

Sussex Botanical Recording Society

Newsletter

No. 59

January 2005

President's Message

by Mary Briggs

Congratulations to those involved in another successful publication from SBRS – the journal *Sussex Botany*, published by the Sussex Wildlife Trust, March 2004. We particularly thank the Editors, Paul Harmes and Nick Sturt, for their hard work in preparing the first issue, Number 01, for publication – and the five authors of the papers. These are full of local botanical information and interest, varied and relevant to our fascinating Counties. Already the next issue is well under way for publication in the Spring, and we look forward to this with thanks again to those involved and congratulations on their successful achievement.

Alan Knapp has been registering our Society for a website, and we are now officially sussexflora.org.uk. First thinking that we should be SBRS.org, Alan found that these initials had already been allotted to:

- 1) South Birmingham Radio Society
- 2) South Bay Recorder Society – a musical group for recorder players in San Francisco!

We will let you know when the website is up and running.

Recording on Road Verges

by Rod Stern

In the last Newsletter, I referred to the need for safety precautions when surveying road verges, including minor roads. I suggested that members should wear fluorescent tabards. The SBRS now has five of these for the use of members. The field meeting conveners have two each available for members to use as necessary, and I have one for recording at evening meetings. It is desirable that members who are recording verges, including parts of tetrads for the New Flora project, should make arrangements in advance so that they can pick up a tabard at a convenient time.

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Secretary's Note

Dates for your Diary

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.

Saturday 5th November 2005

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, reports of field meetings and interesting records and members' slides. Please remember to 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.

by Rita Hemsley

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Obituary: Joan Hall

by Mary Briggs

We were very sorry to learn of the death last year of Joan Hall. Joan will be remembered by all who took part in the recording for the *Sussex Plant Atlas* (1980), which was the pioneer recording for an Atlas project in Sussex. Joan's husband Peter was the author of the *Atlas*, but I know that he would agree that Joan was his right-hand recorder and record-keeper. In the *Atlas* Peter thanked '...my wife who has helped to collate the records, prepared the draft maps, vetted and often improved the text, corrected proofs, but most of all sustained me when the end seemed unattainable'.

It was Joan who at the annual Spring meetings of the Sussex Flora Society (forerunner of the SBRS) would give us instructions for that year's recording – each year a different coloured pencil to mark our master cards, I remember. Joan also prepared maps showing our progress, and the coverage each year of significant species.

Together Joan and Peter spent much time preparing the *Sussex Plant Atlas* for publication, and finally Joan, with Pat Donovan and some other volunteers, filled in the dots on all the maps *by hand* – using a template!

The Halls were an exceedingly competent recording team – they had earlier assisted atlas recording projects in Surrey, Kent and Bedfordshire and others, as well as recording enthusiastically for the first BSBI *Atlas of the British Flora* (1962). Joan was also a very keen gardener and, with Peter, travelled to many of the botanical hotspots of Europe, mainly for alpine plants.

Recently Joan and Peter lived quietly in Dorset, having almost retired from botany. We send our sincere condolences to Peter.

Obituary: Elsie Jean Clunes

by Peter Finch with contributions from Stan & Vera Heyward, Betty Bishop, and Joan & Peter Finch

Jean, as she was known to all her friends, had a deep love of botany. Her particular interests were the conifers and, most especially, the yellow composites, of which she had expert knowledge. When we were out on forays, we were glad to pass specimens of these to her for identification, and she always came up with the right answer!

She had a very reliable internal clock, which began its reminders at about 12 noon, making it imperative that we adjourn for a picnic lunch by 12.30. In the afternoon, no matter what plant we were seeking, Jean would disappear to search the hedgerows for blackberries!

Jean travelled a lot in search of wild plants – it was only a few years ago that she visited a friend in Argentina, and studied several of the plants which

grow in that country, as well as visiting other parts of the world.

She recorded British wild plants for the *Sussex Plant Atlas* from its beginning, and gathered seeds for the Millennium Seed Bank at Wakehurst

Apart from her botanical interests, she assisted the Curator in the Marlipins Museum at Shoreham, and was very involved in the Methodist Church at Shoreham. Her other interests included rambling, calligraphy and swimming.

Professionally, Jean was a Nursing Sister, and towards the end of her career was Sister-Tutor at Southlands Hospital at Shoreham, and it was in 1958 that Joan and I first met her there. At the Hospital, her botanical interests were well-known to her colleagues.

She formed a small informal group, which we called the Botanical Discussion Group, when we met in one another's homes to discuss plants of interest which we had brought with us, with a little nourishment to assist our deliberations. Jean, who died at home in Autumn 2004, will be sadly missed by all in that group, and all who knew her in the SBRS.

Recent Publications

by Nick Sturt & Paul Harmes

Sussex Wild Flowers

Even in these comparatively enlightened times, our countryside and its treasures remain vulnerable to all sorts of pressures. The SWT commissioned Mary to produce this very attractive volume specifically to raise awareness of the floristic wealth of Sussex among the more general public, and so encourage an interest in conservation at home. Mary has assembled nearly 100 plants special to the twin counties, each carefully described with its habitat preferences and range, embroidered with fascinating facts and illustrated with colour photographs. Although Mary emphasizes that the work is written for the non-specialist, specialists too will enjoy the book and in fact there are on every page snippets which will inform and delight even the most seasoned botanist. It is an ideal present for anyone who loves Sussex, but be sure to keep a copy for yourself! (NS)

Sussex Botany

Issue 02 of *Sussex Botany* is due to appear in early 2005 in time for the SBRS AGM. It will contain Patrick Roper writing on some interesting inter-relationships between flies and Sussex flowers, an edited transcript of the masterful talk given by Francis Rose to the Society in 1993, and Howard Matcham's story of his unexpected metamorphosis into a bryologist and the unusual bryophytes which he has found in and around Chichester. In addition the editors have considered a few of the more notable plant records from the county in 2004. (PAH & NS)

Ed's note: Both these publications are available from the Sussex Biodiversity Records Centre at Woods Mill and, while they last, copies are also for sale at indoor SBRS meetings. It is good to see that many Sussex bookshops stock *Sussex Wild Flowers*. The May 2005 Newsletter will contain a review of David Lang's splendid new book on orchids of the UK, written for English Nature.

