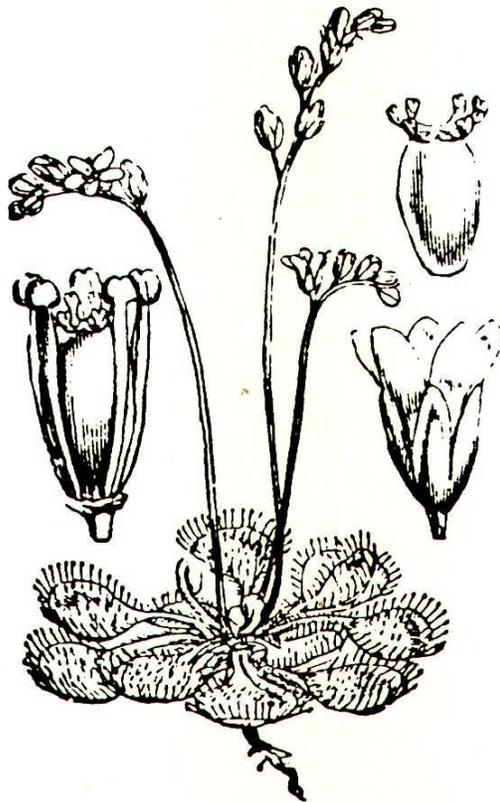


# *Parnassia*

The Newsletter of the Liverpool Botanical Society



Round-leaved Sundew, *Drosera rotundifolia*. 'Flora Britannica' meeting 8th October 1996

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*February 1997*

## Editorial

Welcome to *Parnassia* No. 6. This issue consists of write-ups of presentations given at the autumn/winter indoor meetings, the highlight of which must have been, I'm sure those who attended would agree, Richard Mabey's talk about *Flora Britannica*. This meeting was so popular with members that tickets had to be allocated in advance. For those who were unable to attend then I'm sure you'll enjoy Mike's report on the evening.

Also included are the council's annual reports presented in January. The success of *Parnassia* was kindly noted at this meeting by our former Treasurer Jean. Remember its success, growth and future depends your, its members, input. You may note that in October we will be holding a *Mystery Plant Evening*, well how about members using *Parnassia* as a forum for their 'notes and queries'? If there's a plant you're perplexed by; maybe baffled by a *Brassica*? Confused by a *Carex*? Troubled with a *Tilia*? Well, I'm sure you get the picture.

Finally thanks to all the contributors to this newsletter.

*Donna Hughes*

## 1997 AG.M. Report

The 1997 Liverpool Botanical Society Annual General Meeting took place at Liverpool Museum on 14th January with President, Dr Angus Gunn, in the chair.

## Secretary's Report

During 1996 11 new members joined and no members were deleted creating a membership of 105 including one honorary member.

During the winter months 6 indoor meetings were held including Richard Mabey's launch of *Flora Britannica* which was attended by 48 people. For the remaining 5 indoor meetings the average attendance was 16 compared with 14 for 1995.

9 field meetings were held between April and October with an average of 14 compared with 12 for 1995. The average was somewhat reduced by one meeting at which only 6 members attended. Overall 51 individual members attended the field meetings. 5 meetings were held in South Lancashire, 3 in Cheshire and 1 in North Wales.

The Society is indebted to those who arranged, conducted and above all, attended the meetings thus ensuring their success.

*Vera Gordon*

## Treasurer's Report

The 1996 accounts were circulated, recording a balance in hand as at 31st December of £3,128.56.

Subscriptions at £135.50 against a membership of 105 reflects some payments at the old rate of £1.50, not justifying further expense in following up, and also the fact that 2 years of non-payment are allowed before removal of a name from the list.

The Expenses figure associated with 3 issues of *Parnassia* to members was £86.30, due to one specially reduced charge, and was well covered by the interest on the NSB Investment Account of £154.04. It was therefore agreed that the annual subscription should remain at £2.00 for 1998 as well as 1997. However, the point was made that the low subscription was only possible because of the free accommodation for indoor meeting granted by the Museum. If this was withdrawn in the future, the amount of subscription would be reviewed.

The Auditors, Miss Joan Davis and Mr. Douglas Lockwood, were once again thanked for their services.

