

Sussex Botanical Recording Society

Newsletter

No. 51

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President's Message

In the mild December of 1999 occasional primroses were in flower around Pulborough, and from then continuously through the early months of 2000. On April 20th, travelling to London via Gatwick, there was a magnificent display of primrose flowers, and I cannot recall a year when the clumps were more floriferous. Plant cushions were covered with the distinctive soft pale yellow flowers, but why so abundant in the early spring of 2000? Possibly the cold and damp weeks in March and April that year kept the primroses freshly flowering – together with Railtrack's tree felling and pruning at the edges of railway cuttings in their anti-leaves-on-the-line campaign, letting more light into this habitat? On April 20th 2000 near Christ's Hospital clumps of primroses had spread from the banks across the chippings towards the rails.

This December a few primroses are in flower around Pulborough, but what lies ahead for the spring of 2001 following the persistent rain and floods of the last weeks of 2000? Records of common plants with dates and notes of frequency or abundance repeated over a number of years could help with research into the effects of weather changes on our plants.

On April 20th 2000 the primrose displays near Christ's Hospital were followed by clumps near Ifield which were past their best, but no more further towards London. How lucky we are to live in a County where the railway banks can still be spectacular with flowers!

Mary Briggs

Biodiversity

With the word 'biodiversity' in such frequent use just now, do you get asked 'What is biodiversity'? The Arun Biodiversity Forum's first Newsletter gave a very simple description. In case this is useful as a pass-on definition:

BIODIVERSITY? – WHAT'S THAT?

Simply, it's the variety of life everywhere, from the rain forests to your window box. Biodiversity work focuses on habitats (places where things live, e.g. woods, marshes, cornfields) and species (kinds of creature, e.g. bluebells, swifts, sticklebacks).

Mary Briggs

Secretary's Note

Dates for your Diary

Saturday March 17th 2001

The Annual General Meeting will be held at 2.00pm at Staplefield Village Hall, followed by a showing of members' slides, and finishing with tea and biscuits or cakes.

Saturday November 17th 2001

The Autumn Get-Together will be at Staplefield Village Hall am 10.00am. Soup and jacket potatoes will be available for lunch, with tea and cakes later in the afternoon. Please bring any items of interest or specimens for display round the room, and also any plants or books you may have for sale.

Rita Hemsley

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Verges in W. Sussex

by Ann Griffiths

Good beginnings must have good endings, and at the moment, the West Sussex Road Verge Biodiversity Action Plan is in the middle! however, a £1500 grant from English Nature will considerably assist this plan getting to the other side! Although progress on the plan has not been as rapid as was hoped, ACTION - perhaps the most important aspect, has progressed. Chichester District Council and the Sussex Downs Conservation Board have continued their support for the Road Verge Recording project in FERNHURST. Here a local group is working with Downs Board Ranger, Bruce Middleton to achieve an audit of the Road Verges in the Parish. Safety is a paramount concern, and it is now necessary to comply with a strict code when working on Road Verges - a very dangerous habitat! It is planned that a Guide to Safety on the Verge will be produced as part of the Biodiversity Action Plan.

Please watch this newsletter for an update on the position.

Ann Griffiths - 17 December 2000

More on Verges

by Rachel A. Nicholson

A section of the verge of the A21, N. of St John's Cross, was visited in August 1999 and again a year later. Attention was first drawn to the verge, which was in a fallow state due to road-re-alignment, by the colourful sight of *Papaver rhoeas* (Common poppy) and *Centaurea cyanus* (Cornflower). When *Calendula officinalis* (Pot marigold) and *Viola tricolor* (Wild Pansy) were also found, there was a suspicion that the verges had been seeded with a flower mixture.

The verge was revisited in August 2000 (with all due care and precautions!). This time rather a different set of plants was recorded. Of 25 plants noted in 1999, but not found this year, 19 were annuals or plants which colonise bare ground. 33 'new' species were recorded. These may have been missed previously because of a low-growing habit, like *Prunella vulgaris* (Self-heal). *Taraxacum* agg. (Dandelion) and *Potentilla reptans* (Creeping cinquefoil), but were seen this year because of more careful recording. Others may not have been noticed because, like *Dipsacus fullonum* (Teasel) and other biennials, they would have been in their vegetative phase in 1999.

Within two years all the showy annuals have vanished, but their place has been taken by some other rather unexpected plants for TQ72 in the High Weald. The presence of *Echium vulgare* (Viper's bugloss) and *Ononis repens* (Common restharrow) suggests a chalky soil, while *Galega officinalis* (Goat's-rue) and *Medicago sativa sativa* (Lucerne), both with big seeds not easily blown or moved about naturally, again suggest that the verge was sown, or that soil was brought in from elsewhere to top up the roadsides.

