

Sussex Botanical Recording Society

Newsletter

No. 58

May 2004

Chairman's Message

by Rod Stern

The SBRS is 25 years old this year and I believe we can look back on a very successful quarter century. Of course we did not start from scratch, as we took over from the Sussex Flora Society, which itself had done sterling work on all the "tetrad bashing" to produce the *Sussex Plant Atlas* (published in 1980, after the birth of SBRS). The Foreword to the *Atlas* is by Alison Ross, whom some of us knew by her real name of Ceres Esplan. She mentions that "the survey has not always gone smoothly...with many vicissitudes and setbacks". She also refers to Mary Briggs as "working on this project all the time in her quiet and efficient way... she has been a constant standby with her knowledge, enthusiasm and determination". We can all say exactly the same now, but we can also say that the SBRS has not had the ups and downs of its predecessor and that one of the main reasons for this is Mary's happy influence on all that we do.

At the inaugural meeting of the SBRS in October 1979, I doubt if anyone could have envisaged that we would see the publication of *Sussex Wild Flowers*. The launch of this very attractive book, resulting from an immense amount of time devoted to it by Mary Briggs, is to take place very shortly. Members of the Sussex Wildlife Trust will probably have seen the two page spread by Henri Brocklebank on this publication in the latest issue of the Trust's magazine *Wildlife*. Once again we must be grateful to Mary for her outstanding work.

I think Mary would be the first to agree that others have also contributed to the success of SBRS. We have another example of this in a new publication - *Sussex Botany Journal* - the first issue prepared by Nick Sturt and Paul Harmes to be out shortly. Ideas have already been forthcoming for the second issue.

Meanwhile we still have another several months of recording for BSBI Local Change to complete our contribution to this important national project.

Let us hope the next 25 years are as active as they have been, and also that members will continue to enjoy the survey work and the good companionship.

Secretary's Note

Dates for your Diary

Saturday 20th November 2004

The Autumn Get-together will again be held at 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 an illustrated talk, and reports of field meetings and interesting records. Please bring a packed lunch. Tea or coffee 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.

Saturday 12th March 2005

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.

Rita Hemsley

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Important information about 2004 Field Meetings

Meeting at Thornham & Prinsted
This is on Sun. 15 August not the 14th
as printed in the January Newsletter.

18/19 September - Extra Meeting

In the 2004 field meetings programme included in the last Newsletter the contact for the extra field meetings to be held on 18th and/or 19th September was given as Alan Knapp. Alan may be away in the week or so preceding the meeting so Nick Sturt (Phone: 01243-551292; email nick@yapton.fsnet.co.uk) is an alternate contact if you are unable to contact Alan. Please make a note of this on your field meeting programme now. It is our aim to have decided on the locations of the extra meeting(s) by the time of the previous field meeting on August 21st.

Errors in GPS grid references

by Alan Knapp

During 2003 we have seen a few examples of erroneous GPS grid references (including one I sent to Paul Harmes). It turns out that the reason is not a problem with the GPS system but a problem with misreading the display. In the popular etrex GPS system the grid references are given in relatively small text. In difficult lighting conditions or if the batteries are low or the display contrast has not been correctly adjusted it is easy to mistake one figure or another (especially 0, 3 and 8). So, for example TQ1043313224 could be read as TQ1843318224 (a position more than 9km away from the correct one).

There are several ways to minimise the chance of an error. First double check when you take the reading. If you are in a group and more than one person has a GPS then get a second opinion. A further check is to look at the position indicated by your grid references on a map when it should be obvious if you have misread any of the first 3 figures in either the NS or EW directions. It is unfortunately not so easy to detect an error in the last two figures in either direction.

Finally, you can minimise the risk of misreading by adjusting the display settings for best visibility. On the etrex system select the Setup menu, then select Display and then Contrast and use the 2 buttons at the top left to adjust for the best looking image.

A Clover Enquiry

by Frank Penfold

We have the Red Clover *Trifolium pratense*, which is ubiquitous in Sussex and is commonly of an agriculturally improved variety. It used to be grown from seed as a crop, especially as part of a traditional rotation, and called a clover ley. This is recognized in Stace and was sometimes characterized as var. *sativa*.