*Jean Bentley*

### **Librarian's Report**

The Librarian reported that due to her unofficial role of joint Editor of *Parnassia* and pressing commitments at work in 1996, the items raised at last year's AGM remain pending. The valuation of the books is still under review and this was conveyed to the Treasurer. Donna stated that she would be happy to continue in post of Librarian but stressed that supervision of the Library would have to be in a purely 'care-taker' role. The committee agreed that for practical reasons the Librarian should remain a member of Museum staff so that members could have access to the books any weekday. It was proposed that any offers from members to work voluntarily on the Library would be gratefully accepted.

*Donna Hughes*

### **Election of Officers**

Dr Angus Gunn continues into his second year as President while Peter Gateley and Dr John Edmondson remain Vice-Presidents and Vera Gordon steadfastly marches on as Secretary.

Jean Bentley retires after many years as Treasurer. Douglas Lockwood now takes up the Society's financial reins, while Jean takes over his former role of joint-auditor with Joan Davis.

Peter Gateley felt that because of his vice-county recorder workload he didn't have the time to actively participate in the joint editorship of *Parnassia* and accordingly stood down. Donna, who has already spent the last year as an unofficial editor, was duly officialised.

After some discussion the post of Honorary Librarian remains the same, however, no major work is planned here unless members wish to volunteer their time.

Finally three new members (underlined) were elected to the Council which now comprises: Miss J Bentley, Miss J. Davis,

Mrs C.M Gateley, Mr E. Greenwood, Mrs P. Lockwood, Mrs M. Rainger, Mr J.B. Richardson, Mr D. Rothwell, Mr T. Smale and Dr K. Watson.

### **Any Other Business**

The following resolutions were taken:

- That the following members, Mr D. Lockwood and Miss V. Gordon, act as signatories for the Society.
- That Miss V. Gordon writes to Liverpool Museum thanking them for their hospitality.

The Society is to affiliate with the North West Naturalists' Union. This will allow the Society to join the NWNLU's insurance scheme thus indemnifying the Society from being sued.

Ian Little raised Donna Hughes' suggestion (*Parnassia* November 1996) that the Society should re-engage itself on the social front. It was generally thought by those present that a Saturday afternoon would be preferable to a weekday evening. John Edmondson suggested tying it in with some, as yet to be identified, commemorative, Society event. Donna is to investigate and report back in the next newsletter.

## 1997/98 Programme

### Indoor Meetings (Spring)

**11th Feb**     *The Conservation of Mosslands and their Plant Communities*

Dr Martha Newton

**11th Mar**     *Plants, People, Places*  
*A look at some of the information collected to date for the North-west cultural flora.*

Mike Palmer

### Field Meetings

Field meetings are all-day events, generally to locations remote from shops and pubs, so bring along food, drink and suitable clothing for the day.

#### **19th April. Cefn y Bedd.**

*Leader - Miss Vera Gordon.*

9.12 train from Central Station (to West Kirby). Alight at Bidston for the 9.33 train (to Wrexham). Alight at Cefn y Bedd 10.18.

#### **17th May. Lomax.**

*Leader - Mrs Edna Stephenson.*

9.26 train from Liverpool Central to Kirkby. 9.47 train from Kirkby (to Wigan & Manchester Victoria). Alight at Atherton 10.29.

#### **24th May. Deepdale, Derbyshire**

(A joint meeting with the NWN)

*Leader - Dr Tony Smith.*

For information contact Dr Angus Gunn on 0151 478 4371.

#### **21st June. Stanley Bank and Black Brook, St. Helens.**

*Leader - Dr Angus Gunn.*

9.12 train from Liverpool Lime Street to St. Helens Central, arriving 9.40. Catch the No.1 bus (to Ashton). Alight at the Blackbrook Ship Inn.

#### **12th July. Rainford. (Tetrad Recording)**

*Leader - Miss Vera Gordon & Mrs Pat Lockwood.*

9.26 train from Liverpool Central Station to Kirkby. Take 9.47 train from Kirkby arriving at Rainford 9.54.

#### **2nd August. Neston.**

*Leader - Mrs Joan Duerdon.*

9.12 train from Central Station (to West Kirby). Alight at Bidston for 9.33 train (to Wrexham). Alight at Neston 9.48.

#### **23rd August. Dibbinsdale & Bromborough. Leader - Dr Keith Watson.**

10.07 train from Central Station (to Chester). Alight at Spital at 10.23.

#### **13th September. Bold Moss.**

*Leader - Mr Peter Gateley.*

9.57 train from Lime Street to St Helens Junction arriving at 10.23.

#### **4th October. Wepre Woods.**

*Leader - Miss Vera Gordon.*

9.11 train from Central Station (to West Kirby). Alight at Bidston for 9.33 train (to Wrexham). Alight at Shotton 9.56.