Whether we approve of sowing verges or not, the fact remains that this verge with the tall flowering white and mauve Goat's-rue, the yellow and white Melilots and purple Lucerne augmenting the bright yellow of the local Fleabane and Ragworts is very attractive both to a wide variety of insects and the travelling public. Even perhaps those who prefer neatly mown green verges may enjoy their journey more with such a colourful outlook,

The question arises in this case and also where alien plants are sown for game cover or to 'improve' wildflower meadows - how are they to be recorded? Do we accept that man has always played a part in altering the countryside and that this is just another

manifestation? Or should we take a purist attitude and try to prevent the wholesale scattering of sometimes vigorous non-local or alien seeds which may swamp and cause the loss of some of our unique island species or varieties?

Spring Bulbs by Paul Harmes

Some time ago I published, in the SBRs Newsletter, a key to the quick identification of *Galanthus* species (Snowdrops) most likely to be found in Sussex. Although not native in the British Isles, these plants are well established in woods, churchyards, and on verges and cannot be ignored when recording.

This status also applies to other spring bulbs such as *Crocus*, *Ornithogalum* (Stars of Bethlehem), *Chionodoxa* (Glories of the Snow), *Scilla*, *Muscari* (Grape Hyacinths) and *Anemone*.

We are keen to improve our knowledge of the distribution of the plants within the two Vice Counties. To this end I would like to invite you all to take a look for these plants.

If you need assistance in identification and the population is large enough to permit, do send Alan or myself a specimen. If not, contact us and we will make a note of the location and attempt a visit.

Many thanks for your help.

(NB. As Alan and I both have cause to work away from home, do please call and check before sending fresh material, as any delay may result in decomposition of the specimen)

More on *Ceratocarpus* by Sylvia Simkin

I read with interest Helen Proctor's observations about *Ceratocarpus claviculata* (Climbing Corydalis) in the last Newsletter. As I walk regularly on Sutton Common near Coates, VC13, I have noticed over many years that there were numerous plants of *Ceratocarpus* flowering right through the winter months.

During the winters of 1997/1998 and 1998/1999 flowering appeared to be continuous, but I did not notice any plants in flower from December 1999 to February 2000. The previously high numbers of plants on the Common also diminished last year, but this may be due to the rather severe 'conservation' measures that have been taken. The grass was mown in Autumn 1999, which may have damaged large numbers of plants.

Arun Valley SPA by Mary Briggs

English Nature has notified us that the Arun Valley Special Protection Area (SPA) has been registered under the Conservation (Natural Habitats c.) Regulations 1994. This transposes the E.C. Habitats Directive 92/43/EEC into national law, and the sites listed on the register form part of a network of the most important nature conservation sites in Europe, known as Natura 2000. This is good news for the protection of a famous area rich in species. SBRs has contributed plant surveys and will continue to offer to carry out further surveys as required and requested.

E. SUSSEX FIELD MEETINGS 2000

Ranunculus tripartitus meeting 6/5/00

by Helen Proctor

Twenty SBRs and Plantlife members met in Hailsham to look at sites where *Ranunculus tripartitus* agg. (Three-lobed Crowfoot) had previously been recorded. A pond near Hailsham had a wonderful display of *Hottonia palustris* (Water Violet), flowering profusely. Three minute non-flowering plants of *R. tripartitus* were found. One tiny plant had a niche on a log in the water. Another pond nearby produced *Potamogeton berchtoldii* (Small Pondweed).

At Hooe Common Nature Reserve *R. tripartitus* was growing precariously in cattle-trampled mud by a path. Three plants were found in separate locations on the reserve.

The next site visited was a pond on Milton Hyde near Arlington. Impromptu conservation work was carried out by Nick Stewart in order to prevent the four plants here from being choked by *Glyceria* (Sweet-grass). Nick explained that *R. tripartitus* has sparse long hairs on the receptacle but no hairs on the carpels. The sepals are often violet, but this is not a reliable character. A search for the plant was also made by the lake in Abbots Wood, but no more was found.

Dallington Forest 20/5/00

by Pat Donovan

Those members who braved the track to the meeting-place down in the forest were rewarded with mugs of coffee or tea brewed on a camp-fire by Alastair & Margaret Hanton, who own a part of the forest. In addition they provided maps for everyone and even chairs to sit on for lunch!

The morning was spent alongside, and occasionally in, the Willingford Stream looking for *Festuca altissima* (Wood Fescue), which was eventually found by Paul Maurice*. Several clumps of *Lathraea clandestina* (Purple Toothwort) were seen. This species has spread considerably downstream from Cox's Mill where it was first recorded. Rumour has it that a one-time owner of the mill was a former curator of Kew. Was it introduced by him?

After lunch, the Hantons led the way to the *Convallaria majalis* (Lily-of-the-Valley) site, which is now a patch ca.25 ft square and spreading. It was introduced (?) early in the 20th century by the owner of Glazier's Forge. A walk up a wide damp ride produced several sedges, including *Carex pallescens* (Pale Sedge) and *C. viridula ssp. oedocarpa* (Common Yellow-sedge). A trek back to camp down a shady ghyll with many clumps of *Scirpus sylvaticus* (Wood Club-rush) ended with grateful thanks to the Hantons for their hospitality.

