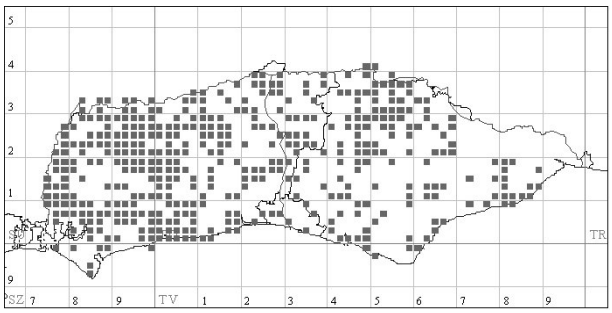
Anemone nemorosa



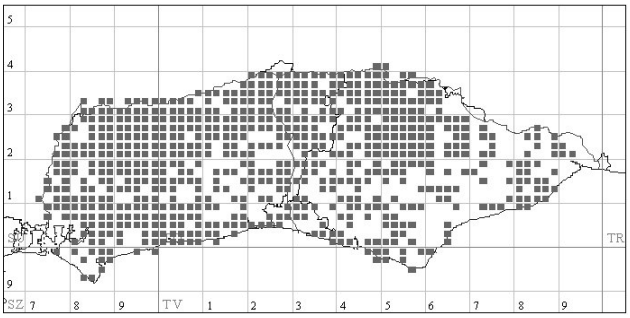
Cardamine pratensis



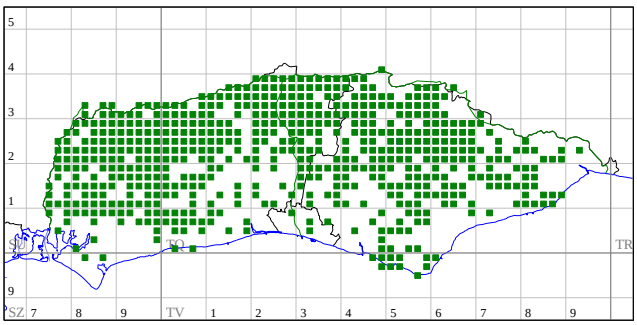
Veronica hederifolia



Ranunculus ficaria



Viola riviniana



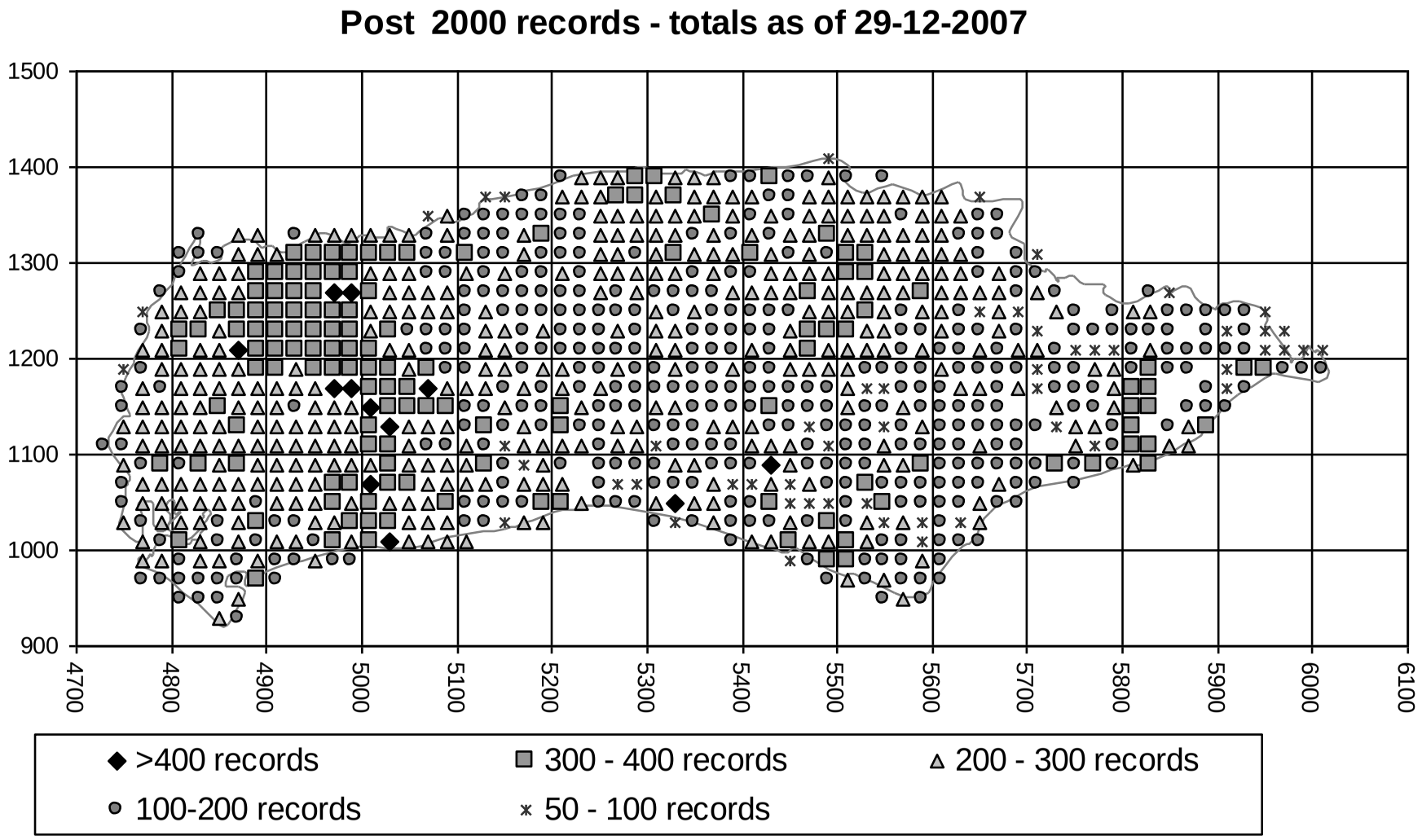
Progress in recording for the New Flora - December 2007