**NB.** Members please note that bus and train timetables may be subject to changes from the winter schedules available at time of publication. Please check all times before setting off!

**(Mersey Travel Line: 0151 236 7676)**

### Indoor Meetings (Autumn)

**14th Oct**      *Mystery Plant Evening*  
All members are invited to bring along plant specimens and slides for identification.

**11th Nov**      *Holiday Exhibits 1997*  
All members are urged to contribute slides and specimens.

**9th Dec**      *Plants in Kazakhstan.*  
Miss Vera Gordon.

**13th Jan 1998**      *Annual General Meeting*  
followed by a resume of the 1997 field meetings. Members are encouraged to contribute slides and specimens.

All the above meetings are held at the Liverpool Museum, William Brown Street, at 7.30pm.

### Society News

Liverpool Botanical Society has been a member of the Rambler's Association for many years now. In addition to keeping the society informed of their activities it should be remembered that our subscription also goes towards helping the Association lobby on issues of countryside access - something our field meetings programme depends on. Members are reminded that we receive their quarterly magazine 'Rambling Today'. This has many interesting articles such as 'Flower Hunting in Andorra' in its winter edition, which along with past editions can be consulted in our library. We also receive 'The Rambler's Yearbook' which has a very useful up-to-date country-wide accommodation listing.

### Vice-county News

News from the BSBI vice county recorder.

The RECORDER database "cuckoo" is the all-abiding concern at the moment demanding almost constant feeding, causing it to outgrow all other commitments with its endless time requirements. It is still only a fledgling, 31,882 records entered thus far, so there is a lot more feeding still to be done yet! But that's enough whinging, please do not be put off from sending in all your 1996 records and prepare to do as much recording as you can in 1997.



The main point behind all this current collection and collation of vc 59 records is of course the national Atlas 2000 scheme, which will update the original atlas by showing the distribution of all vascular plant species in Britain on dot-maps based on hectads (10 x 10km squares). The current distribution of species will be based on records from 1987 up to 1999, so we have up until then to make sure we record all our sites and species. The BSBI timetable for continuing this process is:-

1997/98: continuation of fieldwork, completion of records for 50% of hectads by the end of the 1997 field season. Entering of non-digitised records at BRC (Biological Records Centre, based in

Huntingdon) completed and corrections to interim maps processed.

1998/99: continuation of fieldwork, completion of 75% of hectads by end of 1998 and 90% by the end of 1999 season. Stage two distribution maps prepared and distributed for corrections.

1999/2000: completion of fieldwork (last date for submission of records 1st October 1999), preparation of text.

2000/01: co-ordination of all responses to drafts, correction of proofs then final draft to DoE (Department of Environment, not Duke of Edinburgh!) by 31st May 2000 for them to publish.

This is an important and exciting national project in which to be involved, all the signs are looking good for us being on target in vc59, thanks to fieldworkers throughout the vice county, especially Vera Gordon who kept up a constant flow of up-to-date records to BRC during her long tenure as recorder, as well as being the most prolific fieldworker for the 1995 and 1996 seasons. Once all the 1996 records have been entered we will know how many hectads are complete and so get an accurate assessment of our performance and know how much extra work needs doing to achieve 50% coverage by the end of this year.

In order to get a full picture of each hectad our records are now being collected on a tetrad basis (2 x 2km squares, there are 25 of these within each hectad) this is a double agenda, of course, as the tetrad records will have the potential to form the basis of a more detailed local atlas for vc 59. However, when it gets to the final year of recording we may have to suspend detailed tetrad recording in order to mobilise all our forces to complete the more far-flung less-visited hectads, only one record within each hectad being

required to secure a distribution "dot" in the finished national atlas.

LBS members have already contributed by participating in recording trips about the vice county, such as to Littleborough, Seaforth, Fazakerley and Childwall last year and Lomax, Stanley Bank, Rainford and Bold Moss in the coming field season. In 1989 and 1999 we may find that the northern and eastern moors of the vice county require our attention!

Despite the national priority of Atlas 2000 the scientific interest and value of our local records is still very great and a plan to begin concerted work on production of a new Vice County Flora for South Lancashire is to be discussed at a meeting in Liverpool Museum. The scheme is being promoted by Dr Martha Newton (a nationally renowned bryologist and due to give the February talk to the botanical society) under the auspices of the North Western Naturalists Union, the meeting is to be on Saturday 1st March, for further information please contact Martha via the Botany Department, Liverpool Museum, William Brown Street, Liverpool, L3 8EN, or just mention it to our own president, Angus.