*About 60 more plants were found on sandstone rocks upstream on a subsequent visit by PH & HMP.

Wilmington 17/6/00 by Pat Donovan

The weather on June 17th could not have been more perfect for a walk on the Downs: a cloudless sky, little wind, and good visibility in all directions. First stop on the narrow path to the top was at an ash tree where Rod Stern pointed out the only site in Britain for the rare moss *Rhyncostegium rotundifolium*. Up on the north slopes there were the familiar downland flowers, with several orchids – including Common Spotted, Fragrant, Pyramidal and a few Bee, but no Frog. After lunch and with permission of the owners we explored part of Wootton Manor Estate. The soil was very thin here, but after much searching Tony Spiers found a patch of countless minute seedlings of *Gentianella campestris* (Field Gentian).

Sedlescombe 2/7/00 by Pat Donovan

The Pestalozzi Village now has a resident ecologist, Rebecca Barrett, and in order to help her form a management plan a list of plants was made. In the grounds there were some fine old parkland trees, including an enormous hornbeam. One gnarled hawthorn tree was host to a large clump of mistletoe, and *Rosa stylosa* (Short-styled Field-rose) was common in the hedges. Somewhat unexpectedly, several chalkland species were found, including *Campanula trachelium* (Nettle-leaved Bellflower), *Hypericum hirsutum* (Hairy St John's-wort) and *Echium vulgare* (Viper's Bugloss); they had apparently been introduced by a former member of staff. *Scutellaria galericulata* (Skullcap) was common in a damp ride, and entomologist Patrick Roper found the tiny yellow beetle *Phyllobrotica quadrimaculata* whose food plant it is.

Rye Harbour Nature Reserve 12/8/00

by Helen Proctor

Dr Barry Yates, Reserve Manager, met Paul Harmes and about 13 other members in the car-park. Barry was able to show us a dozen or so plants of *Crepis foetida* (Stinking Hawk's-beard) which had been introduced and were well established on a sandy bank – a similar habitat to that favoured in the 'linked' coastal area in France.

The level, stabilised shingle beyond the old railway line was searched for sites for *Lactuca saligna* (Least Lettuce). 18 sites were found during the meeting. *Galeopsis angustifolia* (Red Hemp-nettle) occurred in 15 sites. A large pool contained *Potamogeton pectinatus* (Fennel Pondweed), and *Carex distans* (Distant Sedge) grew nearby. While searching for *L. saligna*, a few plants of *Sagina nodosa* (Knotted Pearlwort) were found in a square metre area at the base of a shingle bank. This is the first East Sussex record for a very long time. *Lathyrus japonicus* (Sea Pea) was still in flower, but also displaying plenty of brown seed capsules. We walked back along the railway line, finding a few plants of *Trifolium arvense* (Hare's-foot Clover). Near the railway line, *Lactuca virosa* (Great Lettuce) was conveniently growing next to *L. saligna* for ease of comparison.

In the afternoon, botanists joined ornithological twitchers to view a Semi-palmated Sandpiper having a siesta by the Ternery pool, after its long flight across the Atlantic. On the way back to the car-park we checked out *Bupleurum tenuissimum* (Slender Hare's-ear) and *Frankenya laevis* (Sea-heath) by the roadside. The warm sunny weather brought out a number of butterflies and nine species including Clouded Yellow were observed during the day.

W. SUSSEX FIELD MEETINGS 2000

by Nick Sturt

Lancing 26/3/00

A group of us huddled around Alan in a street behind Lancing seafront while we examined his reference specimens of *Poa infirma* (Early Meadow-grass). Our task on this decidedly fresh morning was to restore the honour of Sussex botanists by tracking this modest grass eastwards before persons from a neighbouring county made further inroads along our coast. After diligently working an area adjacent to the beach, eventually the yellowish green of a small patch of *P. infirma* was spotted on a well-mown bank in front of Milford Court flats. Our eyes well and truly in, we ran more to ground on Beach Green a short distance further East where Paul was also able to draw our attention to patchy carpets of *Poa bulbosa* (Bulbous Meadow-grass), another miniature. By now a chill rain had begun to fall and lunch was taken in cars. More intrepid members then drove on into v.c.14 but no further *P. infirma* was found. In between scouring the earth for Alan's tiny treasure we speculated on whether its apparently sudden appearance along the South coast was a real indication of climate change. The weather on that day tended not to lend credence to the idea. (PS In the course of the season *P. infirma* was noticed ever further into East Sussex and having only just gained promotion from no record status to an entry on the county Rare Plants Register proceeded to disqualify itself through being too common!)