by Alan Knapp

The current state of recording for our new Flora of Sussex is summarised in the map on page 10 showing the number of records per tetrad. Currently the total number of records is just over 210,000, which means that we have received around 40,000 new records since the beginning of the year. This puts us just about on target to achieve our goal of an average 300 records per tetrad by the end of 2010. However, from now on, as the number of records in each tetrad rises, finding new species in many areas is getting more difficult and so we expect the number of new records next year to fall significantly. So, what we ask is that as many members as possible go out and record so that this prediction is proved wrong!

In terms of tetrads, we are now in a position where 91% of tetrads have had at least one good recording visit (i.e. have more than 100 records) and 53% have over 200 records. The areas where the coverage is lowest are in the eastern part of East Sussex, especially in 10km squares TQ71, TQ72, TQ82, TQ92 and the eastern part of TQ81. In West Sussex coverage is lowest along the coast in the Brighton/Worthing areas and in TQ12, TQ13, TQ22 and parts of TQ21. Any help in raising the level of recording in these areas is would be especially welcome.

There have been a number of very interesting new discoveries which, as usual, will be described in the Spring 2008 newsletter.


Post 2000 records - totals as of 29-12-2007
1500
1400
1300
1200
1100
1000
900
4700
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
>400 records
300 - 400 records
200 - 300 records
100-200 records
50 - 100 records

Epilobium Hybrid Key

Whilst rummaging through my bits and pieces I came across a rather tatty piece of paper that turned out to be a key to the Epilobium hybrids. Knowing that the expert on this genus is Geoffrey Kitchener I thought that it could be his work so I contacted him to seek permission to reproduce it in our newsletter. Not only did he agree to us using it, but he kindly updated it and adapted it for use in Sussex. It is here presented below with grateful thanks to Geoffrey Kitchener.

Arthur Hoare

This is for the most part deliberately not cast as a true key. It would not be impossible to construct one. Indeed, all known Sussex hybrids, bar one, are covered within a key by Smejkal (1997). But any such key will always face the challenge of suggesting certainty where the extent of variation is too great for this. The following steps are recommended in analysing potential hybrids.