Sussex Bryophytes

New and Interesting Records

by Howard Matcham

The end of 2003 had seen the acceptance by the BBS Recorder of Liverworts for a West Sussex record of the Cavernous Crystalwort (*Riccia cavernosa*). A mud-loving species found growing in the dried up bed of a pond at Maudlin village, east of Chichester. The circumstances of its discovery will be revealed in the forthcoming edition of *Sussex Botany* (in press) and this chance discovery is the first record for the vice-county. An exceedingly attractive thalloid liverwort with the upper thallus composed of tissue separated by large air chambers giving the appearance of a glistening green sponge. Tens of thousands of coalescing thalli covered the bed of the seasonally dry pond.

Some eighteen months ago I began a field study of *Bryum* species with the aim of detecting those that possessed and those that did not possess, rhizoidal tubers, (similar to potatoes on *Solanum tuberosum* roots) a world wide study initiated by Professor Jeff Duckett at QMUL (Queen Mary University of London) with the prospect of a major paper (in prep.) as the end result. During the course of my field work which was to collect species known to possess tubers either frequently or infrequently from a variety of substrata, I gathered the Capillary Thread-moss (*Bryum capillare*) from the concrete wall of a World War II gun emplacement, north of the windmill at Halnaker Hill.

On looking at the rhizoids under the dissecting microscope I noticed what appeared to be single celled tubers (most tubers consist of several to many cells) on the ends of the ultimate rhizoids. Tubers on *B. capillare* are infrequent and never single celled. I did not know what these structures represented! On sending the collection to QMUL the answer was most unexpected.

It was a specialized parasitic fungal infection of mosses and a member of the Rozellopsidales (Oomycota, Chromista, better known previously as the Chytridiales in the aquatic phycomycetes) that form zoosporangia in swollen rhizoid cells. These are commonly referred to as "chytrid" galls. They were first described by Peterson (1910), in an unidentified moss from Denmark, who named the fungus *Pleotrachelus wildemani* and in the Index Fungorum it appears as *P. wildemanii*. The occurrence of chytrid galls in mosses has only been noticed occasionally in the intervening years. This find from Halnaker Hill is

now the subject (with other recent finds from Spain) of a paper entitled: Interactions between parasitic fungi and mosses: pegged and swollen-tipped rhizoids in *Funaria* and *Bryum*. (in press) It will be published in the Journal of Bryology in December of this year (2004).

Chytrid fungal infections are decimating frog populations to the point of extinction throughout Australasia and the Americas. The Halnaker Hill collection (unique in not being close to water) and the recent finds in Spain (aquatic) and a very recent find of chytrid galls on the protonema and filamentous axillary gemmae of the Flabby Thread-moss (*Bryum laevifilum*) that I have found at Swanbourne lake at Arundel are to be the subject of an urgent study by zoologists seeking to find if connections can be made in the life history of this deadly fungus (for the frog) between mosses and amphibians.

Continuing on the subject of tubers in mosses, a recent collection of the Strap-leaved Earth-moss (*Ephemerum recurvifolium*) from hard packed soil of an artificial earth bank, again at Maudlin village, revealed starch filled tubers on the protonema, not previously seen from this genus. These are currently being cultivated at QMUL.

Relaxing at home during a recent downpour, my wife Louise, remarked, that "the gutters on the shed roof need attention," waiting for a suitable respite in rainfall I propped a ladder against the offending gutter and climbed up to do as bidden. To my astonishment a moss unfamiliar to me dripped a welcome from a clay roof tile. Rapidly clearing the offending gutter I removed a small portion of the unfamiliar moss and made for the familiar microscope. It then revealed its name, North Grimmia, (*Grimmia longirostris*) an exceedingly rare species with the next location as far away as North Devon. Not entirely unexpected in Sussex, particularly where the roofs are tiled with clay although the members of this genus are much more familiar in upland Britain. The area around Chichester, however, is unique for southern England in having eight species within a five mile radius of the city!

I enjoy strolling from my home at Strettington along part of the Old Roman road between Chichester and London known as Stane Street. Part of it is now the A285 and another part deviates from the A285 and is now used as a footpath (for centuries past) to the parish of Boxgrove. A moss growing on damp soil, under shade offered by ancient Field Maples (*Acer campestre*) caught my eye recently and on microscopic examination proved to be the Pretty Nodding-moss (*Pohlia lescuriana*); it is the first record for the Vice County. This moss is also a member of the Bryales and has recently been transferred from the Bryaceae to the Mniaceae. It also possesses rhizoidal tubers. In this species it is the composition of these tubers that allows for correct identification.

References

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'Pocket-plums' *Taphrina pruni*

by Howard Matcham

Most gardeners are familiar with the fungal disease known as 'peach leaf curl', usually noticed as a bright red, conspicuous thickening on the leaves of Peach (*Prunus persica*) and Almond (*P. dulcis*). Probably fewer gardeners are aware that it is a plant gall caused by the fungus *Taphrina deformans* (Berk.) Tul. (Taphrinales: Taphrinaceae). One of only four fungus species in the genus *Taphrina* that cause galls on the above and also on Blackthorn (*P. spinosa*), Bird Cherry (*P. padus*) and the introduced Wild Plum *P. domestica*.