(Ed's note: Alan adds that 30 species were seen in flower, despite the early date, including *Sherardia arvensis* (Field Madder), *Medicago arabica* (Spotted Medick) & *Veronica arvensis* (Wall Speedwell) at Lancing, and *Fumaria officinalis* (Common Fumitory) and *Veronica polita* (Grey Field-speedwell) at Roedean)

Besley Farm 3/6/00

Scraps of *Geranium pusillum* (Small-flowered Crane's-bill) about our feet were a good omen as we assembled in Watersfield. Down a farm track, into a grassy field which became increasingly more interesting as we crossed it, the prize being much *Oenanthe silaifolia*. (Narrow-leaved Water-dropwort) Succeeding fields became progressively wetter and sedgier – culminating in large clumps of *Carex vulpina* (Fox Sedge) which was a new plant to many of those present; seeing it in the field and comparing it

with the visibly different *C otrubae* (False Fox-sedge) nearby perplexed some as they reflected on the current state of uncertainty about such microscopic details as leaf sections and testa sculpture. The morning was rounded off with *Stellaria glauca* (Marsh Stitchwort) and so to lunch which was taken by a hedge affording little shade on this hot day but accommodating a very enthusiastic nightingale. The afternoon session proved not in the least anticlimactic and nearly 150 species were entered on the card for the day. Frances, probably facetiously, described the meeting as a *sedgefest* but this was no exaggeration with 12 *Carices* seen in total including *C acuta* (Slender Tufted-sedge) which seems not to be much met with in Sussex. Reviewing the event, however, even those perverse individuals whose hearts do not thrill at the merest glimpse of a triangular stem found an abundance of interest.

Pagham Spit 22/7/00

Seventeen members (with v.c.14 well represented) assembled in the car park at the end of Harbour Road. The Society had not paid a formal visit for a number of years and with the loss of George Forster in 1996 there was a feeling that vascular plant records for this important site were in need of updating; in particular it was hoped that *Galeopsis angustifolia* (Red Hemp-nettle) and *Anisantha madritensis* (Compact Brome) could be refound. The morning was spent working out along the Spit and soon a good list of typical seaside plants was accumulating with the obvious highlight of the Pagham speciality *Petrorhagia nanteuilii* (Childling Pink) - which was found in considerable quantity throughout the day. Other goodies included a stray plant of *Oenanthe lachenalii* (Parsley Water-dropwort) on the shingle, a cluster of *Vicia lutea* (Yellow-vetch) sporting its notably hairy pods, and *Aira caryophyllea* (Silver Hair-grass) which seems to have declined in the county since the Sussex Plant Atlas. No hemp-nettle and vast areas of pebbles bearing nothing more exciting than *Arrhenathrum elatius* (False Oat-grass). After lunch and a smattering of clouded yellows we moved down the beach towards Bognor, noting white-flowered *Verbascum blattaria* (Moth Mulein) (which George Forster had in the past pointed out to several of us) and moving into garden escape territory. By chance we were observing, amongst the forests of *Centranthus ruber* (Red Valerian) and prairies of *Cerastium tomentosum* (Snow-in-summer) some *Briza maxima* (Greater Quaking-grass) when we were approached by (in her own less than accurate words) 'a very amateur botanist' - Sheila Collette, author of the flora of Saudi Arabia. Meanwhile Rod was being presented with stimulating *Hieracia* (Hawkweeds) and - at last - a few plants were found of *Galeopsis angustifolia* (Red Hempnettle).

Especial thanks are due to the Warden of Pagham Harbour NNR Rob Carver who kindly organised parking vouchers, to his Deputy Sarah Patten who showed us caterpillars of the very rare Toadflax Brocade perversely feeding on *Linaria purpurea* (Purple Toadflax) rather than *L. vulgaris* (Common Toadflax), and to Lawrence Holloway whose vast

expertise on birds warned us against assuming that vascular plants were the only absorbing branch of natural history.

Ambersham Common 20/8/00

This last Pagham truth was demonstrated very well on this meeting when the party spent fifteen minutes studying a nightjar which had been flushed from the heather and was showing off its camouflage on a dead branch as if he had seen the standard illustrations.

Not since 1977 when Peter Hall led a Sussex Flora Society outing had the Society visited Ambersham Common but Rod, energetically assisted by Bruce Middleton, made up for the neglect by marching us to some rewarding spots - a mire with much *Narthecium ossifragum* (Bog Asphodel) and *Eriophorum angustifolium* (Common Cotton-grass), a section of bridleway full of *Anagallis tenella* (Bog Pimpernel) and *Radiola linoides* (Allseed), a small piece of damp meadow by a stream which yielded only the second current West Sussex record for *Galium uliginosum*, (Fen Bedstraw) the roadside patch of *Wahlenbergia hederacea* (Ivy-leaved Bellflower) originally planted (according to Guermonprez's annotation in his copy of Arnold's Flora) by 'friends of Rev Edgell' some time before 1909 probably from stock collected in Devon. Throughout the day Rod would disappear at times to refind special bryophytes and his identification of sphagnum species added particularly to the interest. The proceedings were thoroughly enjoyed by thirteen members and two guests. One of the latter was Eric Clement who provided several useful perspectives on our endeavours, for example the suggestion that we might well be overlooking *Juncus x surrejanus* (Hybrid Rush) which is quite frequently met with on the heaths over the border in Surrey.