Does the plant look like a hybrid, e.g. floriferous, perhaps willowy branches, semi-abortive capsules, seed at least in part shrivelled and sterile, flowers perhaps flushed purple, and the plant as a whole not clearly corresponding with a species? If so, for semi prostrate plants outside Sussex, see section 2 below. For erect plants, see section 1. Willowherbs are notoriously variable, so do not draw conclusions too rapidly from a plant just because it does not correspond to the typical form of a species.

1. **Erect plants**
   Is the stigma regularly 4-lobed (see section 1.1); entire (see section 1.2); or misshapen like a clenched fist, or with irregular lobing (see section 1.3)?

   1.1 **4-lobed stigma**. Parents are amongst these: *E. hirsutum, E. lanceolatum, E. montanum, E. parviflorum.* Features which these spp. may contribute are:
   ~*E. hirsutum*: large deep purple flowers, long stem hairs, half-clasping leaves, hooked teeth to leaves.
   ~*E. lanceolatum*: cuneate leaf base, longish leaf stalks.
   ~*E. montanum*: rounded leaf base.
   ~*E. parviflorum*: felted leaf surface, sessile leaves, medium length or longish spreading stem hairs.
   All these spp. may contribute glandular hairs, but if in quantity, they are likely to come from *E. hirsutum* and/or *E. parviflorum*. The most likely crosses in Sussex are *E. parviflorum x montanum* and *E. hirsutum x parviflorum*, followed by (as yet unrecorded) *E. hirsutum x montanum*. Crosses with *E. lanceolatum* are unlikely because of the relative infrequency of that species in Sussex.

   1.2 **Entire stigma**. Parents are amongst these: *E. ciliatum, E. obscurum, E. palustre, E. roseum, E. tetragonum*. Features which these spp. may contribute are:
   ~*E. ciliatum*: glandular hairs in quantity, ridged seeds.
   ~*E. obscurum*: smooth, appressed hairs, glandular around collar below sepals.
   ~*E. palustre*: narrow leaves, long seeds (in hybrids, where fertile, these will be longer than 1.3 mm), some glandular hairs).
   ~*E. roseum*: cuneate leaf base, long leaf stalks, glandular hairs in quantity.
   ~*E. tetragonum*: narrow leaves, smooth, finely appressed hairs, none glandular.
   The most likely crosses in Sussex are *E. obscurum x ciliatum* or *E. tetragonum x ciliatum.* These can be difficult to tell apart if all three species are present. Other possible Sussex crosses, as yet unrecorded, are *E. tetragonum x obscurum, E. obscurum x palustre* and *E. palustre x ciliatum.* Crosses with *E. roseum* are unlikely because of the relative infrequency of that species in Sussex, although *E. parviflorum x roseum* has been seen; also *E. obscurum x roseum* has been recorded twice, but one of these records has recently been re-determined as *E. roseum x ciliatum*.

   1.3 **Misshapen (confused) stigma**. This includes plants that have mixed stigmas, some entire or 4-lobed and some misshapen. One parent will come from the 4-lobed stigma group (section 1.1 above) and the other from the entire stigma group (section 1.2). See above for contributory characteristics. The most likely cross by far is *E. montanum x ciliatum*. Otherwise, *E. montanum x obscurum, E. parviflorum x obscurum* and *E. parviflorum x ciliatum* may relatively frequently be encountered. *E. hirsutum x ciliatum, E. hirsutum x palustre, E. hirsutum x tetragonum* and *E. parviflorum x tetragonum* are also known from Sussex.

2. **Semi-prostrate plants**.
   This section is included for completeness, but its application to Sussex is limited

   2.1 Upland or montane (*E. brunnescens* absent): Parents may include *E. alsinifolium*, and/or *E. anagallidifolium*. Not applicable to Sussex.

2.2 Lowland or upland (*E. pedunculare* present), plant with ovate well toothed leaves bronzed on underside: *E. montanum x pedunculare*. Not applicable to Sussex.

2.3 Lowland or upland (*E. brunnescens* present), reddish plants, beginning as prostrate: *E. brunnescens* hybrids. These are very unlikely in Sussex, not just because *E. brunnescens* is very infrequent, but also in that hybrids appear to be restricted to Cornwall, Wales and Ireland. They may be keyed out as follows (subject to the caveats above as regards the limitations of keys for hybrids).