During the late spring of 2003 I noticed that young fruits of the blackthorn were becoming deformed and 'banana shaped', puzzled, I assumed it was probably a gall, but which and how would it be possible to identify the cause? When in botanical doubt phone and ask the font of all knowledge, Mary Briggs! Mary suggested that I contact our SBRS member, Dr Patrick Roper. Mary had again solved the problem.

Patrick suggested that it was probably *Taphrina pruni* Tul. Colloquially known as 'pocket-plums' and informed me that it was only the second record from West Sussex. The first had been found from the Pagham Harbour Visitor Centre by Sarah Patton in 2002. Also recommended by Patrick is the Field Studies Council publication *British Plant Galls (Identification of galls on plants and fungi)* by Margaret Redfern and Peter Shirley. I now have this book and reiterate Patrick's advice, it is superb!

Those of you who attended the Autumn Get-together will be familiar with the gall and will be aware of what to look for this coming spring. I will be most appreciative if you could send me records of this gall and in particular any records from *Prunus cerasifera*. As far as I am aware this introduced species is not known to become infected, whereas the introduced *P. domestica* is susceptible to infection.

I was only able to detect small populations from the Boxgrove/Maudlin village areas and not all of the fruits are infected; even on the same sprig healthy fruits remain until the end of the year.

Howard Matcham

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Hurry while stocks last! Who wants a free PC?

Free PC. Alan has kindly let me have his old PC and so if any SBRS member would like my old PC and monitor, free of charge, please let me know or phone me if you want to know more about it. It has Windows 95, which is a bit antiquated now.

Tony Spiers. 01273 609836.

2004 field meetings VC13

by Nick Sturt & Arthur Hoare

Rusper, Saturday 8th May (AGH)

On such a wet and miserable looking day it was surprising to find the car-park filled to capacity. It was difficult to get a head count as everyone was milling about greeting old friends and getting an update on the latest gossip, but I'm told that there were 30 present. The object of this joint meeting with the Surrey Flora Society was to look at two different woods, the first a ghyll woodland with an interesting ground flora indicating its ancient origins; and the other a mainly secondary woodland. In spite of the heavy going through the mud we found many spring plants in evidence, including a few fine stands of *Ranunculus auricomus* (Goldilocks Buttercup) and both species of *R. ficaria* (Celandine). It was not too long before we found *Cardamine bulbifera* (Coralroot), one of the specialities of the wood, growing on the banks of the stream. Close by there was *Carex strigosa* (Thin-spiked Wood-sedge) which was being studied by one group when Paul Bartlett appeared clutching a Dandelion leaf, a fine specimen of 64cm (25"); thankfully he did not ask anyone to identify the species. The total number of species recorded was 111, a commendable effort under such trying conditions.

After lunch we travelled in convoy to Edolph's Copse in Surrey, a 68 acre mixed woodland owned and managed by the Woodland Trust. Soon after entering the wood a fine specimen of *Sorbus torminalis* (Wild Service-tree) was admired growing beside one of the ponds. Not finding much in the way of aquatic plants at this time of year, we headed back to the path and started to record the many spring flowers in evidence at the sides of the track leading down into a small meadow. With this change of habitat many new plants were added to the list: *Dactylorhiza fuchsii* (Common Spotted-orchid) was noted growing amongst the abundant *Centaurea nigra* (Common Knapweed) not yet in flower, but the best find here was a patch of *Ophioglossum vulgatum* (Adder's-tongue). Once we had got our eye in we were finding many more patches of this delicate fern. *Hypericum tetrapterum* (Square-stalked St John's-wort) was seen in the damper parts of the meadow. Back into the woodland and, while walking through the carpets of *Hyacinthoides non-scripta* (Bluebell), we had another pleasing find with *Platanthera chlorantha* (Greater Butterfly-orchid) just coming into flower. Our final tally for the afternoon session was 128 species.

Warningcamp, Sunday 16 May (NS)

Alan nudged the party of twenty away from the cars and down the lane under strong May sunshine and the

joyous lark-song that rose above the cries of Linnaean binomials. Nothing remarkable so far except unusual quantities of *Lithospermum officinale*, whose English name was not recalled by everyone even when Rita was informed that it began with G. Short chalk turf by the lane yielded some more refined species as we began to head downhill into a valley whose distant slopes bore patches of the watery blue that is *Veronica chamaedrys* (Germander Speedwell) *en masse*. An abandoned arable field absorbed members for some time – there was more of the *Lithospermum* and also *Euphorbia exigua* – but at length we noticed in the middle distance a somewhat impatient expression on the Knapp visage semaphoring to us quietly but emphatically that it was time to move on. So we followed him up onto the south-facing slope where he hoped to find some interesting plants on soil disturbed by rabbit activity. A few meagre specimens of *Ranunculus parviflorus* (Small-flowered Buttercup) pacified him and while he was off his guard we severally proceeded to sit in the grass at ease until he realised that it was clearly felt to be lunchtime. Much more generous amounts of *Ranunculus parviflorus* were discovered after refreshment, some patches in association with *Arenaria serpyllifolia* (Thyme-leaved Sandwort); and there was also *Cynoglossum officinale* (Hound's-tongue) and a grizzled skipper in mint condition. Descending to the valley bottom again, we made our into the shade of a wood where we crossed the tetrad boundary from 00N to 00I and enthusiastically started a new card with two new species *Listera ovata* (Twayblade) and *Ruscus aculeatus* (Butcher's-broom). The highlight of the walk back was not Alan being mistaken for a certain P A Harmes (who?) but a field edge with *Petroselinum segetum* (Corn parsley). And so along a lane (where Rod pointed out elm leaves with the chewings of white-letter hairstreak caterpillars) back to the cars, uplifted.

