



Dear Flora Group Member

The Flora Group Committee look forward to seeing you at some of the events planned for 2000. If you have any suggestions for future events, practical conservation tasks or training days please let Catherine Chatters (Flora Group Secretary) know. Catherine's address and telephone number are given at the end of this newsletter.



FORTHCOMING EVENTS

Saturday 8 April 2000 - 10.30 am Flora Group AGM and visit to Beacon Hill National Nature Reserve

Bob Lord, English Nature's Site Manager at Beacon Hill, has invited Flora Group members to record the botanical interest of the woodland at this impressive NNR overlooking the Meon Valley. The reserve, which is set in a most attractive part of the Hampshire countryside, is best known for its important chalk grassland habitats. We will meet at 10.30 am at the car park (grid reference SU 599 227) and spend the morning surveying the woodland areas. Bring a picnic lunch. During the lunch break we will hold a brief and informal AGM. During the afternoon there will be an opportunity to explore the dramatic chalk grassland slopes within the reserve. The slopes are steep so please wear suitable footwear.

Sunday 14 May 2000 "Wild Day Out" at Old Winchester Hill National Nature Reserve

To celebrate the new Millennium, English Nature is holding a number of events on NNRs throughout the country. Our local event will be held at Old Winchester Hill NNR, a stunning chalk grassland site containing the remains of an Iron Age Hillfort. Flora Group members are very welcome to attend this exciting whole-day event which will include Iron Age re-enactments, guided walks, displays on conservation work in the County, events for children etc. Refreshments will be available. Further details from Bob Lord (Site Manager) at English Nature - telephone 01703 283944.

Saturday 24 June 2000 - 10.30 am Grasses, sedges, rushes identification training day. Leader - Dr Francis Rose

Following the successful grasses, sedges and rushes training day led by Mike Wildish at Anton Lakes during 1998, Dr Francis Rose has kindly agreed to lead a similar event. Francis (author of "The Wildflower Key" and the "Colour Identification Guide to the Grasses, Sedges, Rushes and Ferns of the British Isles and north-western Europe") has chosen to hold the event at the cluster of Trust reserves in the Greywell/Hook/Warborough area to enable us to study plants growing in a variety of habitats. Meet at 10.30 am at the Bartley Heath car park, just off Junction 5 of the M3 (grid reference SU 726 535). Bring a packed lunch. Whether you have never looked closely at a grass or sedge, or whether you just want to refresh your memory, do come along to what promises to be a fascinating day.

Sunday 2 July 2000 - 10.30 am Aquatic plant identification training day at Bramshill. Leader - Chris Preston

You may recall that Chris Preston (Institute of Terrestrial Ecology) led a Flora Group training day a number of years ago concentrating on the aquatic plants of the Basingstoke Canal. Following a suggestion made by Flora Group member Andrew Branson, Chris has kindly agreed to lead another event for us, this time studying the aquatic plants of the ponds at Bramshill Plantation. Bramshill Plantation is a fascinating place. Formerly open heathland, it was planted up with conifers and has been

dug for gravel. However a series of botanically and entomologically rich wetland habitats survive and part of the site has been notified as a Site of Special Scientific Interest. The Plantation is privately owned and is managed by Forest Enterprise who have given permission for us to visit the area. Meet at 10.30 am at the car park on the north side of the road at grid reference SU 760 613. Bring a packed lunch.

Saturday 2 September 2000 - 10.30am Fern Identification Training Day at Roydon Woods. Leader - David Winsland.

An opportunity to get to grips with ferns, an often under recorded group, at this rich and varied site. Meet at SU 307004.

Sunday 24 September 2000 - 10.30 am Woolmer Forest / Longmoor Ranges

Woolmer Forest is a vast area of heathland, acid grassland, bog and open water habitats on the borders of East Hampshire and West Sussex. It has been notified as a SSSI and forms part of the Wealden Heaths Phase II Special Protection Area due to its important populations of rare birds. Much of the Forest is used as a live firing range by the Ministry of Defence and, consequently, is not frequently visited by botanists. We have been given permission to explore the Forest, including the firing range, when the ranges are closed during the autumn. Meet at 10.30 am in the car park to the east of the A325 at grid reference SU 785 319. Bring a packed lunch if you would like to join us for the entire day.