1 Stems with hairs projecting more than 0.2 mm from surface. ……...**E. parviflorum x brunnescens**
1 Stems with hairs projecting less than 0.2 mm from surface. ……...2

2 Stems semi-glabrous below, with lines of hairs descending from nodes; stigmas entire. ……..…...3
2 Stems hairy all round below, stigmas "confused". ……...5

3 Leaves generally narrow; seeds (when fertile) 1.0-1.3 mm long with distinct neck where hairs are attached. ……**E. palustre x brunnescens**
3 Leaves ovate-lanceolate to elliptic; seeds (when fertile) 0.6-0.95 mm long, sometimes with necks where hairs are attached. ……..……4

4 Glandular hairs present, often abundantly, along ovary at anthesis, extending at least to pedicel; fertile and sterile seeds with ridging on surface; seeds (when fertile) may have a slight neck where hairs are attached. ……**E. ciliatum x brunnescens**
4 Occasional glandular hairs present along ovary at anthesis, not extending to pedicel; seeds without surface ridging or neck; fertile seed surface tuberculate, sterile seed surface reticulate. ……**E. obscurum x brunnescens**

5 Flowers whitish in bud, white or pale pink in flower. ……...……**E. lanceolatum x brunnescens**
5 Flowers purplish-pink in bud and in flower. ……...……**E. montanum x brunnescens**

REFERENCE

Smejkal, M. (1997). *Epilobium* L., in Slavík, B., ed. *Květena České Republiky* 5: 99-132. Academia, Prague

2008 Field Meetings

Saturday 19 April Alan Knapp	**Nyman, Handcross**. Who's afraid of tetrads? A gentle start to the field meeting season, with encouragement for the new members! Parking by kind permission of the National Trust at TQ264295.
Saturday 3 May Rachel Nicholson	**Robertsbridge area**. Tetrad recording. Meet S of Etchingham at junction Oxenbridge Road/Fontridge Lane TQ711250. Limited parking on verge. After lunch we shall move on to Robertsbridge station car park.
Saturday 17 May Nick Sturt	**Fishbourne Marsh and Creek**. Park at Fishbourne church off the A259 at SU843045. To include some local specialities with Frederick Arnold connections.
Sunday 25 May Roy Wells	**Hooe area**: Recording TQ60Z. Meet Hooe church TQ683092, sign-posted from B2095 to Ninfield. Park nearby if car park busy. Could be soggy under foot.
Sunday 8 June Alan Knapp	**Downs SW of Bopeep**. Meet Bopeep car park TQ493051. There will be a 2km walk to reach the area most in need of attention.
Wednesday 18 June 6.30pm Rita Hemsley	**Haywards Heath**. Meet by Franklands Village Hall or in church car park at TQ344236. Intrepidly exploring urban Haywards Heath with Rita. **NB evening meeting**.
Saturday 28 June Roy Wells	**Ashburnham Place**. Meet TQ689147 at church car park within estate, having entered from B2204 3 miles SW of Battle. Roy's second meeting promises ferns and sedges galore!
Sunday 20 July Rita Hemsley	**Mile Oak/Tenant Hill**. Tetrad recording in TQ20J and I. Meet at end of Mile Oak Road: roadside parking from TQ244077 northwards or in side-roads.
Sunday 3 August 10.15 start Alan Knapp	**TQ72/82 multi-tetrad recording**. Meet in Brede High Woods TQ804206, in car park (not shown on many maps) S side of B2089 approx 100m E of junction with minor road. Morning: in small groups in tetrads in east TQ72: afternoon: in TQ82A as one group. **NB 10.15 am start.**
Saturday 16 August Arthur Hoare	**Southwater Country Park**. A re-run of the very enjoyable April 2005 meeting later in the season: tetrad recording in small groups. Meet in the car park at TQ161259 sign-posted off A24.
Saturday 6 September Mary Briggs & Frances Abraham	**Pulborough**. A gentle day recording TQ01P. Park in lay-by on S side of A283 at TQ039184.

One or more late season meetings may be arranged to cover gaps in recording. Details will appear on the SBRS web-site.

All meetings start at 10.45am unless indicated otherwise.

Since some of the venues have limited parking, and for environmental reasons, members are encouraged to share cars whenever possible.

Those attending SBRS field meetings do so at their own risk.