There is also White Clover *Trifolium repens* which, too, is ubiquitous. It is often of similar size to Red Clover, with large flower-heads and leaves; but there is also a low-growing type with very small leaves. The latter used to be harvested occasionally in favourable seasons; it was called Wild White and it had a high value (I remember threshing it). I believe there were improved varieties imported from New Zealand.

Now I see no reference in Floras to the status of this White Clover, and no reference to improved varieties being widespread in the wild. I look forward to a response from members with farming knowledge.

(Ed's note: In the Ebernoe area, and elsewhere in West Sussex, a very large Red Clover occurs occasionally on abandoned arable and on road verges (where agricultural seed may have been spilt) – it has some similarities to Ziz-zag Clover *Trifolium medium*, with a length of stem between the uppermost leaves and the flowering head, but I believe it to be a form of *T. pratense*.)

Treasurer's Note

Subscriptions for 2004 are now due for payment. The rates remain the same: £3.00 for an individual member, and £4.50 for joint members at the same address. Subscriptions can be paid at the Autumn Get-together, or sent to me: Trevor Lording, 17 Hill Rise, Crowborough, East Sussex TN6 2DH

The Fibonacci Series in Plants

by Dawn Nelson

(Members who attended Rod's 'Local Change' meeting near West Stoke in the summer were surprised when Dawn suddenly picked a plant from the verge & used it to demonstrate the Fibonacci series. We were fascinated and so, for those who were not at the meeting, Dawn has given us a written version)

Many formations in nature, although constituted and caused by different phenomena, are not only similar to look at, but have identical mathematical descriptions.

The Fibonacci series is a number series which has fascinated mathematicians, artists and mystics since its first introduction by Leonardo Fibonacci, who brought it to Europe in 1228, having studied mathematics with the Arabs. It begins with any number, say 1. This and the previous number 0 are added together so that their sum forms the third number in the series 1. Then the process is repeated, thus 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233 etc. What is fascinating is its relationship with the ratio of the Golden Mean 1:1.618. If one divides a number of the Fibonacci series by the preceding number (this can be any combination) one gets nearly 1.618 but never exactly – larger numbers get closer.

The Fibonacci spiral is generated by reducing a golden mean rectangle to a square on its smaller side, leaving each time another golden mean rectangle, of which the larger side is now equal to the previous short side. (see fig.1)

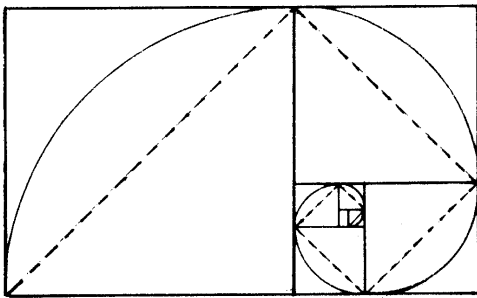


Fig. 1

Spiral patterns appear in all forms of nature, but are especially noticeable in plants and flowers. Think of the centre of a hybrid tea rose or a dahlia. Look at the formation of the florets or seeds of a sunflower. In fact, if you look carefully at these you find that there are two sets of spirals, one left-handed and one right-handed. Each set is made up of a predetermined number of spirals, overlapping each other to form the most intricate pattern. Most Asteraceae have 21 and 34 sets. Pine-cone scales have 5 one way and 8 the other. Pineapple bumps have one set of 8 and one of 13. The ratios of these spirals correspond to two adjacent Fibonacci numbers 5:8, 8:13, 21:34, and the same is true of many other plants with a spiralling leaf growth pattern.

I have been around the garden to see what examples of these spirals I could find. First was *Euphorbia myrsinites* – this wonderful succulent produces great spiralling snakes of scaly glaucous leaves. The patterns are most obvious in rosette-forming plants – all the small Sedums and Saxifrages form spiralling rosettes of leaves, as do the many varieties of House Leek *Sempervivum*. The way the leaves of Teasel *Dipsacus fullonum* curl up as they dry off in winter reflects the way fern fronds emerge tightly curled in the spring. Think also of the way Prickly Sow-thistle *Sonchus asper* leaves form a spiral where they clasp the stem. This spiral pattern is also apparent in fruits, such as some *Medicago* and *Erodium* species.