Shottermill, Saturday 29 May (NS)

It looked like a small and very select band in the recreation ground car-park, but Pat and Sophie tracked us down by feminine intuition after we had entered the damp woodland by the Wey, and were quietly admiring natives including *Cardamine amara* (Narrow-leaved Bittercress) and one or two exotics such as *Lysichiton americanus* (Skunk Cabbage) and *Primula japonica*. The party was 10 strong as Frances led us at a purposeful pace around territory she clearly knew well, while Alan showed no mercy to the young plants of *Impatiens glandulifera* (Himalayan Balsam) which has become such a beautiful scourge of our river banks. Eventually we emerged from the wood and, passing some *Rubus spectabilis* (Salmonberry), we set about a pond and green. Here careful examination of characters such as the topmost bract and male glumes unmasked *Carex acutiformis* (Lesser Pond-sedge), but the geese had left us little else. We picnicked in a field after Frances had taken us to one of her favourite plants, *Equisetum sylvaticum* (Wood Horsetail). More and wetter woods entertained us in the afternoon with further *E. sylvaticum* straddling the tetrad border, along with a Wey speciality, *Lathraea amethystina* (Purple Toothwort) – a species new to several

members. A shady lane and some suburban habitats completed the meeting, leaving us all impressed with the fact that within a very small area we had amassed in excess of 200 species.

Cissbury, Sunday 4 July (NS)

Had it been a sunny morning, the sloping downland above Findon would have been breathtaking with its calcicolous herbs – the golden *Leontodon hispidus* (Rough Hawkbit), the subtly different yellow drifts of *Galium verum* (Lady's Bedstraw), the delicate blue heads of *Scabiosa columbaria* (Small Scabious), mats of *Asperula cynanchica* (Squinancywort) just coming into bloom.... But it was still a pleasant sight in the grey conditions as Alan led his battalion of ten troops on an assault on the Iron Age ramparts.

This was another BSBI Local Change meeting and Alan had a hit-list of some species recorded previously but not yet accounted for: it was absorbing work and by 11.30 we were comfortably behind his schedule for the day. A feature of the meeting was the way in which the topography perversely refused to agree with the parameters laid down by the tetrad boundaries so that frequent reference was made to GPS sets. Having at length ascended to the top of the first bank we sat down to lunch and watched the dark clouds advancing. There followed a wet afternoon, though the rain never really limited botany and a score of about two hundred species was respectable for open chalk with just a little leaching in places.

Looking back on the day, it was remarkable mainly for the calcicoles which we did not find – notably *Blackstonia perfoliata* (Yellow-wort) and *Helianthemum nummularium* (Rock-rose). Walking back lower down the slope we picked up the missing *Anthyllis vulneraria* (Kidney Vetch) in quite large cushions, but it was just as well that Jenny had found her single spike of *Phyteuma orbiculare* (Round-headed Rampion) earlier because it was the only one.

Thornham & Prinsted, Sun. 15th Aug (NS)

The leader's confidence in the meteorologists was misplaced for, despite assurances to the contrary, fine drizzle materialised and even some quite steady and wetting rain. But relatively undeterred, the twenty members who journeyed to this western edge of the county set about the task and even before Thornham Marina had been left there was a good find in the form of *Polypogon monspeliensis*, happened upon by Anne. Taking the track down to Thornham Point at a botanical pace, there was much to admire, for example a patch of *Genista tinctoria* (Dyer's Greenweed), some old bushes of *Rhamnus cathartica* (Purging Buckthorn), and desiccated skeletons of *Lepidium heterophyllum* (Smith's Cress). Tony frolicked in the brackish ditches and along the foreshore, revelling in the challenge of Glassworts: he pointed out several stands of *Sarcocornia europaea* and identified some plants of *Salicornia pusilla*, but the other members of the latter teasing genus were not sufficiently advanced for determination.

The pattern of the morning from the recorder's point of view was much use of the reverse of the soggy card but not a great number of crossings-off on the obverse. And so, via the Harbourside path past scattered *Limonium humile* (Lax-flowered Sea-lavender) and *Atriplex littoralis* (Grass-leaved Orache), to lunch at Prinsted, by now in more clement weather. Prinsted village provided interest, not only in its attractive cottages and cottage gardens but with a new collection of wild and escaped plants. The most notable of the latter type was *Cyperus eragrostis* which was naturalised in gutters and by walls practically everywhere. A brief foray into arable land led to another species new to many, *Solanum physalodes*; this was growing with its close relation *S. nigrum* (Black Nightshade).

To round off the proceedings a large and damp meadow was sampled. Here *Ononis repens* (Common Restharrow) was growing with its scarcer spiny cousin *O. spinosa* and it was also possible to compare *Oenanthe pimpinelloides* (Corky-fruited Water-dropwort) with *O. lachenalii* (Parsley Water-dropwort). One final comparison was strictly for the connoisseurs: the contrast between the flamboyance of Alan's toss of the grapnel and the subtlety of Rod's application of the walking-stick. Honours were even in this contest (which surely has claims as a sport of Olympic status) inasmuch as, despite muttered incantations, both were only able to conjure *Ruppia maritima* from the brackish waters of the pool.

Two expressions of appreciation. Firstly this meeting was rendered all the more profitable and enjoyable by the local knowledge of Anne de Potier who guided the leader discreetly and tactfully to the best sites. Secondly, as West Sussex Field Convenor, I am ever sincerely appreciative of the work of the leaders of our field meetings for they all deserve our thanks. By one particular Committee member I was blamed for a variety of shortcomings, most particularly the weather and the unyielding nature of the rocks on which we took lunch. Students of ecclesiastical history are apt to remark that saints must have been difficult to live with: I can only extend my sincere sympathy to Mrs Kathryn Knapp.