It is now some time since Travis's *Flora of South Lancashire* was published by the Liverpool Botanical Society in 1963. I still refer to my copy constantly and it is an acknowledged early good example of a modern flora, reflecting very well on its authors and the LBS, but like us all it is getting on a bit now and has been overtaken both by the rapid changes in our environment since 1963 and by vast changes in data-handling capabilities. Given a good set of data, which is currently being collected, we should be able to produce a flora along the lines of those produced for Shropshire, Flintshire and Hampshire within the last decade. Accurate distribution maps can be called up at the touch of a button and our semi-natural habitats can be objectively described in terms of the NVC (National Vegetation

Classification) to produce volumes which are both interesting and scientifically valuable. Such a production is a time-consuming and expensive exercise, it is unlikely that a small society such as the LBS would be able to initiate and sustain this task, it may be that an amalgamation of local societies and field clubs throughout the area will be able to get it off the ground. It is certainly worth checking-out the NWNLU plans and helping to form them at the coming meeting on 1st March, if they can both organise the scope of data, its collection/collation and also initiate a scheme for funding a new flora then we should lend our support and do our bit in whatever way appropriate. We should have a better idea how things are looking on this front by the next issue of *Parnassia*.

*Peter Gateley*

## **Liverpool Museum News**

### **Caring for your Herbarium**

An Open Day on a botanical theme will be held on 19th April 1997 in Liverpool at the National Museums & Galleries on Merseyside. It will be of particular relevance to owners of private herbaria and volunteers in museums. Visit the award-winning Natural History Centre, take a tour behind the scenes to visit the Museum's Herbarium, and explore the new Conservation Centre displays in Whitechapel (5 minutes' walk from Liverpool Museum). No need to book but places on behind the scenes tours are limited.

In Liverpool Museum's Natural History Centre, demonstrators will show you a wide range of botanical and other material, some displayed in specially designed cabinets. Use the video-microscopes to examine plants under high magnification; surf the Internet using a specially selected list of Web sites. The Centre is open from 1.00 to 4.30 pm; admission free.

Behind the scenes in the Herbarium, see state of the art compactorised storage and traditional herbarium cabinets. Examine ways of documenting specimens on computer, and generating labels. Curators John Edmondson and Donna Hughes will be there to answer your questions. Tours will be held at 2.00, 3.00 and 4.00pm and will last about 30 minutes; free tickets from the Natural History Centre, but places are limited.

In the Conservation Centre [admission charge made], visit 'Caught in Time', the new permanent display on museum conservation, including hands-on exhibits. Special sessions will be held on herbarium sheet conservation at 12.30, 1.30, 2.30, and 3.30pm using a video link with the Paper Conservation laboratory. The Conservation Centre is open from 10.00 am to 5.00pm.

Further information from Celia Franklyn on 478 4817.

## **Other News**

### **New Variety of Fly Orchid in Anglesey.**

January 1997's *BSBI News* carries a note from R.H. Roberts, Bangor, concerning an unusual variant of Fly Orchid, *Ophrys insectifera*, found on Anglesey. Two specimens were found in 1995. The number growing to eight the next year. The description given matches that of a form first described in southern France in the fifties which was initially listed as a subspecies of Fly Orchid but later raised to specific status under the name of *O. aymoninii*. Further study is needed to decide whether the Anglesey specimens are one in the same while time is required to see if the population will persist and thus be added to the British list.

### **Vale Royal Nature Conservation Audit**

The following letter has been received by the Society.

Cheshire Wildlife Trust, in partnership with Vale Royal Borough Council, are carrying out a Nature Conservation Audit of Vale Royal. The Audit involves the collation and review of existing nature conservation data, including both species and habitat information. Following on from this, field survey work will be carried out to endeavour to fill in the gaps in the existing data.

The results of the audit will be presented as a series of coloured maps, based on the Phase 1 Habitat Survey proposed by English Nature, for each parish, which will show all the habitats present, together with a comprehensive database of all available species records. This information can then be used for future monitoring, to target sites where improvements can be carried out to enhance their nature conservation value and to hopefully ensure that the existing nature conservation value is at least maintained at its present level.