Flowers exhibit this form too. Look at the way Changing Forget-me-not *Myosotis discolor* opens from its tightly curled spiral of buds. And have you ever watched the petals of Evening-primrose *Oenothera biennis* jerking open in the evening from their spirally rolled buds. Another interesting fact is that the petals on daisies and roses are usually a Fibonacci number (5: *Rosa*, *Malus*; 8: *Dryas octopetala*, *Geum rivale*). The more numerous-petalled flowers with 34 or 55 are not always exact but, if you count several of them, the average will always be a Fibonacci number.

Almost all plants with alternate leaves describe a spiral. The amount of turning from one leaf to the next is a fraction of a complete rotation of the stem. It is nature's way of allowing as much light as possible to reach each leaf, but the resulting rotation is always a Fibonacci fraction: 1/2, 2/3, 3/5, 5/8 etc. In the example shown, (see figs.2&3) there are five complete turns with eight spaces between leaves 1 – 9, so the ratio of the spiral is 5:8.

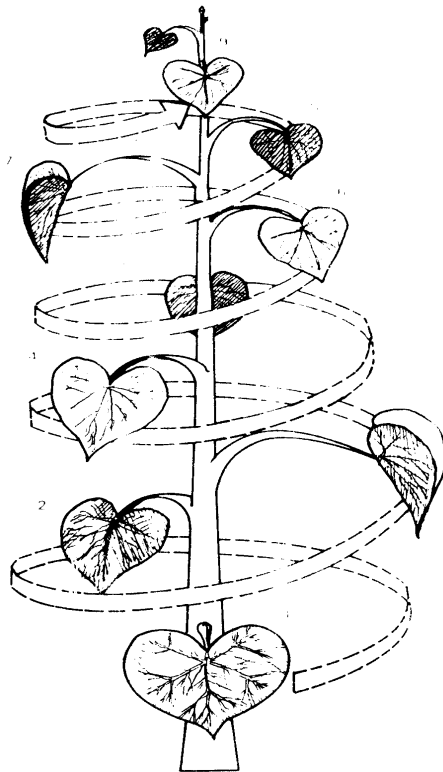


Fig. 2

Plan of Plant Growth

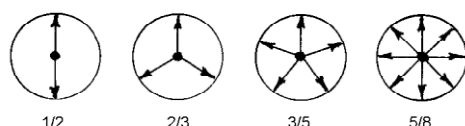


Fig. 3

Flowers in racemes or lateral clusters often spiral in this fashion too, as can be seen in *Genista* flowers (Stace). Allegedly 90% of flower structures visibly relate to the Fibonacci series.

Illustrations from Ardalan & Bakhtiar (1973). *The Sense of Unity*. The University of Chicago Press.

Road Verges

by Rod Stern

Because of its importance, I need once again to refer to the issue of Road Verge Recording, which I mentioned in Newsletter 53 of January 2002. I must reiterate that, unless this is being done at the request of the local highway authority, any recording on road verges by members is done entirely at their own risk. The detailed guidance and restrictions issued by the Highways Departments are included in the draft of the Road Verges Habitat Action Plan for West Sussex, which is published on the website (for those with access). They may have been drafted with the main roads and fast traffic in mind, but they also apply to minor roads, which nowadays often have speeding traffic, especially if they are used as "rat runs". A useful suggestion is that if members undertake this work they are advised to wear fluorescent tabards.

Corrections to the Blue Book

by Alan Knapp

A couple of minor errors in the little blue book ("Notes for members on botanical recording in Sussex") which was sent out with the last news letter have come to light. First (due to a temporary aberration, fortunately spotted by Frank Penfold) the term "Heptad" was used three times in the glossary - it should be "Hectad". Second the example of defining an area using grid references on P.6 is completely crazy. The third sentence in section 4.2 should read "For example TQ216157 TQ216158 TQ222158 TQ224157 TQ224155 (this defines an area of Henfield Common)."

Arable weeds

by Frances Abraham

In the Newsletter of May 2002 there was a note about the importance of recording arable weeds and of noting fields which have particularly good collections of these species. Many thanks to those members who responded... Please continue to concentrate on this habitat - it is especially urgent in those areas such as the Downs where there is likely to be encouragement to farmers to 'restore' their arable to permanent pasture. Of course it is true that much species-rich chalk turf was destroyed by cultivation in the twentieth century, but it is also true, and is frequently forgotten, that parts of the Downs have been cultivated since the Neolithic period and support rich collections of rare and scarce plants. In general, arable weeds have suffered a more devastating decline in recent years than any other group of plants.