Rackham & the Wild Brooks 9/9/00

To close the season's vascular plant meetings we returned to grasses. Arriving at the rendezvous we became entangled with the preparations for the Rackham village fete, but even the promised ox-roast could not deflect the dedicated party of 24 from their task which centred on *Leersia oryzoides* (Rice Grass). Mary and Frances, our joint guides, showed us the vegetative characters from material gathered from ditches, the angle of the topmost leaf above the slightly inflated sheath being unmistakable. Such had been the Summer that very few of the panicles of the grass had become even slightly exerted and thus we really needed this help. There were other specialities to be found, however, for example *Stellaria glauca* (Marsh Stitchwort) and *Potamogeton acutifolius* (Sharp-leaved Pondweed).

Lunch was taken by Greatham Bridge after which we dispersed for an hour to search the river banks and ditches in the hope of confirming the report of *Leersia* a few years ago. Although we were not successful here we moved on to Stopham Bridge and found clumps both to the north of the main road and south of

it between the old bridge and Pulborough. Once again we had to rely almost exclusively upon the vegetative jizz since only in one or two cases had the inflorescence begun to show. In the latter area we were also rewarded with *Persicaria minor* (Small Water-pepper) to complete a very convivial day of fieldwork.

Bryophyte meeting, Staplefield 21/10/00

In the morning we crossed the road into v.c.14 and wandered out from Staplefield village green along a track looking for specimens. Howard and Rod led the expedition and soon small tussocks, wefts and wads were being harvested from the wayside. Some members had to be reminded of the theme of the meeting when luxuriant growths of *Carex remota* (Remote Sedge) caught their eye, but even the single-minded bryologists crossed a large, damp field to examine a particularly fine example of *Sorbus torminalis* (Wild Service-tree) in vivid autumn colour. After lunch in the hall we looked at the morning's collection under microscopes under the supervision of Messrs Matcham and Stern. Howard was especially illuminating on the structure of the mosses, while Rod was becoming excited by his *Juncea cavifolia*, a rather scarce woodland liverwort. Eight members benefited from the expertise of the two resident gurus and by the end of the day had examined a range of the commoner bryophytes of Sussex as a foundation for further study.

Marsh Gentian on Ashdown Forest

by M.E.Reader

At a recent meeting of the Society questions were raised about the management of the *Gentiana pneumonanthe* (Marsh Gentian) on Ashdown Forest, with particular reference to the re-introduction of grazing on the heathland. Several members wrote to the Forest Superintendent to voice their concerns. At the end of the 2000 season the Conservation Committee of the Board of Conservators (the governing body) was briefed with the following, which I thought might be of interest to members:

The third successive annual survey of the Marsh Gentians had been completed by Ranger Marrable. He had produced a chart showing how numbers of spikes within the sites had varied over the period. The figures were encouraging and showed double the numbers of spikes recorded in the two previous years. By and large the increases were recorded on sites within the grazing area, but there were anomalies, and three sites recorded a reduction in the spike numbers. The analysis indicated that where grazing was moderate there was an increase in spikes; where it was heavy – such as on certain fire breaks – there was a decline in numbers. Similarly, in those sites outside the grazing area where vegetation was heavy, numbers of spikes were static or in decline. Gentian seeds are long-lived, and the figures illustrate that, with a large area, one can afford to live with the vagaries of management and grazing pressures. In terms of site status and suitability for Marsh Gentian development, those sites within the grazing area will be normally regarded as 'good', despite the possibility of occasional over-grazing; ungrazed sites will be poor

usually, though management such as bracken mowing may make them more favourable, and recovery after fire will give temporary relief from vigorous competition.

The 2000 survey had been conducted using the new GPS, which enabled the location of individual plants to be recorded with great accuracy, thereby obviating the possibility of double counting.

(Ed's note: Space does not allow us to include the full table of results, but it is impressive to note a total of 688 Gentian spikes recorded on the Forest in 2000 (as against 304 in 1998 and 332 in 1999) with a spectacular 370 spikes in the Millbrook Enclosure area alone.