We have reciprocal arrangements

with the Wiltshire Botanical Society and the Sussex Botanical Recording Society. Consequently we are welcome at each other's meetings. If you would like a list of the meetings of either of these societies, please send an A4 stamped addressed envelope to Catherine Chatters (address at end of newsletter). Please mark the envelope either "Wiltshire" or "Sussex" or both.

A Field Guide to the identification of difficult aquatic plants of the New Forest, by R V Lansdown and T J Pankhurst.

This guide has just been published with Environment Agency funding, and is available free from Hampshire Wildlife Trust on receipt of an A4 stamped addressed envelope.

NEWS AND VIEWS

Crassula helmsii (Australian Swamp Stonecrop)

This small aquatic plant, native to Australia, has rapidly expanded its distribution in Britain over the last two decades since becoming naturalised in the countryside. By October 1991 it had invaded around 320 aquatic areas with the frequency of new sites being invaded still doubling about every two years (IFE 1996). In the New Forest it has been spreading rapidly over the last 15 years and is now threatening native aquatic species and habitats. Primary introduction probably results from a wide range of human activities associated with water, including water gardening and fishing, facilitated because *Crassula helmsii* is generally available from aquatic centres as an "oxygenating plant" for ponds (known in this situation as *Tilia recurva*). Secondary introduction probably involves transfer by wildlife, aided by high viability of extremely small fragments of the plant which can be transported on the feet of grazing animals, for example, to establish quickly at new sites.

Much of the success of *Crassula helmsii* is related to its vigorous growth which continues through the year without die-back during the winter and its ability to colonise a variety of different habitat types. *Crassula helmsii* has been found in acid to alkaline waters of ponds and lakes; it will also grow in flowing water and can tolerate a small



Australian Swamp Stonecrop - *Crassula helmsii*

degree of salinity. It grows well on damp ground over 0.5 metres above water level and in water depths of over 3 metres.

Unfortunately *Crassula helmsii* does not appear to reach any sort of equilibrium in the wild in Britain since it is quickly able to totally dominate aquatic habitats, out-competing all native species. No site, once dominated, has returned to its previous condition (IFE 1996). However, there are trials being conducted in several sites around the country to try and control *Crassula helmsii* using various methods including herbicide treatment, shading with opaque material and physical removal. Despite the difficulty of control it is widely recognised that doing nothing is not an option if we want to conserve native aquatic habitats.

In the New Forest *Crassula helmsii* is an increasingly worrying problem, being found in a large number of wetland habitats from temporary ponds to marl pits. There is plenty of anecdotal evidence that it has spread but at the moment we are unable to

quantify the problem. We have an opportunity to input into the New Forest LIFE project this year in terms of including measures to control *Crassula helmsii* - but we have to quantify the problem in order to do this. I am therefore running a contract this spring to provide detailed information on the extent of *Crassula* invasion in the New Forest. To help augment our survey I would like to put out an URGENT APPEAL FOR RECORDS particularly from the New Forest but I would also be interested in any records from elsewhere in Hampshire. The deadline for the LIFE Bid is the end of May 2000 - so I need as many records as possible by the END OF APRIL 2000. Please send the records to me at the Trust office in Eastleigh (address at end of newsletter). I have put together a simple recording form and a guide to identification - please telephone me for copies - and keep your eyes peeled for this invasive alien!

Thank you.
Debbie Wicks

A Solution to the *Crassula helmsii* Problem?

The invasion of rich ephemeral ponds by *Crassula helmsii* in the New Forest is one of the major threats to the biodiversity of the New Forest. At present there are still ponds without *Crassula* but how long can this last? Fortunately there may be a solution in the long term. *Crassula* has a particular photosynthetic system called C_4 photosynthesis. This is mainly found in tropical plants and is rare in the British flora. A weed killer that interrupted the enzymes of C_4 photosynthesis could kill the *Crassula* and leave other species untouched. Interesting news in the New Scientist (Thwaites, 2000) suggests that just such a herbicide is around the corner. Australian scientists investigating why C_4 seaweed growth was sparse on the Great Barrier Reef, have found 4 different chemicals released by reef organisms that killed only C_4 plants. These are also harmless to fish. Details are sparse as patents are being filed, but it looks like in the future we may have a herbicide specific to *Crassula helmsii* which is harmless to animals as well.