The BSBI is also currently compiling records of good arable fields across the country. If you find a particularly rich field, especially one which contains rare species, please list all the arable weeds present and send it to your county recorder with the usual information. Ideally, the BSBI would also like an abundance score for each species - but please do not let this put you off - it is not essential. The recorders can then pass on the information to the BSBI. If you have access to the internet, you can find further information on the BSBI survey at www.bsbi.org.uk/html/arable_weeds.html.

Geranium lucidum and Others

by Arthur Hoare

I once glanced upon a flower
I had not planted seed
It was a small Geranium
What others called a weed.

Geranium lucidum first appeared in my garden some time ago and now a few years on it has indeed reached weed status along with *G. versicolor* which was kindly given me by one of our members. I then introduced other *geraniums* including *G. endressii*, *sanguineum*, *macrorrhizum* and *x magnificum* scattered about the garden with *G. cinereum* 'Bellerina' dancing in my rockery. A couple of years ago it pleased me to discover *G. x oxonianum* the hybrid between *endressii* and *versicolor* appear by divine intervention and making a splendid show. The latest member of the genus to join its relatives is *G. robertianum* complementing the more usual garden plants.

Local change - last year and this year

We are half way or, to be precise by the time you read this nearly two thirds of the way through the period for the BSBI Local Change project. This note summarises the results achieved in 2003 and explains what we would like you to do this year. First of all we would like to thank all of you who have been out recording in 2003 and sent us records.

The story so far

The results of the 2003 recording are best illustrated by the table of data below. The tetrads being recorded are listed at the left. A star after the tetrad means that only a small part of the tetrad is recorded. For TQ10A & W and TQ40A this is because most of the tetrad is sea. For SU83A and SU83W most is in Surrey. A small part (<10%) of TQ43J is in Kent. The columns labelled "missing" and "new" compare the data so far with that obtained in the previous BSBI study of these tetrads in 1987/1988. Missing gives the number of species recorded in 1987/1988 but not yet recorded this time and new gives the number of species recorded this time but not in 1987/1988. The "No. of recorders" column gives the number of different recorders who have submitted records from that square. Note that groups such as the SBRS or smaller groups who have recorded together are counted as a single recorder.

Tetrad	No. of records at end of Feb. 2004	Missing	New	No. of recorders
SU80A	273	148	93	3
SU80J	264	85	64	4
SU80W	265	63	90	5
SU83A*	165	No 1987/8 data for VC13		2
SU83W*	214	9	167	2
TQ10A*	149	45	75	2
TQ10J	273	166	48	1
TQ10W*	162	74	44	2
TQ13A	296	79	84	4
TQ13W	259	98	67	2
TQ40A*	76	121	28	2
TQ40J	392	112	130	4
TQ40W	198	98	66	3
TQ43A	304	101	59	5
TQ43J	144	173	11	2
TQ43W	117	208	10	2
TQ70J	241	59	114	2

TQ40J which lies at the SE corner of Lewes is the richest tetrad with nearly 400 species recorded so far. This is probably a true reflection of its wide diversity of habitats which includes the River Ouse and its banks, ditches, meadows, chalk grassland, waste ground and urban areas. However a significant factor is the fact that 4 different recorders have recorded there. What is amazing is that, despite this high total, there are still over 100 species which were recorded in 1987/1988 which have not been refound there this time. Other tetrads with high species counts are TQ13A (Slinfold area) and TQ43A (Ashdown Forest SW of Wych Cross). If our results so far are compared with 1987/1988 then SU83W has by far the smallest number of "Missing" species (9) and an amazing number of new species (167). However the fact that only a very small part of this square lies in Sussex may account for this. Other squares with more "new" species than "missing" ones are SU80W, TQ10A, TQ13A, TQ40J and TQ70J.

Looking at the lost species the following are those which are missing from the largest number of tetrads. *Cynosurus cristatus* is missing from eight tetrads; *Atriplex patula*, *Euphorbia helioscopia*, *Leontodon autumnalis*, *Ulmus procera* are missing from seven and *Agrostis stolonifera*, *Arenaria serpyllifolia*,

Calystegia silvatica, *Cerastium glomeratum*, *Elytrigia repens*, *Leontodon saxatilis*, *Poa pratensis*, *Tussilago farfara* are all missing from six. While some of these have almost certainly been missed it may be that others are indicative of a real decline - we will revisit this question again when we have the data for 2004 as well.