***Marrubium* in Arundel Park by F. Penfold**

White Horehound is again flourishing at this site, over 150 plants having been recorded by Frances Abraham and me in April 2000. The population starts about 25m from where I last recorded it in 1972 at TQ016083, and continues W and NW in a band just below the fencing of Box Copse, through the station at TQ011085 found by David Bangs in 1999 and reaching as far as his record for TQ011087. It is regarded as native in S. England, but the Sussex Plant Atlas gives only two sites in VC13 during the period 1966-78, one of which was Arundel Parl; it was subsequently found at Halnaker, most recently by Howard Matcham in the chalk pit. Wolley-Dod recorded it in 1937 as plentiful in the valleys N of Swanbourne Lake in Arundel Park. My own Arundel records started in 1953 and ended in 1972, shortly after which it was destroyed at that site by cattle erosion; my first record for Halnaker is 1991.

This plant has been used as a herbal remedy in Europe for at least 2000 years and was cultivated in this country. The location in South Stoke parish was created by the Duke of Norfolk as a deer-park in the early 19th century, having previously been a rabbit warren of the Dale Park Estate. In the 1950's the Red and Fallow Deer were removed and replaced by cattle, which watered in Swanbourne Lake. Myxomatosis destroyed the rabbits from 1954, resulting in heavy scrub infestation, especially Hawthorn. The Beech hangers had been falling from senescence and the great storms of 1987-90 completed the process. The Arundel Estate therefore started a programme of replanting and fencing, taking care to leave as much of Box Copse as possible. A piped water supply was installed and the cattle replaced by sheep.

An intriguing historical note relates to the name Arundel, which some authorities like to derive from the Old English 'har-hun dell', the valley of the horehound. Others favour the easier 'Dell of the Arun', but history is not on their side, as the river did not acquire that name before the 16th century, having previously been known as Tarente (Tarrant) in Roman and Saxon times, followed by Hault Rey and Alta

Ripa (Norman), the River of Arundel (13th century) and the High Stream in Arundel Rape as late as 1636. In Domesday Book we have Harundel in 1086. I was inclined to scorn this derivation from the supposed prevalence of the plant, but seeing a vast area of country near Adelaide (Australia) thickly covered by *Marrubium vulgare* (White Horehound), probably introduced from Europe, made me wonder how abundant this plant may have been in this area 1500 years ago.

Pevensey Survey Ditch by Helen Proctor

The Environment Agency proposes to build water-control structures at ten locations at Pevensey in order to raise water levels for ecological reasons, and in July 2000 requested the help of SBRS in surveying the aquatic flora adjacent to these sites so that future changes can be monitored. Helen Proctor sends us this report:

Two Sunday meetings and two weekday evening meetings were attended by 4-11 people, including an EA staff member. Ten SBRS members volunteered their help, and that of a non-botanical spouse! Excellent teamwork was achieved, with each person assisting with one or more of a variety of tasks - measuring the sites, dragging for plants, sorting and naming, taking photographs, and helping with the completion of the survey forms.

The survey locations included seven sites around Horseye Level and Rickney, and near Hailsham. Three outlying sites included ditches near Pevensey, Normans Bay and further NE near Wallers Haven. At each site, a 20m length was selected approx. 20m upstream of the proposed structure. However, we were advised to avoid ditches which were totally covered with one species of emergent aquatic plant eg *Hydrocotyle ranunculoides* (Floating Pennywort) at one site. A survey form was completed at each place, recording adjacent land use, soil type, condition of the banks, depth and width of water etc. The local and overall frequency of the plant species was recorded using the DAFOR scale.

An average of six plant species was recorded in each ditch length. The first two ditches near Rickney produced nine species. The highest number of botanists was present at this meeting. However, only one species was found at the third ditch, indicating that there could be no correlation between numbers of botanists and plant species! Eight species were found in the ditch near Wallers Haven, and included some less common plants such as *Hottonia palustris* (Water Violet) and *Sagittaria sagittifolia* (Arrowhead), possibly indicating purer and less nutrient-rich water. Some sites had one dominant plant, different in each place, but often a *Lemna* species. *Lemna trisulca* (Ivy-leaved Duckweed) completely choked one ditch. The most commonly occurring plant was *Hydrocharis morsus-ranae* (Frog-bit), which occurred in eight out of ten ditches. Six *Potamogeton* (Pondweed) species were found, but only one species in

each of six ditches. These included *P.acutifolius* (Sharp-leaved Pondweed), *P.obtusifolius* (Blunt-leaved Pondweed) and *P. polygonifolius* (Bog Pondweed). *Wolffia arrhiza* (Rootless Duckweed) was found just outside one survey area near Rickney.

Acknowledgements were received from Phil Griffiths of the EA expressing his appreciation of everyone's assistance with the completion of the survey. I would like to thank Alan Knapp for his assistance with the naming of the *Potamogeton* species and also the other SBRS members for their support: Pat Donovan, Pauline Drayson, Paul Harmes, Rita Hemsley, Rachel Nicholson, Elizabeth Rich, Jim Riddle and David & Janet Simes.