The partnership recognises the value of contributions to the Audit by the local community/environmental organisations. We are therefore writing to your organisation to ask if you would like to become involved in the Audit by passing on to us any species records which you may have for Vale Royal, regardless of their age and whether the species are common or rare, together with any other information which you may have, for example of local sites which may be particularly well known for butterflies, birds or wildflowers. If it is inconvenient for you to forward us any information, please let us know and we can then arrange to collect the data if necessary. We would also appreciate it if you would network the aims and objectives of this project to you

membership through your own newsletter. Please remember that by supporting the Audit, you will be helping the conservation of the natural world for future generations of people and wildlife. The audit teams are also willing to discuss the project

with you and your organisation - it may be possible for us to deliver a short presentation on the Audit

### **Horace Green's Well**

Former LBS member, the late Horace Green, received mention in an October (1996) edition of the Daily Post. The article, one in a series on *Weekend Walks* takes us round and about the south Wirral village of Burton. After leaving the church the author, Richard Garfield, suggests you "*Turn down Station Road and pass Hampson's Well, a natural spring which once provided a local water supply. It was cleared of rubbish and turned into a little garden in memory of the late Horace Green, a scholarly bachelor who was the village's respected Labour councillor for over 25 years. (It usually votes Conservative at general elections).*"

Horace Green joined the Liverpool Botanical Society in 1923 and soon afterwards became its Secretary. Later, in 1936 he became President, an office held on several occasions in the years that followed.

During his life he collected plants from across the country, with a heavy emphasis on Mersey and Deeside. Horace died in 1973, however his 3,500+ herbarium lives on in Liverpool Museum's Botany Department.

### **Evening Meeting Reports**

***Flora Britannica*** October 8th.

Notes on a talk by Richard Mabey to the Society on the day of *Flora Britannica's* publishing.

This talk replaced that scheduled by Mike Palmer on *Plants, People, Places*. A fitting

exchange however as *Flora Britannica* was responsible for prompting PPP.

Richard Mabey started by noting the success of *Plants, People, Places* which was evidenced by the many examples from the North-west included in the book.

*Flora Britannica* was launched in 1992 as a nation-wide survey exploring how people in Britain relate to plants at the close of the Millennium. Richard identified two extremes. Firstly, that of the authoritative and academic conservationist and scientist at one end and secondly that of seemingly total disregard as witnessed by a whole number of destructive developments. In between these two Richard felt was a rich seam of personally held plant associations and it was this area the author thought important to record. Several earlier publications on *cultural* botany were mentioned these being predominantly Victorian by gentlemen of leisure, parsons etc, and more latterly Grigson's *The Englishman's Flora*. These were, by and large, often compilations and re-writings of earlier works. Richard felt it was important to review what individuals across the country knew and remembered to gain some idea of the contemporary status of plant-people associations. Unusually, Richard gave no mention to the long running work of Roy Vickery in this field, who, for the last ten years, had been doing just that through his *Plant-lore: notes and queries* newsletter. All the same, the high profile nature of the *Flora Britannica* campaign had to be admired and certainly accessed a far wider audience.

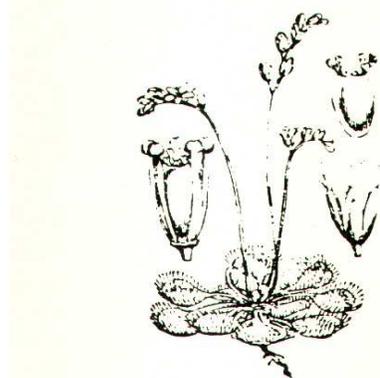
Having thus explained the background to the publication Richard spent the rest of the time providing the audience with various tasters from the book, of which the following is a selection.

#### SUMMER GOLD

Common Ragwort, *Senecio jacobaea*, is a plant more commonly associated with plans for its eradication. However, one

West Country farmer has employed an image change to help him deal with this notifiable weed by picking it from his fields for sale in the shop under the name of 'Summer Gold' - "the townies love it".

#### SYMPATHETIC ENTRAPMENT



Round-leaved Sundew, *Drosera rotundifolia*

The sticky *dew* of the Round-leaved Sundew leaves and its role in entrapping insects has, in years gone by, led to the plant being considered useful in the *entrapment* of partners according to the old ideas of sympathetic magic. While such ideas would generally be considered to only belong to previous centuries, a live display of the plant in the Manx Museum suggests otherwise. All the leaves were gradually pilfered by love-lorn Douglas school children visiting the Museum with a seemingly secret agenda of ensuring their choice of future partners by slipping leaves into the pockets or onto the clothes of other pupils (or were they just being plain mischievous?).