Such technical fixes are to be welcomed but a better solution would be some sort of sense of responsibility in those trading in aquatic plants. This trade has been responsible for a high level of damaging introductions across the world. Some tropical introductions have threatened the livelihoods of many poor people as well as local biodiversity!

Thwaites, T. (2000) Killer from the sea. Are safer herbicides a present from the worlds coral reefs? *New Scientist* 2224: 7.

Neil A Sanderson

Format for records

The following letter has been submitted by Flora Group member Dr John Moon and will be followed up accordingly in the next edition of Flora News:-

"Since we have new vice-county recorders for both halves of the county of Hampshire, and since most Flora Group members do some recording, I wondered if it would be appropriate if in the next newsletter our recorders could be persuaded to say in just what format they would like sightings reported.

For example, I presume that as well as species name, they would like the date, parish, 6-fig grid ref, number of plants, but in what order would they like the information and is there anything else they would like noted (situation?). For reports covering multiple species, can it be assumed that strict alphabetical order would be the most convenient?

Then there is the question of how often they would like it confirmed that a particular plant/group of plants is still present eg could it be assumed that there is no point in repeating a record in less than 5 years (might possibly expect this to be different for annuals than for perennials)?

Red-tipped cudweed *Filago lutescens* at Broomhurst Farm

Red-tipped cudweed was discovered near Broomhurst Farm in north east Hampshire during August 1980 on a roadside verge where soil had recently been disturbed for road widening. The site quickly became overgrown with consequent loss of the plant. In March 1996 scrub was cleared and the ground rotovated. Two small plants were discovered in the following year as a result of further management undertaken in November 1997 and February 1998. A small colony became established on a sandy bank but numbers quickly dwindled when the site was left unmanaged for two winters. In January 1992 the Flora Group commenced annual winter management to maintain and, if possible, increase the colony, which is the only extant population in Hampshire. Chris Hall, who has led the practical conservation

tasks over the years to maintain this population of red-tipped cudweed, has prepared a detailed report following his monitoring at this site during 1999. Copies are available from Catherine Chatters on receipt of a stamped addressed A4 size envelope. Please mark the envelope "cudweed report".

Fields of Vision - a future for Britain's arable plants

A two day conference - 10th / 11th July 2000 - Girton College, Cambridge
Britain's arable flora has undergone a complete transformation during the latter half of the 20th century. Many species that were once common are now among the country's rarest and whole plant communities have virtually disappeared. There is currently much interest in Europe's arable flora and this conference aims to draw together the experience of those working on its conservation and to consider some common approaches and objectives. Topics to be covered will include the effects of changing farming practices and their impact on the arable flora; survey and assessment; management for conservation; conservation projects elsewhere in Europe; integration with other environmental objectives; research in progress; agri-environmental schemes; CAP and farming subsidies; Biodiversity Action Plans; GM crops; organic farming. The conference will include field visits, discussion workshops and a poster session. Registration enquiries: Plantlife, 21 Elizabeth Street, London, SW1W 9RP, telephone 0171 808 0100. Other enquiries - Dr Phil Wilson, Wessex Environmental Associates, 4 Prospect Place, Grove Lane, Redlynch, Salisbury, telephone 01725 510748.

Arable plant discoveries in Hampshire

Last year Flora Group member Dr John Moon stumbled across an interesting arable field whilst on a cross-country run. He discovered 345 corn flowers *Centaurea cyanus* and about 50 plants of corn parsley *Petroselinum segetum* growing in stubble within 5 metres of the edge of a field near Nether Wallop. John revisited the field with Mike Wildish and came across other interesting arable plants including corn chamomile *Anthemis arvensis*, round-leaved fluellen *Kickxia spuria*, sharp-leaved fluellen *Kickxia elatine* and dwarf spurge *Euphorbia exigua*.



Flora English Nature

English Nature has produced an attractive publication titled "Flora English Nature" which gives details of botanical conservation work throughout England, new publications and up-dates on rare plant research. Copies are available free of charge from Catherine Chatters; please send a stamped addressed A4 size envelope to Catherine at the address given at the end of this newsletter. Please mark the envelope "Flora English Nature".

Keep your eyes peeled for more arable plants!