Field meetings 2004 VC14

by Pat Donovan, Tony Spiers & Pam Marchant

Bo-peep, 5th June (PD)

Wimps that we all were, last year's meeting at Cradle Hill was abandoned because of rain (annoyingly, the weather improved later). First impressions on the walk towards the tetrad, from Bo-peep this year instead of Cradle Hill, looked unpromising, but just into it the first *Legousia hybrida* (Venus's-looking-glass), was spotted. Out came the GPSs, but it was soon realised that they would be unnecessary as many more plants were found, along with *Euphorbia exigua* (Dwarf Spurge), *Lamium amplexicale* (Henbit Dead-nettle), *Geranium pusillum* (Small-flowered Crane's-bill), four

species of Poppy and several other arable weeds. The land was obviously set-aside, and it was difficult to find a clear spot for lunch. On the way back up the chalk hillside from Breaky Bottom, typical species included *Thesium humifusum* (Bastard-toadflax), *Lepidium campestre* (Field Pepperwort), *Geranium colominum* (Long-stalked Crane's-bill) and *Koeleria macrantha* (Crested Hair-grass), making a total for the day of 174 species.

Michelham Priory, 19th June (PD)

This meeting was led by Richard Bickers, who once worked at the Priory. Despite the fact that the gardens are well cared for and the lawns closely mown, 184 species were recorded. It was good to find that *Ranunculus sardous* (Hairy Buttercup) and *Trifolium micrantha* (Slender Trefoil) had escaped the mower blades.

The plants around the moat were particularly lush, and included *Carex pseudocyperus* (Cyperus Sedge), *Carex riparia* (Greater Pond-sedge), *Impatiens capensis* (Orange Balsam) and *Rumex hydrolapathum* (Water Dock). In the water were *Ceratophyllum demersum* (Rigid Hornwort) and *Menyanthes trifoliata* (Bogbean). In the woodland surrounding the garden, a *Sorbus torminalis* (Wild Service-tree) was found along with *Ranunculus auricomus* (Wood Buttercup), and the grasses in the meadow nearby included *Hordeum secalinum* (Meadow Brome) and *Trisetum flavescens* (Yellow Oat-grass).

Camber, 11th July (AS)

We were very lucky to have the small Jubilee golf course to ourselves all day and to be able to record this rich area without having to worry about golfers trying to knock our hats off.

Even before we'd got onto the course we'd found *Medicago polymorpha* (Toothed Medick) and *Medicago minima* (Bur Medick). The roughs were full of the blue tussocks of the alien *Festuca brevipila* (Hard Fescue), a grass recorded from here in Wolley-Dod. We also found the rare *Festuca arenaria* (Rush-leaved Fescue), seen here by Breda Burt and Francis Rose over 30 years ago.

There were suprisingly few plants of *Eryngium maritimum* (Sea-holly) - a plant that seems to be declining in Sussex, but *Calystegia soldanella* (Sea-bindweed) was still plentiful. *Oenothera cambrica* (Small-flowered Evening Primrose) was looking suprisingly healthy and abundant here for a plant deemed by 'The Sussex Rare Plant Register' to be 'extinct in Sussex'.

Rita congratulated the leader on a new Sussex record after he managed to lose two botanists before lunch.

In the afternoon, after some searching, we found Caddies Pool which was choked with *Stratiotes aloides* (Water-soldier). We were also pleased to find *Lactuca virosa* (Great Lettuce) and some late-flowering spring annuals - *Trifolium suffocatum* (Suffocated Clover), *Trifolium subterraneum* (Burrowing Clover) and *Trifolium ornithopodioides*, (Bird's-foot Clover).

Although we had hoped to look at the mobile dunes and the beach, it began to rain heavily, and so, card stuffed with records and pockets bulging with golf balls, we followed the old Rye/Camber tramway back to the cars.

Filsham Reedbed, 7th August (PM)

Filsham reedbed was originally floodplain pasture, crossed by a network of dykes (hand-dug and pre-dated 1780). Since about 1974 it has been a nature reserve, within the Coombe Valley SSSI, owned by Hastings BC and managed by SWT. Initially the site was left to develop naturally as a reedbed, but by the 1990s it was realised that it was in poor condition, and many wetland species had been lost. The SBRs survey will assist appropriate management.

The first hour was taken up surveying the approach-route, with the forthcoming Flora in mind. The river gave us *Nymphoides peltata* (Fringed Water-lily), *Sparganium emersum* (Unbranched Bur-reed) and *Callitriche platycarpa* (Various-leaved Water-starwort).

In the Reserve *Phragmites australis* (Common Reed) dominated, with many *Salix* species, scrub, and a good array of the more common plants of ditches and wet places. The more special finds included *Potamogeton obtusifolius* (Blunt-leaved Pondweed), two large colonies of *Oenanthe aquatica* (Fine-leaved Water-dropwort), a few specimens of *O. pimpinelloides* (Corky-fruited Water-dropwort), a single *Alnus cana* (Grey Alder), two *Rubus* species, *R. ulmifolius* and *R. armeniacus*, and one stonewort *Chara vulgaris*. Three hybrids were identified: *Prunus* x *fruticans* (*P. spinosa* x *P. domestica*), *Salix* x *smithiana* (*S. cinerea* x *S. viminalis*) and *Calystegia* x *lucana* (*C. sepium* x *silvatica*).

Sadly this was an 'off-year' for the *Utricularia* (Bladderwort) for which the site is renowned. However, a few flowers were found and the most reliable identification feature was demonstrated: 'glands present on inside of both abaxial and adaxial sides of the spur' for *U. australis*, in contrast to *U. vulgaris* (for an explanatory illustration see Stace!).