At the time of writing, about half the structures have been completed. Wet weather has hampered the completion of the remaining structures. The EA do not have enough divers on their staff and underwater welding is just not possible!

Obituary: Hilda Horder 1914-2000

Many members will have been sorry to hear of Hilda's death last May. Born in Walthamstow, she studied and taught biology at various schools. Rod Stern writes:

Although she enjoyed teaching, & took an interest in the girls she had taught after they left school, Hilda's main interest throughout her life was her subject – biology; she was the editor of a revised textbook on the subject. On reaching retirement in 1974, she decided to move to be near a friend of many years who had retired to Birdham.

To Hilda, the creation of a garden from scratch was a challenge she welcomed & for many years enjoyed. Only recently – with the many other interests – had she found the garden becoming a burden, and decided that she might be better confining her gardening activities to the growing interest of alpinists!

Hilda was an active member of the Sussex Wildlife Trust and the Chichester Natural History Society, as well as regularly attending SBRS meetings. She much enjoyed field excursions and was a knowledgeable botanist, with an interest in lower plants as well as flowering plants & ferns. She was a conscientious participant in various recording schemes. She will be much missed, particularly by those living in the Chichester area.

I am grateful to Hilda's brother, Alan Horder, for allowing me to use extracts from his address at her funeral on 19th May 2000.

Zizania latifolia at Patching

by Mike & Olwen Hollings

The Hollings were intrigued by articles on this rare alien in *BSBI News* 84 and, for the benefit of SBRS members who do not receive *BSBI News*, we include a slightly shortened version of their response:

We were reading through the recent articles by Ken Page and by Eric Clement on Manchurian Wild Rice (*Zizania latifolia*) in southern England when we came to the words: 'v.c.13 (W.Sussex). Lake margin by main road, Patching, nr Worthing, 1947.H.K.Airy Shaw.' Instantly, we sat up with a start; 'that's Patching Pond for Pete's sake', we cried, 'must be'. Wondrous aliens always turn up on the other fellow's patch, yet this one is almost on our doorstep. And how right Eric is to say, 'Look at the leaves', for Patching Pond has been a classical botanising spot for over half a century, yet none of us since Airy Shaw appears to have 'seen' this plant!

Next day (12 April 2000) we were at Patching Pond. The old main road (A27) has now been sidelined by the new dual carriageway, making access and parking beside the pond much easier and quieter, at TQ087055. This is along the southern edge of the pond, and the Wonder Grass is growing just beyond the low wooden fence. All along the southern edge, within c.5m of the shore, were a dozen or more tussocks sticking out of the water, each c.50 cm across by 20 cm high, fairly close to the gentle outflow sluice. Each tussock was a collapsed heap of dry, beige-brown dead leaves from last year, with no sign of any flowering/fruiting stems. The sharply toothed margins still had a vicious edge. Numerous new leaf shoots had already pushed up through the tussocks, and others were projecting 15-25 cm directly from the water. All were of a most striking vivid green colour, markedly different from the young leaves of *Typha* and *Phragmites* growing nearby. Several other big areas of *Z.latifolia* were growing around the edges of the pond.

It proved quite hard to pull out a piece of a plant with roots and rhizomes attached; the latter were extremely tough and had to be cut with a sharp blade. Indeed, a couple of times we nearly did a natty back-somersault into the wet stuff before eventually getting some samples for photography and further study at home. At this stage, the young leaves were in-rolled and had not yet developed the rows of forward-pointing spines along the margins, nor the maroon-red patches at the base of each leaf-sheath. A pair of Mute Swans swam up, plucked about 7 cm from several leaf tips, and ate them with evident relish.

By 24 April, the leaves were 30-40 cm clear of the water, still showed some in-rolling but had now very slight marginal teeth. By 12 May, the plants were 75-90 cm high, most leaf laminae were completely flat with sharp marginal teeth, and maroon patches had appeared at the bases of a few leaf sheaths. The Mute Swans had now definitely lost interest. On 31 May, nearly all the leaves were quite flat and tapering at each end, and the separate tussocks were now being obscured by more continuous foliage. By June 11 all

tussocks had vanished in the solid wall of upright culms, the plants were 90-120 cm high, the leaves broad and the maroon leaf sheath patches very conspicuous. A week later, the plants were 145 cm high, still a bright vivid green, and by 17 July were 210 cm tall; the maximum leaf width was still 42mm, and individual leaves were c.125 cm long, tapered at each end. We saw no cross-veins in the leaves we examined.

The chambered rhizomes were up to 22mm diameter tapering to sharply pointed tips, and exceedingly tough. Roots and culms had developed at many nodes, which were very hard, solid and woody in contrast to the papery septa between nodes. Young roots were very white, brittle and up to 1mm diameter with no root hairs. By contrast, older roots were a bright tawny-orange, over 60 cm long with numerous fine root hairs.