#### INDUSTRIAL FIGS

The, by now, infamous Fig, *Ficus carica*, forest of the River Don near Sheffield was illustrated. While such a great number of these trees occurring in one place is in itself unusual, the studies by Dr Oliver Gilbert showing that all the trees were of pretty much the same age seemed even more so. However, this fact has led to the generally agreed explanation of this arboreal feature. The age of the trees coincides with the height of the Sheffield

steel industry in the 1920s. It is thought that the use of river water for cooling purposes allowed figs washed down with

sewage to germinate in the higher temperatures of the river margins. The subsequent decline of this industry then led to an lack of further regeneration of the figs.

Liverpool's industrial fig, sited by the Tate & Lyle sugar refinery on the Leeds-Liverpool canal also received mention, however, unknown to the author this tree had been lost to a landscape improvement scheme. Would a better understanding of local cultural botany have allowed this tree to be preserved?

### MELDON



Fat Hen, *Chenopodium album*

It is not hard to spot on a map examples of place name of plant derivation. However, some examples are harder than others. On such case is the village of Meldon in Suffolk whose name derives from the Old English name for Fat Hen, *Chenopodium album*. In a fit of village pride the villagers commissioned a six foot cast iron statue of the plant in the 1970s to stand on the parish boundary. Possibly the world's one and only Fat Hen sculpture!

### FRITILLARY FIELDS

The Snake's-Head Fritillary, *Fritillaria meleagris*, tends now to occur only in a

number of distinct populations in the Thames valley and one or two other places. Where it does occur a number of historic associations can still be found. The village of Ducklington, in the Windrush valley, has long had such a population in its low lying meadow lands. Flowers from here were once sent to Covent Garden while local children used to take them to Birmingham to sell as fritillary posies. Only one field still remains where, once a year, on Fritillary Sunday, the visiting public are allowed to wander amongst the blooms. Images of the plant feature heavily in the church, in its stained glass, its embroidered alter frontal and its pew cushions. Interestingly many of these are of twentieth century origin illustrating that this is not just another example of some preserved past association but part of the contemporary living culture of the village.

Probably the country's most famous Fritillary fields, those of Magdalen College, Oxford, were also illustrated. It is now thought that a link between this population and that of Ducklington exists. In the eighteenth century Ducklington's church was under the patronage of Magdalen College. It has been suggested that an incumbent at Ducklington may have taken a fancy to the flowers and carried some bulbs back to his college to plant. Both populations have a high proportion of plants with pure white blooms.

### FOOD FOR FREE

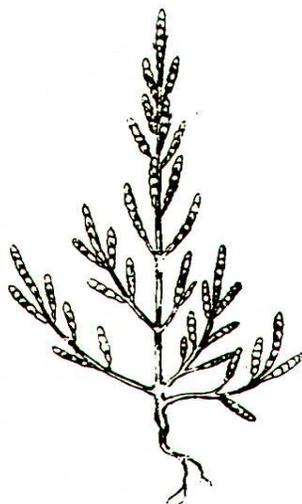
A topic already covered by Richard in an earlier publication, but one that fits neatly in with *Flora Britannica*.

Sandforthing - the gathering of Sandforth, a local name for Samphire, *Salicornia* spp. in parts of Lancashire was illustrated. Richard suggested a short boil followed by

a pat of butter, but also noted an old Norfolk preparation which recommended filling jars with the chopped shorts, covering with spiced vinegar and leaving

in the local baker's oven as it cooled off over the weekend. A completely different end product should be anticipated.

Also from Norfolk comes the tale of the *monster* samphire. This was found in a creek near Blakeney in 1953 and is reputed to have stood 2 metres tall. It was strapped to a bicycle's crossbar and taken to the local pub where it was hung above the bar like a prize fish.



Samphire, *Salicornia* spp.

Unfortunately, Dave Earl wasn't with us to hear Richard's enthusiasm for his inclusion in the book concerning the gastronomic delights to be had for anyone with a taxonomic knowledge of *Rubus fruticosus* agg. [See *Plants, People, Places*, newsletter No. 3, p.6].

Many other examples were referred to, including one possible indication of the return of the *feel-good* factor - the use of balsamic vinegar for hardening conkers.