What Next?

The first message is simple - go out, record and send us your results! It is a little disappointing is that only 21 of our members have contributed records so far. So, if you haven't done anything yet, please do some recording in 2004. A second message for those of you who have contributed is this - please go and record in a tetrad you did not visit in 2003. It is well established that having different recorders visit the same area increases the number of species recorded.

From an analysis of the data so far we would like to ask you to spend some time in the following tetrads which are almost certainly under-recorded based on a combination of the following criteria - small total number of records, large number of "missing" species and low number of recorders so far. These tetrads are: **SU80A, SU80J, TQ10J, TQ13W, TQ40A, TQ40W, TQ43J, TQ43W and TQ70J**. This does not mean that we don't want records from the other tetrads but do please try to improve the recording of those just listed.

Finally, if you would like a list of "missing" species for any square where you are planning to do some recording, please contact Alan Knapp with a list of the squares for which you would like information. If you have email then they can be sent instantly (but please note new email address - aknapp2000@btinternet.com). If you want a printed copy please send an SAE. They make very interesting reading - in all cases there are species which are common and are certainly present but which have not been recorded in 2003.

A final request

A final but vital point is this is the last year so we need to have the results entered, checked and sent off to the BSBI by the end of the year. **So, please send your records to us every 2 or 3 months. Do NOT save them up until the end of the year as we would prefer not to spend Christmas 2004 entering records!.**

Alan Knapp, Paul Harmes, Mary Briggs & Arthur Hoare

SELECTED RECORDS 2003 – VC13 Compiled by Alan Knapp

Species	Location	Status	Comments	Recorder
<i>Agrostemma githago</i>	Drove Lane, Yapton	U	c. 100 plants on grass strip by rape field	RCS
<i>Allium neapolitanum</i>	Lancing	E	Waste ground on road edge	BC/EB
<i>Amaranthus retroflexus</i>	Chichester	C	2 plants on small roundabout	MMS
<i>Amsinckia micrantha</i>	Shoreham	C	3 large plants in council flower bed	EB
<i>Anagallis tenella</i>	Parham	N	Locally abundant on side of ditch	J.Reardon-Smith
<i>Anisantha diandra</i>	Henfield	C	New bund along edge of Common	CMPR
<i>Arachis hypogaea</i>	Hove	S	In flower, base of wall in Vallance Gardens.	AS
<i>Callistephus chinensis</i>	Hove	S	1st VC13 recd. By trees, Vallance Gardens.	AS
<i>Cardamine impatiens</i>	Five Oaks	N	Damp patch (regularly cut due to being under telegraph wires)	SCU
<i>Carex strigosa</i>	Harting	N	7 records from Nyewood - Harting - Barlavington area (SU72Q,V, SU81E, SU82A)	FA
<i>Carex strigosa</i>	Cocking	N	11 records from Cocking - Graffham (SU81U,Z, SU91D,I,N,T)	FA
<i>Carex strigosa</i>	Kirdford	N	8 records from Ebernoe, Kirdford, Plaistow area. SU92Y,Z, TQ02E,J, TQ03A	FA
<i>Centaurea cyanus</i>	Drove Lane, Yapton	U	Few plants by rape field, with <i>Agrostemma githago</i>	RCS