After 3 months in plastic tubs 48x48 cm, 25 cm deep, and filled with water and some bottom mud, single culms with a few roots had grown virtually to fill the entire space with a dense tangle of roots and rhizomes. Our experience at Patching Pond suggested *Zizania* had done the same thing in the mud there. So we began making local enquiries.

For many years, the pond has been leased by the Worthing Piscatorial Society, and their Secretary told us that they had been aware of the 'giant rush' for over 40 years. In the 1960's, the plants occupied a very much smaller area than now, but in recent years have caused increasing problems. Mechanical diggers were brought in to remove the roots and rhizomes from successive stretches of the margins, and in 1999, over 80 tons of *Zizania* were removed. Yet the plant bounces back, as vigorous as ever!

On the gastronomic front, Joy Larkcom gives helpful comments in '*Oriental Vegetables*' (1991, John Murray) and points out that, to grow well, *Z.latifolia* needs high temperatures (20-30°C) and intense light with a slightly acidic clay soil. The plants at Patching Pond seem to manage with what W.Sussex has to offer – is this global warming in our midst? In SE Asia, infection with the fungus *Ustilago esculenta* is regarded as essential, producing indoleacetic acid which induces the stem to swell to 17 cm long by 3 cm wide, but the plant must be harvested before the fungus starts to produce spores, for the flesh then deteriorates. Cultivated forms are often preferred, for wild genotypes have developed resistance to this smut fungus. Perhaps infection with the smut fungus inhibits the rampant growth and might even explain the dwarfing to 4ft (1.2m) quoted by Eric Clement. Flavour is described as mild, pleasant and reminiscent of celeriac, but it is also widely used in various Chinese dishes to absorb other flavours. However, many fungi produce highly toxic substances, including some of the world's favourite carcinogens, so it might pay to let the other fellow try the culinary delights first! We have seen no sign so far of any swelling of the stem base or fungal infection.

Rather than any need for help or protection, vigorous control measures would seem to be necessary for *Zizania*. Perhaps the folk operating the local Chinese Takeaways might be encouraged to harvest it in a big way!

FIELD MEETINGS 2001

Saturday April 28 Howard Matcham	Woods on the Gault nr. Graffham. Meet crossroads SU910190 Ambersham Common nr Polecats.
Saturday May 5 Rachel Nicholson	Bellhurst Wood, Hurst Green. Ancient woodland with ghyll, waterfall, <i>Cardamine bulbifera</i> . Meet Bellhurst Farm TQ721279. Turn off A21 approx. 1 mile N of Hurst Green onto B2099. After 200yds turn left down track to Bellhurst.
Saturday May 19 Alan Knapp	Sullington Warren: search for lost species. Meet at TQ099142 in small NT car park on W side of Water Lane almost 200m N of junction with A283.
Saturday May 26 Lyn Haines (owner)	Barklye Farm. 100 acre unimproved farm. Meet at farm at TQ619233. Turn off A265 into Swife Lane at TQ619228 (between Broad Oak & Burwash Common). V. shortly turn left to farm.
Sunday June 10 Frances Abraham	Harting Down, to record NT chalk grassland. Meet at SU790181 car park at top of hill, turning E off B2141.
Saturday June 16 Helen Proctor	Wootton Manor, Polegate. Estate survey. Meet at house TQ565052. Turn off A27 at TQ569047 – NB concealed turning on fast road.
Saturday June 30 Margaret Hanton	Wellhurst Wood, Staplecross. Meet in small car park by church at TQ784225.
BSBI Bramble Weekend: July 13/14/15 – Alan Newton. For more information contact Murray Marr 01730 816471:	
Friday July 13	Meet 6.30 pm at Reception, The Grange Centre, Midhurst SU885212. Assembly, evening ramble, workshop.
Saturday July 14	Midhurst Common, meet 10.15-10.30 nr. Warren Cottage SU870207 (parking E of lane). Afternoon: Iping Common/Stedham Common/Quags Corner.
Sunday July 15	Ambersham Common, meet 10.15-10.30 at crossroads nr. Polecats SU910190. Afternoon: commons further E.
Saturday July 21 Paul Maurice	Montague Farm, Hankham. Farm survey for new owner. Park at farm TQ624058.
Sunday August 12 Bruce Middleton	Iping Common & beyond. Meet car park SU853220. Turn S off A272; car park on right after approx. 200m. We shall move on after lunch.
Saturday Sept. 1 Nick Sturt	East Head, West Wittering, NT reserve. Meet car park W Wittering Memorial Hall SZ781984. In village turn left off A286 in front of hall, from where we shall travel in a group to E.Head.

ALL MEETINGS START AT 10.45 UNLESS INDICATED OTHERWISE.
FOR FURTHER INFORMATION CONTACT PAT DONOVAN (E.SUSSEX) OR NICK STURT (W.SUSSEX).
THOSE ATTENDING SBRS FIELD MEETINGS DO SO AT THEIR OWN RISK.