Some impressive examples of *veteran* trees were illustrated, notably; the Tortworth Chestnut, *Castanea sativa*, in Gloucestershire "probably not far short of

1,000 years old and now resembling a wooden cave-system"; the Much Marcle

churchyard Yew, the hollow bow of which seats five or six people on a rainy day; and the now sadly demised Aston on Clun Flag tree, *Populus nigra*, which was annually dressed with large flags on Oak Apple day until it was toppled by gales in 1995. A new tree has been planted.

The story of the Autumn Crocus, *Crocus nudiflorus* and the Knights of St John was relayed [See *Parnassia* April 1995 'In search of the Autumn Crocus' by Dave Bishop].

After a brief round of questions the members retired for tea, coffee, biscuits and Richard's book-signing.

"Never have so many books been sold to so few" was the comment from Richard's publicity assistant.

### Holiday Exhibits

14th November 1996 Holiday Exhibits Meeting.

Contributors to the Holiday Exhibits Meeting were John Richardson, Duncan Rothwell and Vera Gordon. Slides were shown taken on the Sefton dune slacks, in the Highlands, Western Algarve Portugal and Jordan.

At the dune slacks on the Sefton Coast it was disturbing to be shown holes in the ground where clumps of Grass of Parnassus had been dug up and taken.

The standing stones of Callarnish and views of old crofting areas of Skye abandoned during the evictions revived memories for some of the members.

General views of the magnificent cliffs of Western Algarve were shown. They were too rough for cultivation and in April were colourful with spring flowers and

flowering shrubs. They included *Narcissus bulbocodium* ssp. *obesus*, *N. gaditanus* and *Romulea bulbocodium*. The most colourful shrubs were *Halimium commutatum* and the shrub rock roses *Cistus albidus*, *C. ladanifera* and the endemic *Cistus palhinhaei*. Going east from these cliffs were sand dunes where an alien from Africa across the water, *Arctotheca calendula*, was competing well with mature plants. A salt marsh behind the dunes had hundreds of spikes of very robust specimens of the bright yellow broomrape *Cistanche phelypaea* growing between shrubs of *Limoniastrum monopetalum* just coming into flower.

From the shores of the Dead Sea, over 300 metres below sea level, in Jordan were many desert type species. *Blepharis ciliaris*, with pale mauve flowers and a member of the *Acanthaceae*, looked more like a spiny Labiate. A walk northwards out of Amman produced purple flowered *Scorzonera papposa* with dense white pappus heads. In cereal fields *Linum nodiflorum* was shown with large yellow flowers. Views of Petra's ruins showed many bushes of *Nerium oleander* in good pink flower against the red sandstone cliffs. Here also were the white flowers of *Peganum harmala* belonging to the *Zygophyllaceae*. Many introduced species including a large tree with flowers in pale yellow balls which produced twelve inches long pods. The Flamboyant Tree, *Delonix regia*, with many large crimson flowers seven inches across was well named 'flamboyant'.

Vera Gordon

### **Trees and their Timbers**

An article based on the talk given to the Society 10th December 1996 by Dr Angus Gunn.

Timbers are generally classified into two main groups: softwoods which are produced by the conifers (Gymnosperms); and hardwoods, which are produced by

flowering plants (Angiosperms), in particular the dicotyledons.

Looking at the softwoods first, in total there are just over 500 species of conifer in the world. While nearly all of these species are important sources of timber, at least on a local basis, probably only 20 - 30 species make up the vast bulk of commercially traded softwoods. Only the Scots Pine, *Pinus sylvestris*, Yew, *Taxus baccata* and Juniper, *Juniperus communis* are native to the British Isles, but several other Pines, Spruces, *Picea* spp., Firs, *Abies* spp. and Larches, *Larix* spp. are widely grown in commercial while even more species are grown as ornamentals in parks and gardens.

The wood of these trees is relatively simple in its structure, being largely made up of one kind of cell - a tracheid - which gives the wood its strength and transports water up the trunk of the tree. Of course, there are also rays which transport water and food horizontally within the wood and it is the connections that the rays make to the tracheids - known as "cross-field pits", which are the most useful feature in identifying a softwood sample. Unfortunately, these can only be observed under high power microscopes. It is the tracheids which determine the structural properties of the wood and in two of the toughest softwoods Yew and Douglas Fir, there is additional spiral thickening in the cells but again observing these requires a microscope.

A more easily observed feature is the growth rings. In spring, "earlywood" is laid down in which the tracheids have thin cell walls and this is followed in summer by zones of "latewood" with thicker cell walls. In many species, the contrast between the pale coloured earlywood and darker latewood give the timber a banded appearance. But remember, when counting growth rings, a year's growth includes both bands and the growth ring boundary is

between the latewood of one year and the earlywood of the next.