In passing – another useful object lesson for some of us was *Galeopsis bifida* (Bifid Hemp-nettle), a more common species than expected: its similarity to its 'common' lookalike was a sharp reminder of the dangers of identification by recognition of general appearance!

Rye Harbour, 21st August (PD)

Thirty members came to this joint meeting with the BSBI, which was not the usual 'tetrad bash', but rather a chance to enjoy the special plants of the Reserve. Recent unseasonal storms had affected many of them, particularly *Galeopsis angustifolia* (Red Hemp-nettle) and *Lactuca saligna* (Least Lettuce), hard to spot at the best of times.

The Warden, who led us round, came armed with a ladder for everyone to climb up and over a fence 5 feet

high to look for *Chenopodium chenopodioides* (Salt-marsh Goosefoot), which proved elusive (after all that effort!). Above the tideline beside the river, *Limonium hyblaicum* (Rottingdean Sea-lavender) seems to be increasing, along with *Frankenia laevis* (Sea-heath). *Bupleurum tenuissimum* (Slender Hare's-ear) was still on the low bank where it has been for several years. A brief visit was made in the afternoon to Castle Water, where quite a small muddy pool had *Baldellia ranunculoides* (Lesser Water-plantain) and *Ranunculus baudottii* (Brackish Water-crowfoot).

Ashdown Forest, 19th September (PD)

Alan decided that as TQ43W has now been adequately covered for Local Change Monitoring, he would make a start on recording for the new Flora in TQ42U.

Of the 100 or so species recorded in the morning, nearly two thirds were found on the road verges, and therefore were not typical of the area. The true Forest plants included *Euphrasia anglica*, *E. nemorosa* (Eyebright species), *Narthecium ossifragum* (Bog Asphodel) and *Eriophorum angustifolium* (Common Cotton-grass).

The south-west side of the B2026 is a well known site for *Gentiana pneumonanthe* (Marsh Gentian) and, after tramping through much *Molinia caerulea* (Purple Moor-grass), some 40 plants were found; in the same area were *Cirsium dissectum* (Meadow Thistle) and *Salix repens* (Creeping Willow). Alan later confirmed that the *Spergularia* found on the road edge was *S. marina* (Lesser Sea-spurrey). Is this to be the next maritime species to spread inland? Not as easy as *Cochlearia danica* to spot from a car though...

Recording in winter

by Alan Knapp

Although not the best season for vascular plant recording, there are some species which it is easier to record in winter than at any other time. There are of course the Snowdrops but also others. *Viscum album* (Mistletoe) is much easier to see in trees with no leaves, *Petasites fragrans* (Winter Heliotrope) is often more obvious when in flower in the winter, and some things like *Ruscus aculeatus* (Butcher's-broom) and *Daphne laureola* (Spurge-laurel) can be easier to spot in woods and hedges in the winter.

Autumn Crocus

by Frances Abraham

I have recently been reading some of the circulars which were sent to all West Sussex schools by the Local Education Authority during WWII. An item about *Colchicum autumnale* (Autumn Crocus) caught my eye: children should collect corms and seeds, which must be sent to various pharmaceutical companies for the manufacture of drugs for treating rheumatism and gout. This species was always rare in Sussex, and was thought to have been extinct by the time of the *Sussex Plant Atlas* (1980). Do any members recall collecting it during their wartime schooldays?

Summary of Results of BSBI Local Change Project in Sussex

Alan Knapp

During the two year period 1987/1988 a series of tetrads spread across the country was recorded by BSBI members. In 2003/4 the BSBI Local Change project has re-recorded the same tetrads in order to see what changes have occurred in the intervening period. Sussex has 17 of these tetrads (10 in West Sussex and 7 in East Sussex) which are listed in table 1. The vast majority of the recording for the project in Sussex has been done by members of the SBRS. These records have now been collected and sent to the BSBI. We would therefore like to thank all the 23 members of the SBRS who submitted records.

There is a lot of information which could be extracted from the results of this survey and this note gives an initial summary of some of them. Some results are unsurprising but others, such as the very significant difference in the species lost from the most tetrads between East and West Sussex, are quite unexpected.

Table 1 gives the number of records for each tetrad and the (very) approximate percentage of the tetrad in Sussex (in some cases the rest of the tetrad is in another county and in other cases it is in the sea).

Table 1: No. of records per tetrad

West Sussex (VC13)			East Sussex (VC14)		
Tetrad	% of tetrad area in Sussex	No. of species recorded	Tetrad	% of tetrad area in Sussex	No. of species recorded
SU80A	70	348	TQ40A	70	239
SU80J	100	322	TQ40J	100	450
SU80W	100	332	TQ40W	100	319
SU83A	20	176	TQ43A	100	348
SU83W	10	289	TQ43J	90	353
TQ10A	20	232	TQ43W	100	334
TQ10J	100	369	TQ70J	100	337
TQ10W	10	220			
TQ13A	100	353			
TQ13W	100	317			
Average no. of records per tetrad = 314					
Average no. of records per complete tetrad = 348					

The two richest tetrads were TQ40J and TQ10J. The very large number of records for TQ40J is a reflection of the wide range of rich habitats present (including both fresh water and saline wetlands, chalk grassland, urban and disused industrial areas). TQ10J also has a variety of habitats including urban, chalk grassland and arable but has no wet habitat at all. One other interesting point which emerges from this table is that 2 squares (TQ10W & SU83W) have only about 10% of their area in Sussex but TQ10W has 63% and SU83W an amazing 83% of the average number of records for a complete tetrad. This implies that most species in a tetrad are represented in quite a small fraction of the area.

One of the most interesting questions to ask is "What has changed?" One way of answering this is to look at the number of lost species and the number of new species - i.e. those which were recorded in the square in 1987/8 but were not refound in 2003/4 and vice versa. Table 2 shows this information as the number of species and also as the percentage of the number of species recorded in the square in 1987/8. SU83A is not included because the Sussex part of this square was apparently not recorded in 1987/8.