<i>Chrysanthemum segetum</i>	Watersfield	N	In set-aside & nearby sandy field	FA
<i>Chrysanthemum segetum</i>	E of Petworth	N	Many plants in arable field	RIH
<i>Cicuta virosa</i>	S of Petworth	N	New location, only 2nd known in VC13	CMPR
<i>Conyza bilbaoana</i>	Bognor Regis	C	Waste ground	MMS
<i>Crataegus laevigata</i>	Ebernoe	N	11 records from woods in Ebernoe, Kirdford & Plaistow areas. SU92T,Y, TQ02D,E & TQ03A	FA
<i>Crocus tommasinianus</i>	S of Compton	E	Roadside verge, Birchin Copse	DNE
<i>Digitaria ciliaris</i>	Hove	C	1st VC13 record. One plant in crack by pavement	AS
<i>Equisetum sylvaticum</i>	Shottermill	N	Locally common in wet wood	FA
<i>Eriophorum vaginatum</i>	Lavington Common	N	In damp area	O&MH
<i>Erysimum cheiranthoides</i>	Chichester	C	Many plants, rough area by new Homebase	MMS
<i>Euphorbia platyphyllos</i>	N.Stoke	N	One plant	SMS
<i>Festuca filiformis</i>	Forest Mere	N	Beside sandy track	SBRS
<i>Fumaria bastardii</i> var. <i>bastardii</i>	Crawley	C	Only recent VC13 record. Weedy strip disturbed in road building	AGK
<i>Galanthus elwesii</i>	Merston Church	P	Churchyard	N&ES
<i>Galium uliginosum</i>	Forest Mere	N	Edge of field & in mown grass ~70m away	SBRS
<i>Gnaphalium sylvaticum</i>	Hammer Wood	N		BMI
<i>Hedera algeriensis</i>	Withdean Woods	E	1st VC13 record. Climbing trees and rambling along the ground	AS
<i>Helleborus argutifolius</i>	Aldwick Bay	P	Beach	MMS
<i>Hyoscyamus niger</i>	East Marden	N	100's of plants in Brassica crop	H.Huxley
<i>Ilex x altaclerensis</i>	SW of W.Itchenor	P	1st VC13 record, one bush	SBRS
<i>Inula crithmoides</i>	Furzefield Creek	N	Former Combes Boatyard	N&ES
<i>Lathraea squamaria</i>	West Dean	N	Alongside a track in West Dean Woods	JCO
<i>Lepidium heterophyllum</i>	West Itchenor	N	Many plants by track near boatyard	SBRS
<i>Lotus glaber</i>	Slinfold	N	Single clump on bank by A29	AGK
<i>Moenchia erecta</i>	Itchenor	N	Meadow behind harbour wall	SBRS
<i>Philadelphus x virginalis</i>	Lancing Ring	S	1st VC13 record, near Hill Barn Farm	SBRS
<i>Poa infirma</i>	Hove	N	Bottom of tree on A270	AS
<i>Polygonatum multiflorum</i>	Graffham/Heyshott area	N	10 records in woods on gault in SU91D, E, J	FA
<i>Polygonum rurivagum</i>	West Dean	N	Set-aside arable field	Miss R. Bucknall
<i>Ranunculus parviflorus</i>	Runcton	N	Disturbed ground under fence	AGH/AGK
<i>Rhynchospora alba</i>	Heyshott Common	N	Several plants in damp area	O&MH
<i>Rumex pulcher</i>	West Stoke	N	Churchyard, 1 plant	AGK
<i>Rumex pulcher</i>	Lancing	N	1 plant on grass verge	BC/EB
<i>Salvia pratensis</i>	Upper Beeding	N	20m S of S.Downs Way. Clump of c.25 plants	HM
<i>Samolus valerandi</i>	Parham	N	Scattered along ditch	J.Reardon-Smith
<i>Sarcocornia perennis</i>	Old Shoreham	N	13 locations along edge of Adur	AS
<i>Schoenoplectus x kuekenthalianus</i>	South Stoke	N	S bank of Arun on mud by river	SMS
<i>Scutellaria x hybrida</i>	Roffey	N	Wet wood, many large patches	AGK
<i>Scutellaria x hybrida</i>	Snapelands copse	N	Damp woodland rides in many places	SBRS
<i>Sisyrinchium californicum</i>	Pagham Harbour	C	Approx. 20 plants	HWM
<i>Stachys arvensis</i>	Watersfield	N	Locally common in two sandy fields	FA
<i>Torilis arvensis</i>	West Lavant	N	Field beside New Barns Lane	N&ES
<i>Torilis nodosa</i>	West Worthing	N	Few plants in grassy pavement edges	BC et al.
<i>Trifolium ornithopodioides</i>	West Itchenor	N	Small patch on bank	AGH
<i>Valerianella dentata</i>	Bury Hill	N	Beside bridleway on escarpment	BL
<i>Veronica peregrina</i>	Nyman's Garden	C	Garden weed	AGH