Finally, there is one feature of many softwoods which many people will be familiar with. These are the resin canals which are especially common in members of the Pinaceae and give them their distinctive smell.

In contrast to the conifers, there are many thousands of species of hardwoods, although again only a small proportion of these are traded commercially. These include several native species such as Beech, Birch, Box, Elm, Cherry, Lime and Oak as well as naturalised species such as Chestnut, Sycamore and Walnut. Of these, Beech is probably the most important at this time, being very widely used in furniture making, as well as tool handles etc. In the past Oak was probably the most important of our native hardwood timbers both for shipbuilding and for furniture and it remains a very significant wood.

Tropical hardwoods such as Mahogany, *Sweitenia* spp. from South and Central America and, increasingly, *Dipterocarpus* and *Shorea* species from S.E. Asia are widely used for furniture, doors and plywoods etc. Nearly all of this timber is still extracted from natural rainforests, and its use is controversial.



Mahogany, *Sweitenia* spp.

The timber of flowering plants is generally much more complex than that of conifers. While tracheids, very similar those in conifers, are sometimes present, the two functions of these cells are undertaken by two very different types of tissue. Vessels transport water up through the trunk, while structural support is the job of fibres. Storage tissue (parenchyma) can be quite abundant in hardwoods although it is relatively rare in softwoods. There is also a much greater variety in the size and arrangement of rays in hardwoods.

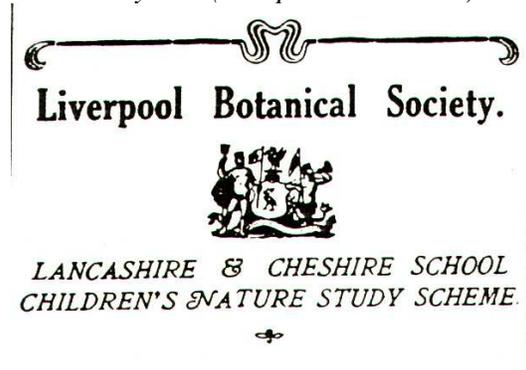
The mechanical properties of hardwoods are largely due to the abundance and distribution of the fibres. Thus a hardwood can be very light and soft e.g. Balsa, *Ochroma lagopus* or very hard and heavy e.g. Lignum Vitae, *Guaiacum officinale*. The wide variety of anatomical arrangements in the wood of hardwoods also results in the many distinctive grained woods which have been used as veneers to decorate furniture.

In comparing softwoods with hardwoods, there has always to be some exceptions, there are one or two advanced Gymnosperms which have wood with vessels (e.g. *Ephedra*) and a few primitive Angiosperms in the family Winteraceae lacking vessels. Finally there are also “oddball” woods which come from the Palms, *Araceae*, and the Screw-pines, *Pandanus* sp. Both of these are monocots (like grasses, lilies etc) and have evolved their own distinctive type of wood. Although rarely seen in this country, they provide an important building material in the tropics.

#### **From the Archives**

At the AGM meeting of 1911 “a discussion took place on the desirability of the Society taking an active part in encouraging the study of botany and natural history amongst children”. This idea was put before the council, agreed upon, and later that year the first LBS

'Prizes and Certificates for Botany and Nature Study' competition was held. Eleven subjects were set, including " *the best Nature Diary, Journal, or Calendar. This must include observations taken during at least any four consecutive months of 1911*" and " *the best set of twelve Drawings, Paintings, or Photographs, of representative sandhill plants*". The first prize in each class was Half-a-Guinea. Some of the subjects set were quite specific, such as " *the best description of the development of the flower, floral structure, and pollination of one of the following, viz : Cow Parsnip (Heracleum sphondylium); Dandelion (Taraxacum officinale); Garden Nasturtium (Tropaeolum); or the Canterbury Bell (Campanula Medium).*"



In December that year an exhibition and prize giving was held at the Hartley Botanical Laboratories, Liverpool University. Mrs Haydon, the wife of the then President of LBS, W.T. Haydon, presented the prizes and certificates of merit. It would be interesting to know if the prize-winners of 1911 such as Bertha Doris Tyrrell of Queen Mary High School, or John Riley of St. Luke's, carried on with their interest in botany. Maybe they even became members of LBS! (I'll have to research the archives!).

Donna Hughes

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