Table 2: Gains and losses per tetrad

Tetrad	Lost (no. of species)	Lost (% of 1987/8 records)	New (no. of species)	New (% of 1987/8 records)
SU80A	73	24	119	39
SU80J	48	17	85	30
SU80W	29	12	130	57
SU83W	6	10	232	368
TQ10A	40	22	91	50
TQ10J	96	25	80	21
TQ10W	42	22	74	39
TQ13A	58	20	122	42
TQ13W	68	24	96	33
TQ40A	51	28	106	58
TQ40J	82	22	153	40
TQ40W	38	15	110	45
TQ43A	69	20	70	20
TQ43J	51	17	97	32
TQ43W	52	16	66	21
TQ70J	37	18	172	85

The first thing of note is that, in all except one tetrad (TQ10J), the number of species recorded this time exceeds the number recorded in 1987/8.

There is always a question about whether the changes are real or are just artifacts associated with the imperfections of recording. Answering this is not easy (although comparison with data from the whole country may help) and in reality the changes are a mixture of both although in some cases there is good evidence for real change.

Take for example TQ10J, the one tetrad where the losses exceed the gains. At first sight this is a little surprising as it is the tetrad with the second highest number of records this time. However, examination of the list of lost species indicates a possible explanation. Over 20% of the lost species come from one habitat - chalk grassland. Many of the chalk grassland species from the 1987/8 recording came from Cissbury Ring. This is now more heavily rabbit grazed than in the past so the losses of the chalk-loving species may well be real. During an SBRS meeting there we specifically searched for some of the missing species without success, which also supports the view that these losses are real.

Another tetrad where there is a clear explanation for some of the losses is TQ13W. Here the changes are associated with a very significant expansion in the urban area of Horsham following construction of the A264 ring road just after the last survey. Houses now cover what used to be an area of acid grassland, and the river which runs through the tetrad is now canalised for most of its length and has almost no marginal vegetation. These changes match the observed loss of wetland and heathy species which, between them, account for 30% of the losses from that tetrad.

Where there have been large gains (e.g. SU80W, SU83W, TQ40J & TQ70J) the cause is almost certainly the result of more intense recording and a greater willingness to record introduced species. One common feature is that, in almost all cases, there has been an increase in the number of species associated with urban or disturbed areas.

The next step is to look at species, and Table 3 lists the species for which there have been the greatest changes across the county as a whole (i.e. for East & West Sussex combined).

One thing is immediately obvious from this list - a great majority of the losses are for native species, whereas all of the gains are for introduced species or native species which often occur as casuals (*Lactuca serriola* & *Matricaria recutita*). This is no surprise but it is useful to have some real confirmation of what many of us would have expected from casual observation of the changes around us.

Table 3: Losses and Gains for the Whole of Sussex

Losses		Gains	
Species	No. of tetrads	Species	No. of tetrads
<i>Cynosurus cristatus</i>	7	<i>Hyacinthoides x massartiana</i>	12
<i>Pilosella officinarum</i>	6	<i>Narcissus aggregate</i>	12
<i>Vicia sativa</i> subsp. <i>nigra</i>	6	<i>Pentaglottis sempervirens</i>	11
<i>Myosotis scorpioides</i>	5	<i>Lonicera nitida</i>	10
<i>Ranunculus bulbosus</i>	5	<i>Lactuca serriola</i>	9
<i>Trifolium campestre</i>	5	<i>Matricaria recutita</i>	9
<i>Ulmus procera</i>	5		

Five of the seven species which have apparently been lost from five or more tetrads are most often associated with grassland habitats, one (*Myosotis scorpioides*) with wet habitats and one (*Ulmus procera*) with hedgerows and woodland edges. However, the decrease in *U. procera* may be an artifact caused by problems in identifying specific *Ulmus* species where, following Dutch elm disease, they only persist as hedgerow suckers.

A surprising fact which is not apparent from this table is that the lost species for East and West Sussex are significantly different. If the species lost from three or more tetrads in each vice county are compared, only two species, *Cynosurus cristatus* & *Pilosella officinarum*, are common to both vice counties.

In addition to these two, West Sussex has lost *Bromopsis ramosa*, *Fallopia convolvulus*, *Festuca pratensis*, *Lolium multiflorum*, *Luzula pilosa*, *Medicago sativa* subsp. *sativa*, *Plantago media*, *Sanicula europaea*, *Silene latifolia*, *Ulmus procera* and *Vicia sativa* subsp. *nigra*.

For East Sussex the losses are *Aethusa cynapium*, *Alopecurus myosuroides*, *Anthemis cotula*, *Carex pallescens*, *Epilobium tetragonum* subsp. *tetragonum*, *Festuca arundinacea*, *Galeopsis bifida*, *Glyceria fluitans*, *Leucanthemum vulgare*, *Lychnis flos-cuculi*, *Moehringia trinervia*, *Pimpinella saxifraga*, *Polygonum arenastrum*, *Ranunculus bulbosus*, *Trifolium campestre*, *Trifolium hybridum* subsp. *hybridum*, and *Vicia hirsuta*.

Looking at the typical habitats for these lost species also shows a clear difference. For West Sussex nearly half of the species lost from three or more tetrads are of grassland species. In East Sussex, as well as grassland species, species found in farmland and, to some extent, wet places are also high on the list of losses.

Looking at the gains, there is more in common between East and West Sussex, with all the species listed in Table 3 except *Matricaria recutita* having been found in more than four new tetrads in both vice counties. *M. recutita* has been newly found in six new tetrads in West Sussex and three in East Sussex.