SELECTED RECORDS 2003 – VC14 Compiled by Paul Harnes

Species	Location	Status	Comments	Recorder
<i>Aira caryophyllea</i>	Lydd Ranges	N	Short turf	SBRS
<i>Aira caryophyllea</i>	Bexhill Cemetery	N		PGM
<i>Alopecurus aequalis</i>	Pound Hill, Crawley	N	Bare mud, Milton Mount Lake	AGK
<i>Anagallis minima</i>	Spithurst	N	Knowlands Wood	SBRS
<i>Anagallis minima</i>	S of Wych Cross	N	Damp track	AGK/AGH
<i>Festuca rubra</i> ssp. <i>littoralis</i>	SE of Lewes	N	Tidal river bank	AS
<i>Fumaria viallantii</i>	Peacehaven	N	Arable field	AS
<i>Genista anglica</i>	Chelwood Gate	N	Ride	RAN
<i>Jasione montana</i>	Lydd Ranges	N	Short maritime vegetated shingle	SBRS
<i>Lathyrus hirsutus</i>	Newhaven	N	Landfill site	SD
<i>Malva neglecta</i>	Hailsham	N	Station Road	JPD
<i>Malva neglecta</i>	Peacehaven	N	Arable margin	AGK
<i>Ophioglossum vulgatum</i>	Lewes	N	Railway Lands	AS
<i>Ophioglossum vulgatum</i>	Wilmington Green	N	Common land	HMP
<i>Phleum arenarium</i>	Rye Harbour NR	N	Vegetated shingle	AS
<i>Potamogeton berchtoldii</i>	Arlington	N	Pond by reservoir	HMP
<i>Potamogeton trichoides</i>	Winchelsea	N	Ditch S of station	SBRS
<i>Reseda phyteuma</i>	Peacehaven	E	Arable margin	AGK
<i>Rumex palustris</i>	S E of Lewes	N	Poached edge of ditch	AS
<i>Rumex cristatus</i>	Camber	C	Edge of cycle track	AS
<i>Ruppia cirrhosa</i>	Lydd Ranges	N	Saline lagoon	SBRS
<i>Salicornia ramosissima</i> x <i>pusilla</i>	Rye Harbour	N	Saltmarsh	AS
<i>Sandix pecten-veneris</i>	Berwick	N	Arable	ASY
<i>Selaginella kraussiana</i>	Sedlescombe	E	Churchyard	AGH
<i>Silene noctiflora</i>	Hollingbury	N	Arable	PTH/PW
<i>Solanum physalifolia</i>	Peacehaven	E	Arable margin	AGK
<i>Suaeda vera</i>	Lydd Ranges	N	Saline hollow	SBRS
<i>Thlaspi alliaceum</i>	Hollingbury	C	Rough grassland	PTH
<i>Typha</i> x <i>glauca</i>	Pett	N	Royal Military Canal	SBRS
<i>Verbascum densiflorum</i>	Newhaven	E	Tide Mills	AS
<i>Verbascum</i> x <i>broickmuelleri</i>	Newhaven	N	Tide Mills	AS/PAH
<i>Verbascum virgatum</i>	Rye Harbour NR	N	Caravan park	PGM
<i>Veronica perigrina</i>	Handcross	C	Nymans Gardens	AGH
<i>Veronica perigrina</i>	Magham Down	C	Car park of Garden centre	PAH/AS
x <i>Conyzigeron huelsenii</i>	Rye Harbour	N	Spoil heaps	AS
<i>Zanichellia palustris</i>	SE of Lewes	N	Drainage ditch	PAH/AGK/AS

Recorders' initials

AGH	Arthur Hoare	JPD	Peter Davys
AGK	Alan Knapp	MMS	Mike Shaw
AS	Tony Spiers	N&ES	Nick & Elizabeth Sturt
ASY	Adriana Symon	O&MH	Olwen & Mike Hollings
BC	Beryl Clough	PW	Peter Whitcomb
BL	Brian Laney	PGM	Pam Marchant
BMI	Bruce Middleton	PTH	Philip Thompson
CMPR	Kate Ryland	RAN	Rachel Nicholson
DNE	Dawn Nelson	RCS	Rod Stern
EB	Betty Bishop	RIH	Rita Hemsley
FA	Frances Abraham	SBRS	Sussex Botanical Recording Society
HM	Harry Montgomery	SCU	Simon Curson
HMP	Helen Proctor	SD	Simon Davey
HWM	Howard Matcham	SMS	Sylvia Simkins
JCO	John Cole		