The biodiversity of arable land in Britain has recently suffered declines to a greater extent than that of any other habitat even though it covers a greater land area than any other single land use. The decline of farmland birds has been well researched and documented, but the decline of arable "weeds" less so. The main reasons for their decline are more effective or more frequent herbicide applications; more effective seed cleaning techniques; change from spring sown to autumn sown crops; hedge removal reducing the area of field margins.

The Hampshire Biodiversity Action Plan includes a habitat action plan for arable land and in this are listed the following plants of conservation concern which may be found in arable field margins:

Species		County Occurrence
<i>Adonis annua</i>	pheasant's eye	1?
<i>Ajuga chamaepitys</i>	ground pine	1
<i>Althaea hirsuta</i>	rough marsh mallow	1?
<i>Briza minor</i>	lesser quaking grass	1
<i>Bromus interruptus</i>	interrupted brome	x
<i>Centaurea cyanus</i>	cornflower	1
<i>Ephemerum stellatum</i>	a moss	1
<i>Euphorbia platyphyllos</i>	broad-leaved spurge	1
<i>Filago lutescens</i>	red-tipped cudweed	1
<i>Filago pyramidata</i>	broad-leaved cudweed	x?
<i>Galeopsis angustifolia</i>	red hemp-nettle	1
<i>Galium tricomutum</i>	corn cleavers	x
<i>Lathyrus aphaca</i>	yellow vetchling	1
<i>Lithospermum arvense</i>	corn gromwell	1
<i>*Minuartia hybrida</i>	fine-leaved sandwort	1
<i>Ranunculus arvensis</i>	corn buttercup	1
<i>Rhinanthus serotinus</i>	greater yellow-rattle	1
<i>Scandix pecten-veneris</i>	shepherd's-needle	1
<i>Silene gallica</i>	small-flowered catchfly	1
<i>*Teucrium botrys</i>	cut-leaved germander	1
<i>Torilis arvensis</i>	spreading hedge-parsley	1
<i>Valerianella rimosa</i>	broad-fruited corn salad	1

*not strictly arable species but found on disturbed, sandy ground (edge habitats)

1 = present
1? = possibly present
x? = probably extinct
x = extinct

The actions required to conserve these species will mainly be based on targeted advice to landowners to implement the required management. Knowledge of the locations of these species is therefore imperative. I would therefore like to ask all Flora Group members to keep a special look out for any of the species listed above. Many of you have old records and perhaps you would be able to check to see if the species are still present this year. However, I would like you all to be careful about trespassing. We have habitat management advisory staff who spend a lot of time building up relationships with landowners, and it has happened once or twice where we have highlighted the importance of particular species on their land but the landowner hadn't given permission for a survey and therefore wanted to know how we knew the species was there!!

Pete Selby and I have put together a recording pack which includes tips and instructions and useful information plus a simple recording form which also asks for information such as crop, soil type, associated species and management. Please telephone me (at the Trust office) for copies.

Thank you.
Debbie Wicks.

Calling all potential plant recorders

First let me introduce myself. I am Tony Mundell, and I have taken over from Lady Anne Brewis as the North Hampshire (VC12) BSBI Recorder for plants. Unlike South Hampshire, where Pete Selby has his troops well-trained and under control, I still need volunteers to join my army!

I need to get to know potential plant hunters in my half of the county, so please get in touch. Use e-mail if you have it or ordinary snail-mail. I have just bought myself a computer to get the existing records under control so I now have an e-mail address. Nearly all the VC12 Atlas 2000 records were contributed by only four people, so clearly I need to build up a team for future recording (e.g. for Biodiversity Action Plans etc).

My address is:
Tony Mundell, 38 Conifer Close, Church Crookham, Fleet, Hants, GU13 0LS. or tonymundell@ukonline.co.uk

Interested in joining the Flora Group Committee?

The Flora Group Committee is a friendly bunch of people who meet a couple of times a year to organise the programme of events and to discuss matters of botanical interest. The Chairman is Dr Sarah Ball and Catherine Chatters is the Secretary; other members are Mary Platt, Debbie Wicks, Paul Stanley, Neil Sanderson and Clive Chatters. If you would like to help out on the Committee, please let Catherine know either prior to, or at, the AGM in April.



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