Distinguishing between real losses and changes in recording is very difficult. In the case of the species which have apparently spread, at least part of the apparent spread is due to the increased willingness of recorders to record introductions (*Lonicera nitida* is a good example of this) but this is almost certainly combined with a real increase in these species. For the lost species it is harder to attribute the losses of many of the species to recording artefacts and we can conclude that at least a significant part of the decrease is real. It will be interesting to see how our results compare with those from other areas when the BSBI analyses the results across the whole country, and also with the Sussex data we will acquire during recording for the new Flora.

This note has only scratched the surface of the information which could be gleaned (given time) from the data we have collected. If anyone has any comments or questions on the data presented here, especially any suggestions for causes of the changes or any observations which support or refute the suggestions made here, or would like to have more detailed information, please contact me.

New Sussex Flora – Short summary by Alan Knapp

This note summarises the key points of the talk about the New Sussex Flora given at the SBRS autumn get-together by Paul Harmes and Alan Knapp. A more detailed note based on that talk will appear in the next Newsletter.

Why a New Flora now

There has been no full account of the Sussex flora published since the Flora of Sussex by Wolley-Dod in 1937. The most recent publication covering all species was The Sussex Plant Atlas (SPA) but that was published in 1980 and contained no detailed species accounts. The new flora will be a full flora with maps and species accounts.

Approach

Recording will cover the period January 2000 to December 2010 and we aim to publish as soon as possible after 2010 as we can. Recording will be on a **tetrad (2km x 2km square) basis** which will allow comparison with previous work.

A sub-group of the SBRS committee consisting of the 4 VC recorders (Mary Briggs, Paul Harmes, Arthur Hoare & Alan Knapp) plus Frances Abraham and Nick Sturt has been set up to look after the project.

The role of SBRS members

To get the data we need for a high quality Flora we need the involvement of as many SBRS members as possible in the recording process. Please contribute – even if it is only a few records – everything helps.

What to record

Please record all native and introduced species (including hybrids). Also record planted species in natural surroundings but not planted trees and shrubs in streets, gardens, parks etc. or crops.

Where to record

In 2005 please record in any tetrad (except the tetrads we already recorded for the BSBI Local Change project). As time goes on we will ask you to record in those areas which have not been well covered.

If you plan to do a particular set of tetrads then please let Paul or Alan know which you plan to do. Also, **very important**, if you subsequently find you are unable to visit those areas tell us as soon as you can.

Critical Points to remember

- The most critical point is that we must be able to refer all records to a specific tetrad. This means that if you record a site or area you will need to keep separate records if it runs across more than one tetrad.
- If you have **ANY queries** about tetrad recording (or any other aspect of the project) please contact one of the members of the group mentioned above.
- Please continue to send in detailed information including accurate grid references (just as before) for scarce species.
- We would welcome electronic submission of records but if you propose to do this please contact Alan Knapp or Paul Harmes **before you start** so we can agree an acceptable format.

FIELD MEETINGS 2005

Saturday 2 April Arthur Hoare (<i>et al</i>)	Southwater Country Park. Incorporating an introduction to tetrad recording for the less experienced, but a day in the field for all to enjoy! Meet in the car-park at TQ161259 sign-posted off A24.
Saturday 7 May John Hicks	Powdermill Wood. Spring flora in a SWT reserve. SWT car-park on B2095, Powdermill Lane, at TQ735144.
Saturday 21 May Frances Abraham	The Mens, SWT reserve. Woodland & meadow flora. Meet in small SWT car-park just off lane on SE side of crossroads on A272. GR TQ023236.
Sunday 5 June Pat Donovan	Stockland Farm, Hadlow Down. An interesting unimproved Wealden farm. Turn N off A272 at TQ531241 in Hadlow Down, then second right into narrow, winding lane, park at farm, TQ529248.
Saturday 18 June Bruce Middleton	Maysleith. Some unimproved habitats in NW Sussex. Meet at Great Trippetts less than 1 mile W of Milland at SU827268 (watch out for directions). We may move on in the afternoon.
Saturday 25 June Helen Proctor	Cuckmere Valley: joint meeting with BSBI. Meet at Exceat car-park TV519994.
Sunday 26 June Helen Proctor	Cuckmere Valley: joint meeting with BSBI. Meet at High and Over car-park, Alfriston Road, Seaford TQ509011
Wednesday 13 July Rita Hemsley 6.30 pm start	Burgess Hill. Tetrad recording. Meet in the Burgess Hill Football Club car-park off Maple Drive (near Wivelsfield Station), TQ317202. NB evening meeting 6.30 start
Saturday 16 July Rachel Nicholson	Rotherfield. High Weald lanes, meadow and heathland. Meet at Sewage works side entrance, 2km N of Rotherfield, TQ558318. We may move on in the afternoon.
Saturday 30 July Ann de Potier	Thorney Island. Turn South off A259 into Thorney Road, meet at junction with Thornham Lane, SU757049. NB MOD land: please supply registration, colour and make of car to NS by July 20.
Saturday 13 August Alan Knapp	Pevensey SWT reserve. General recording with a leaning towards <i>Potamogetons</i> . Park on track (Lampham Drove) East off Pevensey to Wartling road at TQ653074. Since parking is limited, it would be helpful if members could share cars.
Saturday 27 August Paul Harnes 10.00 am start	Northiam and district. Meet at car-park in Church Lane TQ830245 by Northiam church, having turned E off A28 Main Street. As the goal is to survey TQ82B,C,G and H. Note early start, 10.00am.
Sunday 9 October Howard Matcham	Verdley Wood. Cryptogams and also general vascular plant recording. Park by roadside N of Henley village, SU895263.

**ALL MEETINGS START AT 10.45 UNLESS INDICATED OTHERWISE.
Those attending SBRS field meetings do so at their own risk.**